

SERVICE BULLETIN

Date: May 2, 2000

Subject: Transmittal of Revision 2 to Service Bulletin Number V2500-NAC-71-0235

Service Bulletin Revision History:

<u>Event</u>	<u>Date</u>
Original Issue	May 13, 1999
Revision 1	February 10, 2000
Revision 2	May 2, 2000

Reasons for issuance of Revision:

- (1) To add “Revision 2” to page 1.
- (2) To amend the “Material information” (Ref 3.C.). Fixative “UW” (colour green) company and address updated to read TIP Serigraphie (Transferts Industriels et Publicitaire)..... was TIP.....

Effect on Past Compliance:

None.

List of Effective Pages:

<u>Page No.</u>	<u>Rev No.</u>	<u>Date</u>
1	2	May 2, 2000
2 – 5	Original	May 13, 1999
6 – 8	1	February 10, 2000
9 – 11	Original	May 13, 1999
12	2	May 2, 2000

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Aero Engines**

V2500 Propulsion System — Nacelle

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NACELLE - POWERPLANT – FAN COWL DOORS – APPLICATION OF CAUTION MARKINGS

MODEL APPLICATION

V2500-A1
V2522-A5
V2524-A5
V2527-A5
V2527E-A5
V2530-A5
V2533-A5

BULLETIN INDEX LOCATOR

71-00-00

COMPLIANCE CATEGORY CODE

4

INTERNAL REFERENCE No

SM/HM 96VN208A

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1. Planning Information

A. Effectivity

(1) Aircraft:

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

(2) Nacelle:

- (a) All V2500-A1 Fan Cowl Doors.
- (b) V2522-A5 Fan Cowl Doors Prior To Serial number 1575001.
- (c) V2524-A5 Fan Cowl Doors Prior To Serial number 1575001.
- (d) V2527-A5 Fan Cowl Doors Prior To Serial number 1575001.
- (e) V2527E-A5 Fan Cowl Doors Prior To Serial number 1575001.
- (f) V2530-A5 Fan Cowl Doors Prior To Serial number 1575001.
- (g) V2533-A5 Fan Cowl Doors Prior To Serial number 1575001.

B. Reason

(1) Condition

Several instances have been reported of Fan Cowl Doors not being fully latched (as per manual requirements) prior to flight. This may result in actual Door loss in flight.

(2) Background

There have been several reports from Operators of actual Fan Cowl Door loss due to Doors not being fully latched.

(2) Objective

To maintain engine reliability by introducing 'CAUTION' notices to the Fan Cowl Doors to ensure the Doors are fully latched

(3) Substantiation

Trial installation of the caution markings has been shown to be satisfactory



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(4) 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

(5) Supplemental Information

None.

C. Description

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

A Fan Cowl Door Latch Decal “MAKE SURE THE FAN COWL DOORS ARE FULLY LATCHED WHEN CLOSED” is added to both left and right doors on both left and right engines. Alternatively the warning may be added using stencils in place of the decals.

D. Approval

The technical content of this Service Bulletin has been approved under the authority of the DGAC Design Organisation Approval No. F.JA.02.

E. Compliance

Category 4

Accomplish at the first visit of the Nacelle or Nacelle component to a maintenance base capable of compliance with the Accomplishment Instructions regardless of the planned maintenance action for the Nacelle or Nacelle component.

F. Manpower

Estimated man-hours to incorporate the intent of this Service Bulletin on each engine:

Decal Method

VENUE

ESTIMATED MAN-HOURS

(1) In Service

(a)	To gain access.....	0.25 M/Hr
(b)	To embody.....	<u>4.5 M/Hr</u>

Total 4.75 M/Hr

NOTE: Manhours provided for planning purposes only

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Stencil Method

VENUE

ESTIMATED MAN-HOURS

(1) In Service

(a) To gain access..... 0.25 M/Hr

(b) To embody..... 1.50 M/Hr

Total 1.75 M/Hr

NOTE: Manhours provided for planning purposes only

G. Material Cost and Availability

Modification kit not required.

H. Tooling - Cost and Availability

None required.

I. Weight and Balance

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

J. Electrical Load Data

Not Affected.

