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Tel : (33) 61-93-33-33
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A320

Vu DBR
Vu P34

SERVICE BULLETIN

29 JUIL. 1991

D

REVISION TRANSMITTAL SHEET

M/01 — 27-05-91 — 22-01-91

MODIFICATION No. : INSPECTION

ATA SYSTEM : 21

T I T L E : AIR CONDITIONING — PACK 1 AND 2 — INSPECT THE RAM AIR INLETS

Herewith Revision No. 1 of Service Bulletin A320-21-1040.

No additional work is required by this Revision.

REASON

This Revision is issued to cancel this Service Bulletin. The inspection is no longer required.

FILING INSTRUCTIONS

Discard Service Bulletin completely.

Insert this Revision Transmittal Sheet in your file.

REVISION SEQUENCE

Original: Feb 27/91
Revision No.: 1-

DATE :

REVISION No. : JUL 08/91

SERVICE BULLETIN No. : A320-21-1040

Printed in France

A320

SERVICE BULLETIN

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MODIFICATION No. : INSPECTION

ATA SYSTEM : 21

T I T L E : AIR CONDITIONING - PACK 1 AND 2 - INSPECT THE RAM AIR INLETS

IS BEING HEREWITH SUBMITTED TO YOU FOR REVIEW

Please fill : ... REJECTED

... WILL BE EMBODIED

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This SB can only be incorporated in your "customized" documentation within the agreed time schedule in so far as this sheet is returned to us on purchase date and signed by a duly authorized and empowered officer or representative.

F R O M :

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Please return to:

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Att. : AI/SP - Technical Publications Department

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A320
SERVICE BULLETIN

MODIFICATION No. : INSPECTION

ATA SYSTEM : 21

T I T L E : AIR CONDITIONING - PACK 1 AND 2 - INSPECT THE RAM AIR INLETS

1. PLANNING INFORMATION

A. EFFECTIVITY

(1) Aircraft Models: All A320

(2) Spares

None

B. REASON

(1) History

During servicing of the air cooling system, the fan of the air cooling machine was found to be ruptured. Tests have shown that the fan stress level was extreme when the ram air inlet was closed (linked to reduced fan flow) during take-off and landing.

(2) Objective/Action

Checking the play of the kinematic of the ram air inlet and the gap dimension between the intake nose and the diffuser ramp, when the actuator is in the mechanical stop.

(3) Advantages

To ensure sufficient air flow over the ACM fan and maintain ACM reliability.

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(4) Accomplishment Timescale

This inspection should be carried out at every C-Check.

C. DESCRIPTION

Accomplishment of this Service Bulletin consists of:

(1) Gaining access to the pack ram air inlets, LH and RH.

(2) Checking the play of the kinematic of the ram air inlets.

(3) Disconnecting the air inlet flap actuators 8HH and 28HH.

(4) Connecting an external regulated AC power supply to the air inlet flap actuators and driving the actuators to the mechanical stop:

(5) Checking the gap between the intake nose and the diffuser ramp and adjusting the gap if out of tolerance.

(6) Reconnecting the air inlet flap actuators 8HH and 28HH.

(7) Performing an operational test of the pack temperature control system.

(8) Close-up.

D. APPROVAL

This Service Bulletin is approved by Direction Générale de l'Aviation Civile - FRANCE (D.G.A.C).

E. MANPOWER

	Manhours
Gain access	1.5
Inspection	4.0
Test	1.0
Close-up	2.5
TOTAL MANHOURS	9.0
ELAPSED TIME (HOURS)	4.0

NOTE: This Service Bulletin assumes that the aircraft has been placed in a maintenance status. The manhours/elapsed time estimates do not include preparation for the modification, non-productive elapsed time, or administrative functions.

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F. MATERIAL - COST AND AVAILABILITY

None

G. TOOLING - PRICE AND AVAILABILITY

Regulated AC power supply with following electrical data :

Output 0-115 V AC/400 Hz (min. 0.25 A)

and 28V DC power supply.

