AIRBUS INDUSTRIE
PRODUCT SUPPORT DIRECTORATE
1 Rond Point Maurice BELLONTE
31707 BLAGNAC CEDEX FRANCE
Tel: (33) 61-93-33-33

Telex: AIRBU 530526F

This summary is for information only and is not approved for modification of the aircraft

MODIFICATION No.: 23191K2776

ATA SYSTEM: 21

TITLE: AIR CONDITIONING - DISTRIBUTION - INSTALL DRAINAGE DEVICES ON CABIN

AIR DISTRIBUTION DUCTS

REASON/DESCRIPTION/OPERATIONAL CONSEQUENCES

One operator has experienced water accumulation in the air conditioning distribution system on several aircraft operating in hot and humid condition.

This Service Bulletin introduces drain holes in the mid and aft cabin distribution ducts and a drain hose between frames 50 and 51 RH.

This modification avoids the water accumulation in the distribution ducts under hot and humid conditions and prevents the possibility of water dripping onto passengers and aircraft equipment.

EFFECTIVITY

This Service Bulletin is applicable to the following operator: ANA

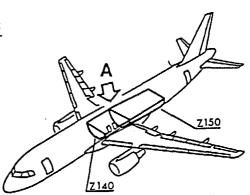
Should other operator wish to embody this modification, please contact:

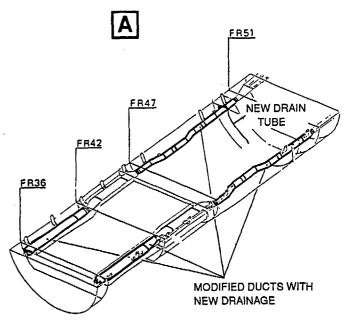
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31707 BLAGNAC CEDEX
FRANCE

through R.F.C./R.M.O. procedure.

SERVICE BULLETIN/MODIFICATION TO BE ACCOMPLISHED PREVIOUSLY OR SIMULTANEOUSLY

None





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REFERENCES/REPERCUSSIONS

TFU 21.21.00.12

LIFE LIMIT

None

0EB None

LINE MAINTENANCE AFFECTED

NO

AOT None

SIL None

OTHERS None

NATURE OF THE MODIFICATION

AIRCRAFT

YES

EQUIPMENT

NO

HARD

NO

SOFT

NO

OBRM

NO

COMPLIANCE

Optional

MANPOWER

Kit No. 211061

A01

Manhours

32.00

Elapsed Time (hours)

16.00

MATERIAL INFORMATION

Aircraft Data

Tube, nipple, clamp, mounts, ties and tape

Equipment Data

None

APPENDICES

None

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

MODIFICATION No.: 23191K2776 ATA SYSTEM: 21

TITLE: AIR CONDITIONING - DISTRIBUTION - INSTALL DRAINAGE DEVICES ON CABIN

AIR DISTRIBUTION DUCTS

1. PLANNING INFORMATION

A. EFFECTIVITY

(1) Aircraft Models: A320-211

(2) Aircraft

Customer and MSN Kit No. Qty of Fleet No. ANA 001-015 138, 139, 148, 151, 167, 170, 196, 212, 219, 245, 300, 328, 365, 383, 413

(3) Spares

None

B. REASON

(1) History

One operator has experienced water accumulation in the air conditioning distribution system on several aircraft operating in hot and humid condition.

(2) Objective/Action

This Service Bulletin introduces drain holes in the mid and aft cabin distribution ducts and a drain hose between frames 50 and 51 RH.

(3) Advantages

This modification avoids the water accumulation in the distribution ducts under hot and humid conditions and prevents the possibility of water dripping onto passengers and aircraft equipment.

(4) Accomplishment Timescale

This optional Service Bulletin can be accomplished at the convenience of the operator.

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C. DESCRIPTION

Accomplishment of this Service Bulletin consists of carrying out the following jobs:

AIRCRAFT

- (1) Opening the FWD passenger/crew door.
- (2) Opening of the AFT cargo compartment door.
- (3) Removing of the passenger seats.
- (4) Removing of the lower sidewall panels.
- (5) Removing of the floor covering
- (6) Removing of the cabin floor panels.
- (7) Removing of the cargo compartment sidewall panels.
- (8) Removing of the air conditioning ducts for modification on bench.
- (9) Installing of the air conditioning ducts.
- (10) Installing of the cargo compartment sidewall panels.
- (11) Installing of the cabin floor panels.
- (12) Installing of the floor covering.
- (13) Installing of the lower sidewall panels.
- (14) Installing of the passenger seats.
- (15) Closing of the AFT cargo compartment door.
- (16) Closing of the FWD passenger/crew door.

BENCH

(17) Modifying of the air conditioning ducts.

D. APPROVAL

The design data contained in this Service Bulletin has been approved under the authority of DGAC Design Organisation Approval No CO1. The changes specified in this Service Bulletin have been approved by the DGAC when they are major, or under the authority of DGAC Design Organisation Approval No CO1, when they are minor.

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E. MANPOWER

	Manhours
Kit No 211061	<u>A01</u>
Gain access	10.00
Modification/aircraft	5.00
Modification/bench	3.50
Close-up	13.00
Test	0.50
TOTAL MANHOURS	32.00
ELAPSED TIME (HOURS)	16.00

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

Should other operator wish to embody this modification, please contact:

AIRBUS INDUSTRIE
PRODUCT SUPPORT DIRECTORATE
AI/SX DEPARTMENT
31707 BLAGNAC CEDEX
FRANCE

through R.F.C./R.M.O. procedure.