K. References

Publication

Chapter/Section

A319/A320/A321/V2500-A1/A5 Aircraft Maintenance Manual (M V2500 1IA)	71-13-00
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IAE V2500 Standard Practices/Processes Manual (SPP-V2500-1IA)	70-09-00
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This Service Bulletin is the subject of Aircraft Modification Nos. 21948 and 24259.



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L. Other Publications Affected

<u>Publication</u>	<u>Chapter/Section</u>
A320/V2500-A1 Engine Illustrated Parts Catalog (S-V2500-1IA)	71-13-11 71-13-16
A321/V2500-A5 Engine Illustrated Parts Catalog (S-V2500-2IA)	71-13-11 71-13-16
Powerplant Illustrated Parts Catalog (PIP-V2500-1IA)	71-13-11 71-13-16
Powerplant Illustrated Parts Catalog (PIP-V2500-2IA)	71-13-11 71-13-16
A319/A320/A321 Aircraft Maintenance Manual	11-24-71



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2. Accomplishment Instructions

A. Pre-requisite Instructions

- (1) Open the Fan Cowl Doors as instructed in the A319/A320/A321/V2500-A1/A5 Aircraft Maintenance Manual, Task 71-13-00-010-010.

B. Rework Instructions

Application of 'CAUTION' Decals to Fan Cowl Doors.

WARNING: SOLVENT IS FLAMMABLE AND THE VAPOUR IS HARMFUL. USE IN A WELL-VENTILATED AREA. AVOID PROLONGED BREATHING OF VAPOURS OR PROLONGED OR REPEATED CONTACT WITH SKIN. HIGH CONCENTRATIONS MAY CAUSE IMPAIRED JUDGEMENT. PROTECTIVE GLOVES SHOULD BE WORN DURING USE. MAY CAUSE DERMATITIS BY REMOVING SKIN OILS. PRIOR TO USE OF THIS PRODUCT, READ THE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH PRECAUTIONS.

- (1) Clean the Fan Cowl Door in the area indicated as 'Fan Cowl Caution Markings' with a clean lint-free cloth (CoMat 02-099) made moist with solvent (CoMat 01-076). Wipe the area dry before the solvent evaporates. (Refer to Figure 1)

WARNING: OBEY THE PRECAUTIONS THAT FOLLOW WHEN YOU USE LABEL ACTIVATOR. USE SAFETY GOGGLES. PUT ON PROTECTIVE CLOTHING AND DO NOT LET THE LABEL ACTIVATOR TOUCH YOUR SKIN, MOUTH, OR EYES. DO WORK IN AN AREA THAT HAS NO SPARKS, FLAME OR HOT SURFACES. OBEY THE MANUFACTURERS INSTRUCTIONS. GET MEDICAL AID IF IRRITATION OCCURS. DO NOT RE-USE SEALANT APPLICATION OR MIXING TOOLS PR1750 SEALANT IS POISONOUS AND CAN CAUSE DAMAGE TO SKIN, EYE AND LUNG TISSUE.

NOTE: To prepare the Fixative, mix one part Fixative to one part distilled water (CoMat 01-201). Prepare sufficient Fixative to complete the task. Do not store mixed solution.

- (2) Immerse Label in Adhesive Fixative for fifteen seconds.
- (3) Remove Label from Adhesive Fixative.
- (4) Apply Label to Fan Cowl Door as indicated in figure 1.
- (5) Rub label with a moist sponge to remove any air bubbles.
- (6) After two minutes carefully remove the backing from the Decal.



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- (7) Clean the perimeter of the Decal with a sponge dampened with distilled water (CoMat 01-201) to remove any excess Adhesive

NOTE: If the Decal has been badly applied, remove the Decal before it dries and repeat steps (1) thru (7).

- (8) Cure label with a heat lamp placed so as to maintain a Fan Cowl Door surface temperature of $70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 2 hours.

