AIRBUS INDUSTRIE
PRODUCT SUPPORT DIRECTORATE
1 Rond Point Maurice BELLONTE
31707 BLAGNAC CEDEX FRANCE

Tel: (33) 61-93-33-33 Telex: AIRBU 530526 F

#### SERVICE BULLETIN CHANGE NOTICE

**SA320** 

S.B. No. A320-21-1001

REV. O

ATV

QTY

DATED: MAR 03/89

Mod. No. 20905/K0893

TITLE: AIR CONDITIONING - TRIM AIR SYSTEM - REPLACE HOT TRIM DUCT (Y-DUCT)

# **DESCRIPTION**

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

Page 15, Para. 3.A. LIST OF COMPONENTS PER AIRCRAFT change as follows:

# FROM

ITEM	NEW P/N	PER KIT 211001 A01	DESCRIPTION	ITEM	OLD P/N	
6 10	D2167200000200 NSA8206-145	1	Duct O-Ring	(6) (10)	D2167200000000 -	_

TO

ITEM	NEW P/N	PER KIT 211001 A01	DESCRIPTION	ITEM	OLD P/N
21	D2167200000200	1	Duct	(21)	D2167200000000
18	NSA8206-145	4	O-Ring	(18)	

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

# FILING INSTRUCTIONS

File this Change Notice in front of this Service Bulletin.

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SERVICE BULLETIN SUMMARY

Tel: (33) 61-93-33-33 SUMMARY Telex: AIRBU 530526 F

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

MODIFICATION NO: 20905/K0893 ATA SYSTEM: 21

T I T L E : AIR CONDITIONING - TRIM AIR SYSTEM - REPLACE HOT TRIM DUCT (Y-DUCT)

#### REASON

During endurance tests it was found that after approximately 180,000 cycles a crack of 13 mm (0.512 in.) became evident in the Hot Trim Duct of the Trim Air System. Up to the end of the endurance tests of 300,000 cycles, further crack propagation had extended only a further 5 mm (0.197 in.) giving a total crack detection of 18 mm (0.709 in). It is recommended that at 24,000 flight hours the Hot Trim Duct should be replaced with a modified duct.

# ACTION

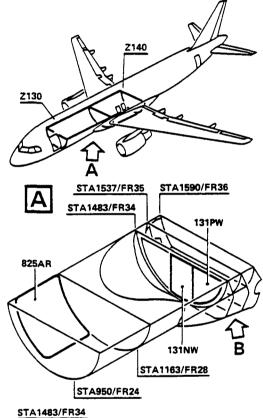
Removing the Hot Trim Duct and installing a modified Hot Trim Duct.

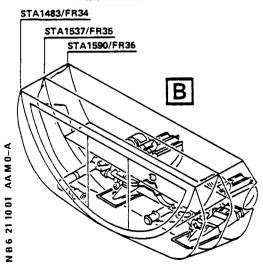
#### **EFFECTIVITY**

Applicable by Service Bulletin on A/C MSN 005 thru 008 and 010 thru 030. Embodied prior to delivery on A/C MSN 031 and subsequent.

# COMPLIANCE

Recommended





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MANPOWER

Kit No. A320211001A01

Manhours: 17.00 Elapsed time (hours): 5.00

MATERIAL INFORMATION

Quantity per aircraft:
1 Hot trim duct and 4 0-rings

NOTE: Modification of one aircraft requires: 1 A/C Kit No. 320211001A01.

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AIRBUS INDUSTRIE PRODUCT SUPPORT DIRECTORATE 1 Rond Point Maurice BELLONTE 31707 BLAGNAC CEDEX FRANCE

**GA320** 

SERVICE BULLETIN

Tel: (33) 61-93-33-33 Telex: AIRBU 530526 F

MODIFICATION NO: 20905/K0893 ATA SYSTEM: 21

T I T L E : AIR CONDITIONING - TRIM AIR SYSTEM - REPLACE HOT TRIM DUCT (Y-DUCT)

# 1. PLANNING INFORMATION

#### A. EFFECTIVITY

(1) Aircraft Models: 320-111, 320-211, 320-231

(2) Aircraft

Customer	MSN	Qty of Kits	
Fleet No.		211001A01	
AAA 001-008	022, 023, 024, 025	8	
	026, 027, 029, 030		
AFR 001, 002	005, 007	2	
004-007	014, 019, 020, 021	4	
BAW 001-005	006, 008, 011, 017, 018	5	
CYP 001 .	028	1	
ITF 001-005	010, 012, 013, 015, 016	5	

This modification is embodied prior to delivery on A/C MSN 031 and subsequent.