H. WEIGHT AND BALANCE

None

J. REFERENCES

Aircraft Maintenance Manual : 12-34-24, 21-52-00, 21-61-00, 21-61-51, 53-35-13

Service Bulletin: A320-21-1036, A320-21-1037

K. PUBLICATIONS AFFECTED

Maintenance Planning Document

Printed in France

2. ACCOMPLISHMENT INSTRUCTIONS

WARNING: MAKE SURE THAT NO AIR IS SUPPLIED TO THE AIR CONDITIONING SYSTEM FROM THE MAIN ENGINE, THE APU OR GROUND SOURCE.

A. GENERAL

Accomplishment of this Service Bulletin includes the following operations:

(1) Preparation

(a) Electrically ground the aircraft (Ref. AMM 12-34-24, P. Block 201).

(b) Open safety and tag these circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
FOR 8HH			
122VU	AIR COND/PACK TEMP/CTL SYS1/1/115VAC	1HH	X22
122VU	AIR COND/PACK TEMP/CTL SYS1/1/28VDC	3HH	X21
122VU	AIR COND/PACK TEMP CTL SYS2/1/28VDC	4HH	Y19
122VU	AIR COND/PACK TEMP CTL SYS2/1/115VAC	2HH	Y18
FOR 28HH			
122VU	AIR COND/PACK TEMP/CTL SYS1/2/115VAC	21HH	W22
122VU	AIR COND/PACK TEMP/CTL SYS1/2/28VDC	23HH	W21
122VU	AIR COND/PACK TEMP CTL SYS2/2/28VDC	24HH	Y21
122VU	AIR COND/PACK TEMP CTL SYS2/2/115VAC	22HH	Y20

(c) Put a warning notice in the cockpit to tell persons not to operate the air cooling system (Ref. AMM 21-52-00, P. Block 501).

(d) Remove the access panels 191KB and 192KB.

B. INSPECTION

NOTE: The procedure is given for the pack ram air inlet LH; RH is similar. Designations for RH side are given in brackets.

Refer to Figure 1

(1) Inspection of the ram air inlet kinematic for play.

(a) Inspect all connections of the ram air inlet kinematic for correct play.

- If the play of the diffuser ramp is more than 1 mm (0.04 in.), replace the respective component.

NOTE: Report the inspection findings to AIRBUS INDUSTRIE, Dept. ST23

- In case of no findings, inspect the gap dimension between the intake nose and the diffuser ramp (Ref. Para. 2.B.(2).

NOTE: Store the removed component(s) for later investigations.

(2) Inspection of gap dimension between the intake nose and the diffuser ramp.

(a) Disconnect the electrical connector 8HH-A (28HH-A), item 2 from the actuator 8HH (28HH), item 3.

(b) Connect the 28V DC supply to the connector of the actuator 8HH (28HH) respectivily, to loosen the electromechanical brake:

- 28V DC plus line to pin 'U'
- minus line to pin 'T'.

NOTE: Do not switch on the 28V DC power supply at this stage.

(c) Provide AC power supply as specified in para. 1.G.

(d) Prepare the AC power supply as follows:

NOTE: Do not connect the AC power supply to the actuator at this stage.

1 Regulate the AC power supply exactly to 70 V AC, marking the adjustment point.

2 Switch off the AC power supply.

(e) Drive the actuator 8HH (28HH) to the mechanical stop:

1 Connect the AC power supply to the following pins of the actuator 8HH (28HH):

- Phase line to pin 'R'
- Return line to pin 'H'

NOTE: Ensure that the regulated AC power supply is still on the adjusted 70 V point.

2 Switch on 28V DC power supply and the AC power supply. Switch-off both power supplies at the same time when the actuator 8HH (28HH) is in the mechanical stop position (no more movement).

(f) Check the gap between the inlet nose, item 5 and diffuser ramp, item 4:

GAP = 0.8 mm + 0.6 mm, -0.5 mm
(0.0314 in. + 0.0236 in., - 0.0196 in.)

(g) If the gap is out of tolerance, adjust as described in AMM 21-61-51, P. Block 401.