WARNING: THIS LAQUER IS CLASSIFIED AS A HAZARDOUS MATERIAL WHICH MAY CAUSE INJURY OR ILLNESS IF NOT USED PROPERLY. 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

- (9) Apply Polyurethane Lacquer (Co-Mat 07-098) to the Label. Cure Lacquer at room temperature for 0.5 Hrs. Then cure Lacquer with a heat lamp placed so as to maintain a Fan Cowl Door surface temperature of $70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour.
- (10) The Label shall be capable of passing the following dry adhesion test. Apply a one inch wide strip of 3M Masking Tape #250 (Co-Mat 02-178). Firmly press tape on to coated surface and then remove tape in one abrupt motion perpendicular to the coated surface.

Application of 'CAUTION' markings - Stencil method

WARNING: SOLVENT IS FLAMMABLE AND THE VAPOUR IS HARMFUL. USE IN A WELL-VENTILATED AREA. AVOID PROLONGED BREATHING OF VAPOURS OR PROLONGED OR REPEATED CONTACT WITH SKIN. HIGH CONCENTRATIONS MAY CAUSE IMPAIRED JUDGEMENT. PROTECTIVE GLOVES SHOULD BE WORN DURING USE. MAY CAUSE DERMATITIS BY REMOVING SKIN OILS. PRIOR TO USE OF THIS PRODUCT, READ THE "MATERIAL SAFETY DATA SHEET" AND FOLLOW ALL LISTED SAFETY AND HEALTH PRECAUTIONS.

- (1) Clean the Fan Cowl Door in the area indicated in figure 1 with a clean lint-free cloth (CoMat 02-099) made moist with solvent (CoMat 01-076). Wipe the area dry before the solvent evaporates.



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- (2) Prepare the stencil (Ref. Figure 2). The letters are to be No. 3 Alternate-Gothic style. The height of the letters for the word “CAUTION” is to be 25 mm high. All other letters are to be 15mm high.

NOTE: A HEAVY STENCIL BOARD THAT IS 0.015 IN. (0.381MM) THICK CAN BE USED WITH AN AVAILABLE STENCIL MACHINE. THESE STENCILS ARE STRONG ENOUGH TO BE USED AGAIN.

- (3) Use the masking tape to hold the stencil in the correct position (figure 1 sht 1 & 2).

WARNING: DO NOT GET THE PAINT BASE, CATALYST OR THINNER ON YOUR SKIN OR IN YOUR EYES. PUT ON PROTECTIVE CLOTHING, GOGGLES AND A FACE MASK. USE IN A WELL VENTILATED AREA. AVOID PROLONGED BREATHING OF VAPOURS. IF IN A CONFINED AREA USE A SUPPLIED AIR RESPIRATOR. GET MEDICAL AID IF YOUR SKIN OR EYES BECOME IRRITATED. PRIOR TO USE OF THIS PRODUCT, READ THE “MATERIAL SAFETY DATA SHEET” AND FOLLOW ALL LISTED SAFETY AND HEALTH PRECAUTIONS.

- (4) Mix the Gloss Base (CoMat 07-078), the Catalyst (CoMat 07-077) and the Thinner (CoMat 07-076) in accordance with the Manufacturer’s instructions. Refer to the Standard Practices Manual, chapter 70-30-00. Leave the mixture for 30 minutes before use.
- (5) Apply the paint mixture to the stencil area.
- (6) Remove the stencil and masking tape and use a cotton swab (CoMat 02-174) to clean off all unwanted paint.

CAUTION: ALLOW THE PAINTED MARKING TO DRY FOR 15 MINUTES BEFORE THE HEAT IS APPLIED.

- (7) Cure paint with a heat lamp placed to maintain a surface temperature of $70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for one hour.

C. Post-requisite Instructions

- (1) Close the Fan Cowl Doors as instructed in the A319/A320/A321/V2500-A1/A5 Aircraft Maintenance Manual, Task 71-13-00-410-010.

D. Recording Instructions

Write in the Aircraft Log Book and metal stamp, vibroetch or electroetch on the Fan Cowl Door data plate that Service Bulletin V2500-NAC-71-0235 has been done. Refer to the IAE V2500 Standard Practices/Processes Manual, Chapter 70-09-00.