Accomplishment of this Service Bulletin cancels the following Recordable Concession:

TH-72603

A/C MSN 6

#### (3) Spares

The embodiment of this modification renders these spares redundant.

D2167200000000

Duct

# B. REASON

During endurance tests it was found that after approximately 180,000 cycles a crack of 13 mm (0.512 in.) became evident in the hot trim duct of the trim air system. Up to the end of the endurance tests of 300,000 cycles, further crack propagation had extended only a further 5 mm (0.197 in.) giving a total crack detection of 18 mm (0.709 in.). It is recommended that at 24,000 flight hours the hot trim duct should be replaced with a modified duct.

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# C. DESCRIPTION

Accomplishment of this Service Bulletin consists of:

(1) Removing the hot trim duct (Y-duct) from the trim air system and replacing it with a modified hot trim duct.

# D. APPROVAL

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

# E. MANPOWER

This Service Bulletin may be accomplished in the following approximate manhours and elapsed time:

	Manhours/Aircraft		
	Kit No. 211001A01		
Gain access	2.50		
Modification	9.00		
Test	3.00		
Close-Up	2.50		
Total manhours	17.00		
Elapsed time (hours)	5.00		

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.

# F. MATERIAL-COST AND AVAILABILITY

#### (1) Material

Operators with aircraft listed under paragraph 1. A. (2), should submit purchase orders quoting this Service Bulletin to:

AIRBUS INDUSTRIE SPARES SUPPORT CENTER WEG BEIM JAEGER 150 D2000 HAMBURG 63 GERMANY

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#### SERVICE BULLETIN

(2) Cost and Availability

Kit Cost Availability\*

(U.S. Dollars)

A320211001A01 3,780 150

\* Calendar days from receipt of order.

NOTE: Sales terms (cost and availability) are evaluated with respect to economic conditions at the issue date of this Service Bulletin.

A discount of (10) percent will be accorded to all orders received within a period of 120 days from the original issue date of this Service Bulletin.

G. TOOLING - PRICE AND AVAILABILITY

None

H. WEIGHT AND BALANCE

None

I. REFERENCE

Aircraft Maintenance Manual 06-41-53, 24-00-00, 24-41-00, 49-40-00, 52-10-00, 52-30-00, 53-35-13

J. PUBLICATIONS AFFECTED

Illustrated Parts Catalog 21-63-03

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# 2. ACCOMPLISHMENT INSTRUCTIONS

### A. GENERAL

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

#### (1) Preparation

- (a) Electrically ground the aircraft (Refer to AMM 24-00-00, Page Block 301).
- (b) Put the correct access platform at the door of the FWD cargo compartment.
- (c) Open the door of the FWD cargo compartment (Refer to AMM 52-30-00, Page Block 201).
- (d) At the rear of the FWD cargo compartment, remove the partition panels 131NW and 131PW at FR34.
- (e) Put the correct access platform at access panels 191KB and 192KB.
- (f) Remove the access panels 191KB and 192KB (Refer to AMM 53-35-13, Page Block 401).

#### B. MODIFICATION

(1) Replacement of the Hot Trim Duct (Y-duct) in the Trim Air System.

Refer to Figure 1

(a) Remove:

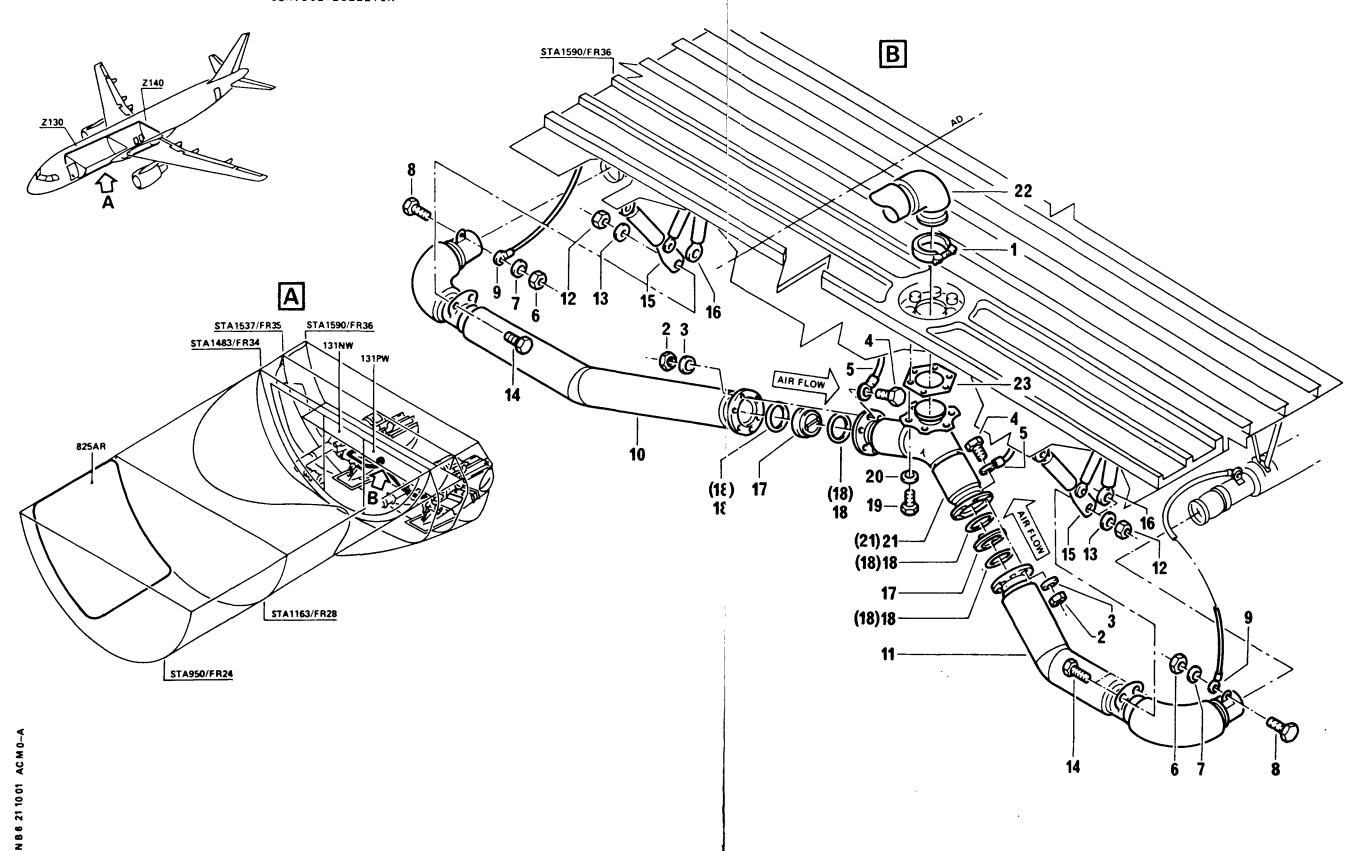
1 Vee clamp item 1 (retain)

- (b) From the right side and the Left side of the hot trim duct (Y-duct), item (21), remove:
  - 12 nuts items 2 (retain)
  - 12 washers items 3 (retain)
  - 12 bolts items 4 (retain)

NOTE: The bonding leads, items 5, become disconnected when items 2, 3 and 4 are removed.

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Replacement of Hot Trim Duct



- (c) From the right side duct, item 10 and the Left side duct, item 11, remove:
  - 2 nuts items 6 (retain)
  - 2 washers items 7 (retain)
  - 2 bolts items 8 (retain)

and disconnect bonding leads, items 9:

- (d) Support the ducts, item 10 right side and item 11 Left side and remove:
  - 4 nuts items 12 (retain)
  - 4 washers items 13 (retain)
  - 4 bolts items 14 (retain)

and disconnect the tie-rods right side and left side, item 15 and 16.