NOTE: Do not change the settings of the rod, item 6.

NOTE: Do not turn out the eye-end of the setting device, item 7 more than 6 mm (0.236 in.).

(h) Drive the actuator 8HH (28HH) continuously to fully open position:

1 Regulate the AC power supply to 0 V output.

2 Connect the AC power supply to the following pins of the actuator 8HH (28HH):

- Phase line to pin 'V'
- Return line still to pin 'H'

NOTE: The 28V DC power supply is still on the same connection points of the actuator 8HH (28HH).

3 Switch-on the 28 V DC power supply and the AC power supply.

CAUTION: DO NOT REGULATE THE VOLTAGE HIGHER THAN 70 V AC; OTHERWISE THE ACTUATOR WILL BE DAMAGED.

4 Regulate the voltage continuously to the marked 70 V position and check the correct movement of the diffuser ramp, item 4 to the fully open position.

5 If no more movement is noticed, switch-off the AC power supply and the 28V DC power supply.

(j) Drive the actuator 8HH (28HH) continuously to the mechanical stop position:

1 Regulate the AC power supply to 0 V output.

2 Connect the AC power supply to the following pins of the actuator 8HH (28HH):

- Phase line to pin 'R'
- Return line still to pin 'H'

NOTE: The 28V DC power supply is still on the same connection points of the actuator 8HH (28HH).

3 Switch on the 28V DC power supply and the AC power supply.

CAUTION: DO NOT REGULATE THE VOLTAGE HIGHER THAN 70 V AC; OTHERWISE THE ACTUATOR WILL BE DAMAGED.

4 Regulate the voltage continuously to the marked 70 V position and check the correct movement of the diffuser ramp, item 4 to the mechanical stop.

5 If no more movement is noticed, switch off the AC power supply and the 28V DC power supply.

(k) Check the gap again as described in para. 2.B.(2),(f).

(l) Disconnect both power supplies from the actuator 8HH (28HH).

(m) Re-connect the electrical connector 8HH-A (28HH-A), item 2 to the actuator 8HH (28HH), item 3.

(n) Make sure that the work area is clean and clear of tools and other items.

C. TEST

(1) Remove the safety clips and tags and close these circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
FOR 8HH			
122VU	AIR COND/PACK TEMP/CTL SYS1/1/115VAC	1HH	X22
122VU	AIR COND/PACK TEMP/CTL SYS1/1/28VDC	3HH	X21
122VU	AIR COND/PACK TEMP CTL SYS2/1/28VDC	4HH	Y19
122VU	AIR COND/PACK TEMP CTL SYS2/1/115VAC	2HH	Y18
FOR 28HH			
122VU	AIR COND/PACK TEMP/CTL SYS1/2/115VAC	21HH	W22
122VU	AIR COND/PACK TEMP/CTL SYS1/2/28VDC	23HH	W21
122VU	AIR COND/PACK TEMP CTL SYS2/2/28VDC	24HH	Y21
122VU	AIR COND/PACK TEMP CTL SYS2/2/115VAC	22HH	Y20

WARNING: BEFORE YOU START THE TEST, MAKE SURE THAT THERE ARE NO PERSONS NEAR THE RAM AIR OUTLET DOORS.

(2) Do the operational test of the pack temperature control system (Ref. 21-61-00, P. Block 501).

D. CLOSE-UP

(1) Close the access panels 191KB and 192KB (Ref. AMM 53-35-13, P. Block 401).

(2) Remove the warning notice from the cockpit.

(3) Restore the aircraft to normal operating condition.

E. DOCUMENTATION

Record the accomplishment of this Service Bulletin in the relevant aircraft technical records.