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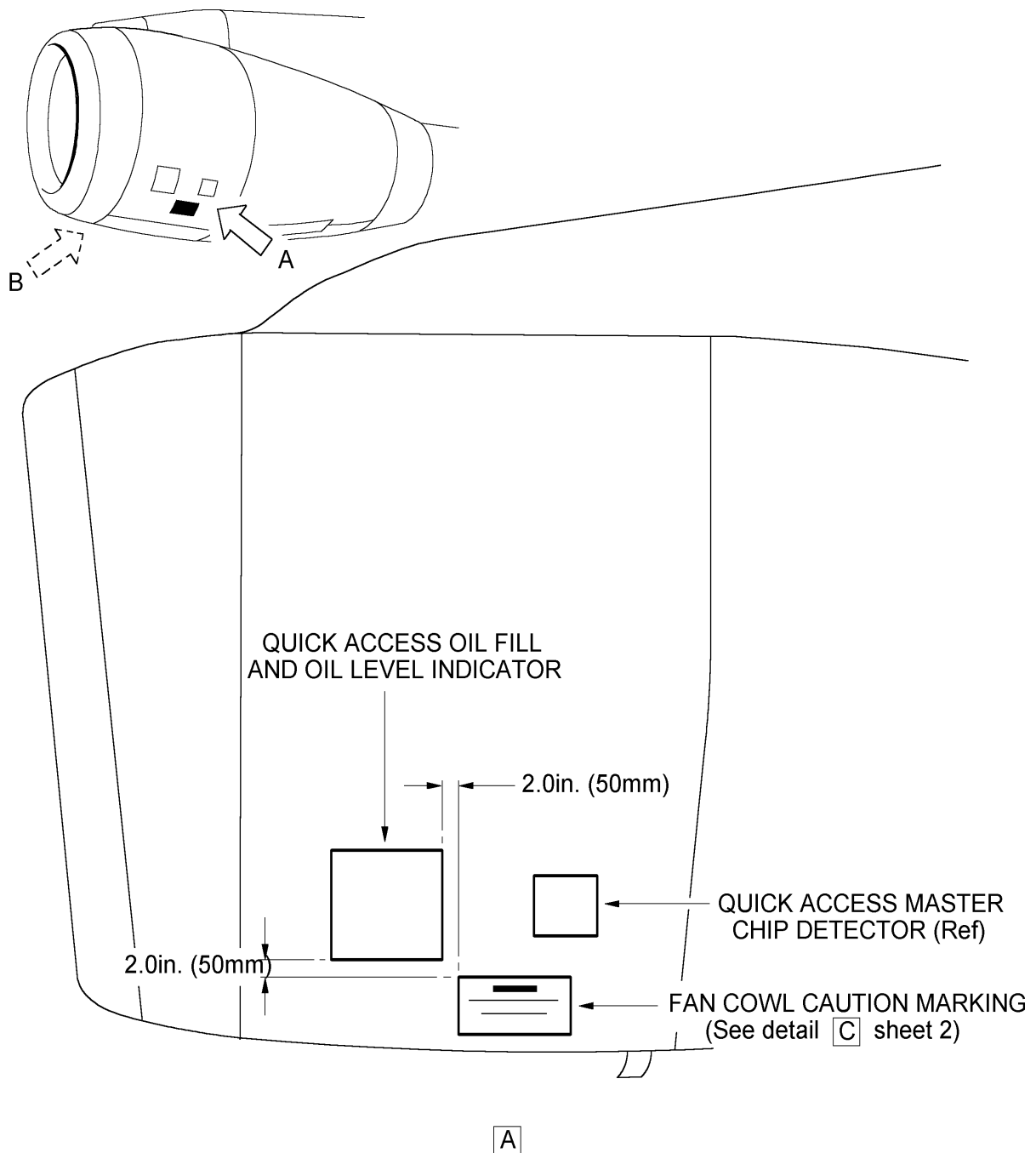
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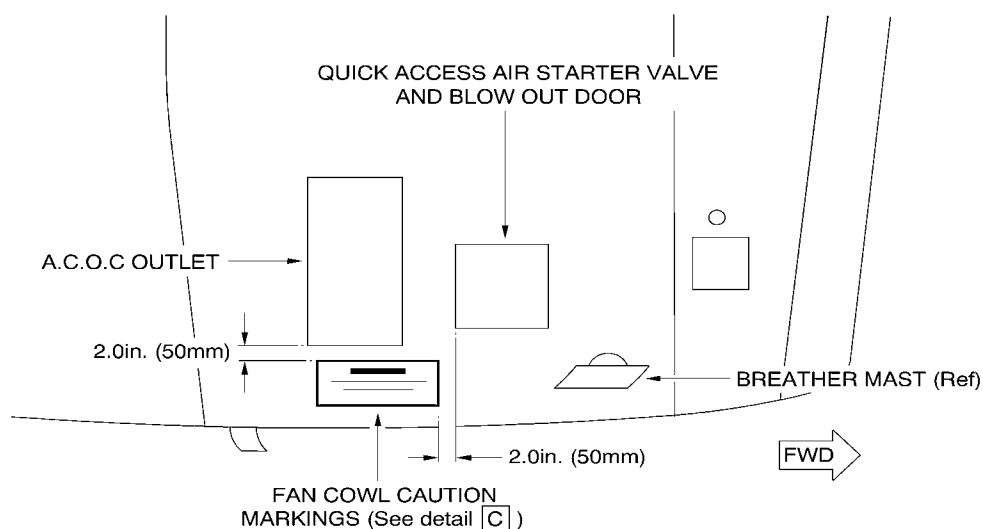
Application of Caution Marking
Figure 1 Sheet 1