- (e) Remove:
  - 1 duct (right side) item 10 (retain)
    1 duct (left side) item 11 (retain)
- (f) From the right side and Left side of the hot trim duct (Y-duct), item
  (21), remove:
  - 2 trim air check valves items 17 (retain)
- (g) From the right side and the Left side of the hot trim duct (Y-duct), item (21) and the removed ducts, items 10 and 11, remove:
  - 4 0-rings items (18) (discard)
- (h) At the bulkhead flange on the hot trim duct (Y-duct), item (21), remove:
  - 6 bolts items 19 (retain)
  - 6 washers items 20 (retain)
- (i) From the elbow duct, item 22 and the bulkhead remove:
  - 1 hot trim duct (Y-duct) D2167200000000 item (21) (discard) 1 bulkhead seal item 23 (retain)
  - NOTE: Make sure that the removed components, the component interfaces, the parts which you retained from the removed components and the adjacent area are clean and in the correct condition.

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- (j) Put in the correct position on the bulkhead:
  - 1 bulkhead seal D2167200620000 item 23 (retained on removal).
- (k) Install the replacement hot trim duct (Y-duct):
  - 1 hot trim duct (Y-duct) D2167200000200 item 21 with
  - 6 washers AN960C416L items 20 (retained on removal)
  - 6 bolts NAS1304-4 items 19 (retained on removal)
- (L) Install in the right side and in the left side of the hot trim duct (Y-duct), item 21 and the removed ducts, items 10 and 11:
  - 4 O-rings NSA8206-145 items 18
- (m) At the right side and the left side of the hot trim duct (Y-duct)
  install:
  - 2 trim air check valves 745A0000-01 items 17 (retained on removal).
  - NOTE: Make sure that the check valve flaps open in the direction of the air flow, and make sure that the locating pin on the check valve, engages in the locating hole on the flanges of the replacement hot trim duct (Y-duct).
- (n) Put in position and support:
  - 1 duct (right side) D2157125100200 item 10 (retained on removal) 1 duct (Left side) D2157125200200 item 11 (retained on removal)
- (o) Position the tie-rods, right side and Left side, items 15 and 16, at the support brackets on the ducts, items 10 and 11 and install:
  - 4 bolts NAS6704U9 items 14 (retained on removal)
  - 4 washers AN960C416 items 13 (retained on removal)
  - 4 nuts MS21043-4 items 12 (retained on removal)

but do not fully tighten them at this time.

- (p) Install on the right side and the left side flanges of the hot trim duct (Y-duct), item 21 and the ducts, items 10 and 11:
  - 2 bonding Leads E0089-10-200 items 5
  - 12 bolts A104-1D items 4 (retained on removal)
  - 12 washers AN960C1QL items 3 (retained on removal)
  - 12 nuts MS21043-3 items 2 (retained on removal)

but do not fully tighten them at this time.

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# (q) Connect:

- 2 bonding Leads E0089-10-200 items 9 with
- 2 bolts NAS6703U1 items 8 (retained on removal)
- 2 washers AN960C10L items 7 (retained on removal)
- 2 nuts MS21043-3 items 6 (retained on removal)
- (r) Make sure that the trim air ducts, items 10 and 11, are correctly located and aligned then tighten all the nuts.
- (s) At the bukhead, engage the elbow duct, item 22 with the hot trim duct and install:
  - 1 Vee clamp NSA8601-09 item 1 (retained on removal)

and TORQUE it to the value given on the clamp.

# C. TEST

- (1) Preparation for the test.
  - (a) Make sure that the work area is clean and clear of tools and other items.
  - (b) Put the correct access platform at the FWD passenger/crew door.
  - (c) Open the FWD passenger crew door (Refer to AMM 52-10-00, Page Block 201).

(d) Make sure these circuit breakers are closed.