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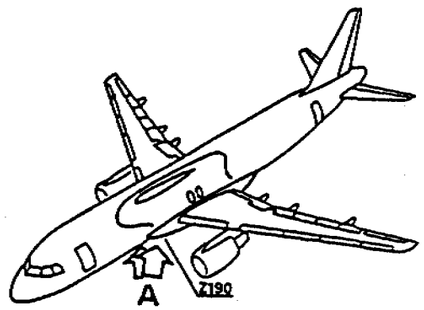

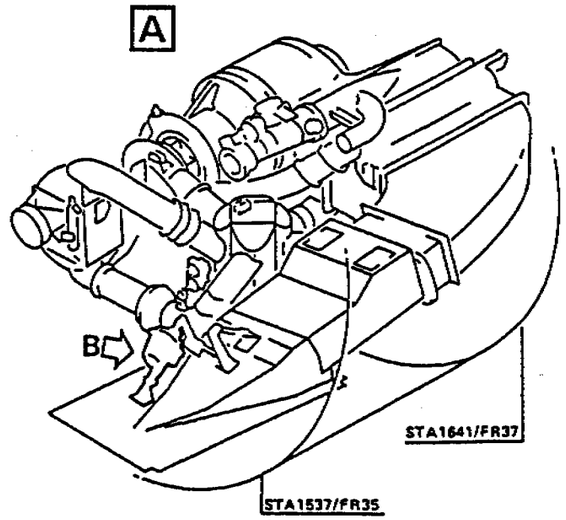

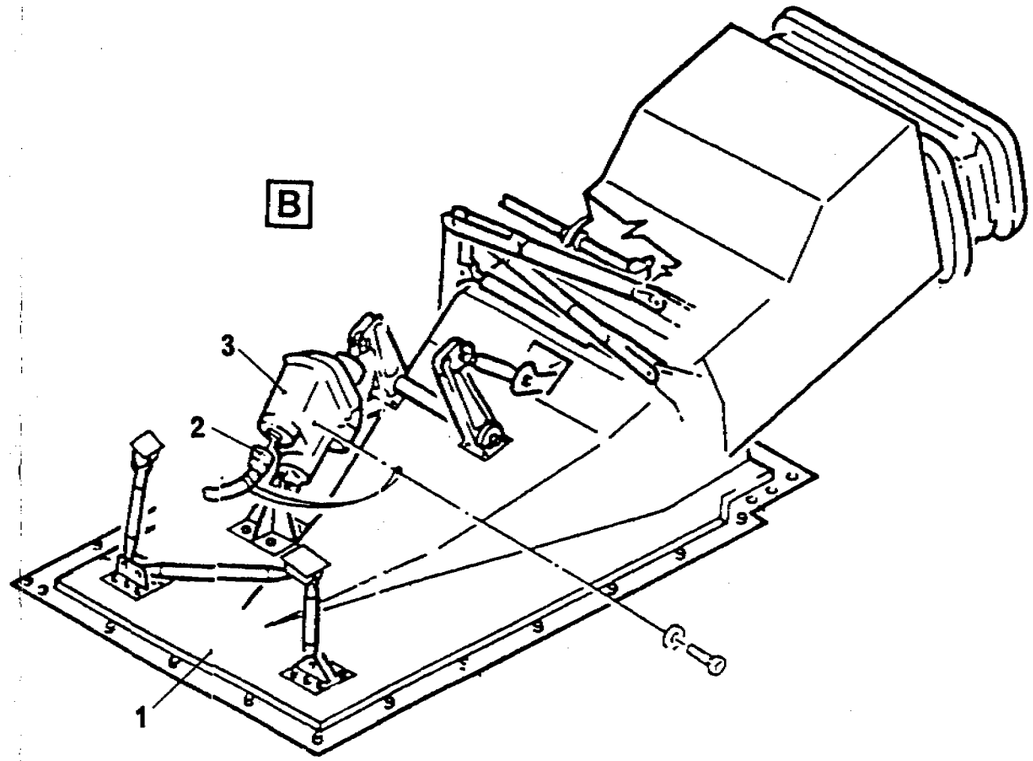

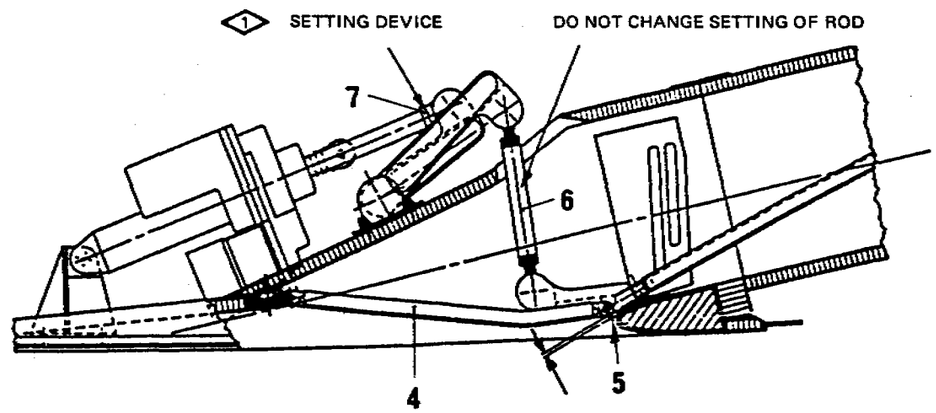

GAP DIMENSION INLET NOSE/DIFFUSOR RAMP
(OVER ENTIRE RAMP WIDTH)

Inspection of Ram Air Inlet
Figure 1

1 CAUTION: DO NOT TURN–OUT THE EYE END OF THE ROD MORE THAN 6mm(0.236in.)

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A320 Va DBB>
SERVICE BULLETIN
SUMMARY
Va P3A

M/00 — 22-01-91

This summary is for information only
and is not D.G.A.C.-approved for modification of the aircraft

MODIFICATION No. : INSPECTION ATA SYSTEM : 21

T I T L E : AIR CONDITIONING - PACK 1 AND 2 - INSPECT THE RAM AIR INLETS

REASON/DESCRIPTION/OPERATIONAL CONSEQUENCES

Operators have reported abnormal wear of the ram air inlet assembly.

The purpose of this Service Bulletin is to ensure that the ram air inlets remain properly adjusted as it could have an adverse impact on the reliability of the Air Cycle Machine (ACM). Therefore the play of the kinematic of the ram air inlet and the gap dimension between the intake nose and the diffuser ramp, when the actuator is in the mechanical stop, has to be checked.

This Inspection should be carried out at every C-check.

EFFECTIVITY