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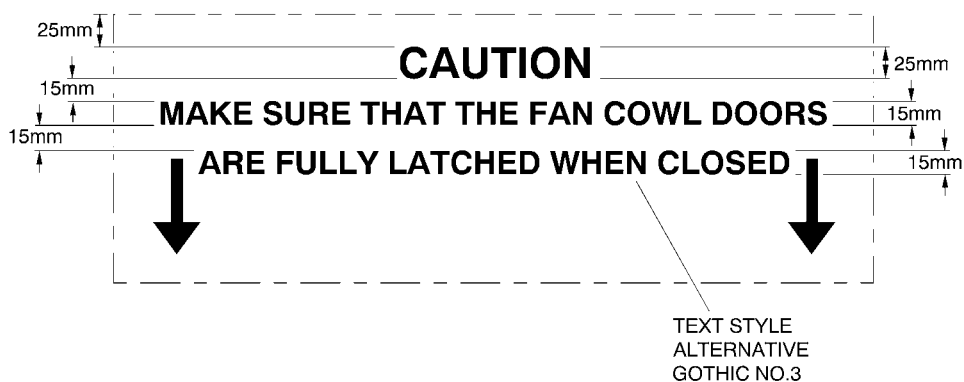


B



C

Application of Caution Marking
Figure 1 Sheet 2



Application of Caution Marking
Figure 2



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3. Material information

Applicability: For each V2500-A1 or V2500-A5 Nacelle to incorporate this Bulletin.

A. Kits associated with this Bulletin

None.

B. Parts affected by this Bulletin:

<u>NEW PART No (ATA No)</u>	<u>QTY</u>	<u>EST'D UNIT PRICE (\$)</u>	<u>KEYWORD</u>	<u>OLD PART No (IPC No)</u>	<u>INSTR/ DISPOS</u>
740-3199-029 (71-13-11)	1		..Decal, Fan Cowl Door Latch Caution	- - - - (02-040)	(A)(1D)

C. Materials required to incorporate this Service Bulletin:

CoMat 01-076	Solvent
CoMat 02-099	Lint free cloth
CoMat 07-096	Thinner
CoMat 07-097	Catalyst
CoMat 07-098	Polyurethane Lacquer 683-3-2
CoMat 02-178	3M Masking Tape #250
CoMat 02-174	Cotton Swab
Fixative "UW" (green colour)	Supplied by - TIP Serigraphie (Transferts Industriels et Publicitaires) Zone Industrielle Nord Rue Philippe Le Bon BP 411 85010 LA ROCHE SUR YON cedex France Tel. 00-33-2-51-36-26-48 Fax. 00-33-2-51-36-32-06
CoMat 01-201	Distilled Water
CoMat 07-076	Thinner
CoMat 07-077	Catalyst
CoMat 07-078	Gloss Base

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

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