PANEL	SERVICE	IDENT.	LOCATION
122VU	AIR COND/PACK TEMP/CTL SYS1/1/115VAC	1нн	22X
122VU	AIR COND/PACK TEMP/CTL SYS2/1/115VAC	2HH	18Y
122VU	AIR COND/PACK TEMP/CTL SYS1/1/ 28VDC	ЗНН	21x
122VU	AIR COND/PACK TEMP/CTL SYS2/1/ 28VDC	4HH	19Y
122VU	AIR COND/PACK TEMP/CTL SYS1/2/115VAC	21HH	22W
122VU	AIR COND/PACK TEMP/CTL SYS2/2/115VAC	22HH	20Y
122VU	AIR COND/PACK TEMP/CTL SYS1/2/ 28VDC	23HH	21W
122VU	AIR COND/PACK TEMP/CTL SYS2/2/ 28VDC	24HH	21Y
122VU	AIR COND/ZONE TEMP/CTL/115VAC/SYS1	1HK	17V
122VU	AIR COND/ZONE TEMP CTL/115VAC/SYS2	2HK	18V
122VU	AIR COND/ZONE TEMP CTL/ 28VDC/SYS1	3HK	19V
122VU	AIR COND/ZONE TEMP CTL/ 28VDC/SYS2	4HK	20V
122VU	AIR COND/FLOW/CTL AND IND/1	1HB	22V
122VU	AIR COND/FLOW/CTL AND IND/2	2HB	21V
122VU	AIR COND/FLOW/MIXER/FLAP	3HB	23V
121VU	EIS/ECAM DU/LOWER/SWTG	24WT2	10R
121VU	EIS/ECAM DU/LOWER/SPLY	13WT2	11R
49VU	EIS/ECAM CTL/PNL	15WT	12E

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- (e) Energize the aircraft electical circuits (Refer to AMM 24-41-00, Page Block 201).
- (f) On the overhead panel 30VU make sure that the X-BLEED selector is in the AUTO position.
- (g) On the overhead panel 30VU push the pack 1 and 2 pushbutton switches.

NOTE: When the pack pushbutton switches are pushed the white OFF light goes off.

- (2) Do this test
  - (a) Start and operate the APU (Refer to AMM 49-40-00, Page Block 501).

NOTE: If the APU is not available, connect a ground supply source to the aircraft high pressure ground connector. The flow should not exceed 1.0 kg/s at a temperature of 200 °C (392 °F). Do the test but do not push the APU BLEED pushbutton switch.

ACTION RESULT

(1) On the ECAM control panel 11VU:
- push the BLEED pushbutton switch.

On the ECAM lower display unit:
- the BLEED page comes on.

NOTE: When the test is in progress you must monitor the pack temperatures on the BLEED page on the ECAM lower display unit:

- (2) On the overhead panel 30VU:
  - push the APU BLEED pushbutton the blue ON light in the APU switch.
    - BLEED pushbutton switch comes on.

- (3) On the trim air System:
  - do a leak check of the Y-Duct connections.
- no leaks are permitted.
- (4) After approximately 15 minutes stop the APU (Refer to AMM 49-40-00, Page Block 501). (Or stop the ground air supply).
- (5) On the overhead panel 30VU:
  - push the APU BLEED pushbutton switch.
  - push the pack 1 and 2 pushbutton switches.
- the blue ON light in the APU BLEED pushbutton switch goes off.
- the white OFF Lights in the pack 1 and 2 pushbutton switches come on.

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# D. CLOSE-UP

- (1) On the ECAM control panel 11VU set the lower display and the upper display knobs to the OFF position.
- (2) Make sure that the work area is clean and clear of tools and other items.
- (3) Install the access panels 191KB and 192KB (Refer to AMM 53-35-13, Page Block 401).
- (4) Install the partition panels 131NW and 131PW at Frame 34, at the rear of the FWD cargo compartment.
- (5) Close the door of the FWD cargo compartment (Refer to AMM 52-30-00, Page Block 201).
- (6) Close the FWD passenger/crew door (Refer to AMM 52-10-00, Page Block 201).
- (7) Remove the access platforms.
- (8) Disconnect the aircraft electrical ground connection (Refer to AMM 24-00-00, Page Block 301).

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# 3. MATERIAL INFORMATION

Basis for the following material data is per aircraft.

A. LIST OF COMPONENTS PER AIRCRAFT

QTY PER KIT 211001

ITEM	NEW P/N	A01	DESCRIPTION	ITEM	OLD P/N	
6	D2167200000200	1	Duct	(6)	D2167200000000	
10	NSA8206-145	4	0-Ring	(10)	-	

B. LIST OF MATERIAL - OPERATOR SUPPLIED

None

C. PARTS TO BE REIDENTIFIED BY OPERATOR

None

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