This Service Bulletin is applicable to the following operators: AAA, ACA, ADR, AFR, AMC, ANA, BAW, CDN, CYP, DLH, HP, IAC, IBE, ITF, MSR, NWA, OYC, RJA, TAR, XF, XP and XZ.

SERVICE BULLETIN/MODIFICATION TO BE ACCOMPLISHED PREVIOUSLY OR SIMULTANEOUSLY

None.

REFERENCES/REPERCUSSIONS

TFU		21.53.00.03	LIFE LIMIT	None
OEB	Added	None	LINE MAINTENANCE AFFECTED	
	Cancelled	None	NO	
AOT		None		
SIL		None	OTHERS	None

NATURE OF THE MODIFICATION

AIRCRAFT	YES
EQUIPMENT	NO

COMPLIANCE

Desirable

MANPOWER

Manhours	9
Elapsed time (hours)	4

MATERIAL INFORMATION

Aircraft Data

None

Equipment Data

None

Special Tools

Regulated AC power supply.

APPENDICES

None

A320

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M/00 — ——— — 22-01-91

SERVICE BULLETIN CHANGE NOTICE

S.B. No. A320-21-1040 REV.- DATED : Feb 27/91

Mod. No. INSPECTION

TITLE : AIR CONDITIONING - PACK 1 AND 2 - INSPECT THE RAM AIR INLETS

MODEL : All models listed on S.B.

DESCRIPTION :

This notice is issued to inform the affected operators that the subject Service Bulletin is changed as stated below.

Service Bulletin
Page 3/4 - Para.1.J. REFERENCES: The references to SB A320-21-1036 and A320-21-1037 are deleted

This change will be incorporated in the next revision of this Service Bulletin; however no revision is planned at the present time.

File this Change Notice in front of the Service Bulletin.