Sales terms must be agreed between the Customer and Airbus Industries in accordance with R.F.C./R.M.O. procedure.

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G. TOOLING - PRICE AND AVAILABILITY

None

H. WEIGHT AND BALANCE

Kit No. 211061A01

M.E.W.

:+0.23 kg (+0.51 lb)

Effect on balance :+5.28 kgm (+38.19 lb. ft.)

I. REFERENCES

Aircraft Maintenance Manual: 25-21-41, 25-23-44, 25-28-41, 25-32-12, 25-55-11, 52-10-00, 52-30-00

J. PUBLICATIONS AFFECTED

Illustration Parts Catalog: 21-21-03, 21-21-04

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2. ACCOMPLISHMENT INSTRUCTIONS

AIRCRAFT

WARNING: MAKE SURE THAT ALL THE CIRCUITS IN MAINTENANCE ARE ISOLATED BEFORE YOU SUPPLY ELECTRICAL POWER TO THE AIRCRAFT.

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

A. GENERAL

(1) Preparation

Accomplishment of this Service Bulletin includes these operations:

- (a) Put the access platform in position.
- (b) Open the FWD passenger/crew door (Ref. AMM 52-10-00, P. Block 201).
- (c) Open the AFT cargo compartment door (Ref. AMM 52-30-00, P. Block 201).
- (d) Open, safety and tag these circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
49VU	AIR COND/CAB/PRESS/CTL 1	1HL	009
122VU	AFT CARGO VENT AND HTG/FAN	30HN	\$22
122VU	AIR COND/LAV/GALLY VENT CTL/EXTRACT FAN/SPLY	6HU	U19
122VU	AIR COND/CAB PRESS/CTL/MAN	3HL	Y23
122VU	AIR COND/CAB PRESS/CTL/2	2HL	Y22

- (e) Remove and retain the passenger seats as necessary (Ref. AMM 25-21-41, P. Block 401).
- (f) Remove and retain the lower sidewall panels (Ref. AMM 25-23-44, P. Block 401).
- (g) Remove and retain the floor covering (Ref. AMM 25-28-41, P. Block 401).
- (h) Remove and retain the cabin floor panels (Ref. AMM 25-32-12, P. Block 401).
- (i) Remove and retain the cargo compartment sidewall panels (Ref. AMM 25-55-11, P. Block 401).

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(2) Standard Procedures

- (a) Clean the area(s) with cleaning agent Mat. No. 11-002 where you apply sealant or bond identification placards.
- (b) Tag all retained parts during the removal to make the installation easier.

B. MODIFICATION

NOTE: Item numbers in brackets show parts which have to be modified or discarded.

Part numbers of removed parts are specified in Para. 3. Material Information.

(1) Removal and installation of the duct assys between FR36 and FR42 LH/RH and FR47 and FR51 RH.

Refer to Figure 1

- (a) Removal of the duct assys.
 - 1 Transfer the dimensions to the duct insulation, item 5 and 12, of the duct assys, item (2) and (3) as shown in detail E and section C-C.
 - 2 Mark the existing duct assy position for easy and correct reinstallation.
 - 3 Remove and retain the clamps from the duct assys to be removed.
 - 4 Move the flexible sleeves on the duct assys to disengage the duct assys, item (1), (2), (3) and (4).
 - 5 Remove the duct assys, item (1), (2), (3) and (4) for modification on bench.
- (b) Installation of the duct assys.
 - 1 Make sure that the clamps and the flexible sleeves are in a good condition. Replace, if necessary.
 - 2 Put these duct assys in the installation position as shown in detail A:

duct assy D2127101403100 or item 1
D2127101403400 or
D2127101403800 or
D2127101403700

duct assy D2127102406200 or item 2

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D2127102406600 item 3 D2127102406000 or duct assy D2127102406400 D2127101403200 or item 4 duct assy D2127101404000 or D2127101403600

- 3 Move the flexible sleeves to engage the duct assys, item 1, 2, 3 and 4 and install the retained clamps.
- 4 Do not tighten the clamps at this stage.
- 5 Make sure that the duct assys, item 1, 2, 3 and 4 are correctly aligned, than tighten the clamps to the torque value which is indicated on the clamp.
- (2) Installation of the drainage tube

Refer to Figure 1

- (a) Transfer dimension for fastening holes as shown in section B-B.
- (b) At FR 50 drill and deburr fastening holes 5.2mm (0.205in.) dia.to dimensions as given in section B-B.
- (c) Apply primer (Mat. No. 16-006) and top coat (Mat. No. 16-002) to the fastening holes.
- (d) Install the drainage tube NSA3629-12-17, item 7, with the clamp ASNA0032-022, item 6, to the nipple D2127115920000, item 10.
- (e) Install the drainage tube, item 7, with mounts NSA935513-05, item 8, and ties NSA935401-03, item 9, to the fastening holes at FR50 as shown in section B-B.
- (f) Put the end of the drainage tube under the insulation mat as shown in section B-B.

C. TEST

Do an operational test of the flow control and indicating system as given in AMM 21-51-00, P. Block 501.

D. CLOSE-UP

- Make sure that the work area is clean and clear of tools and other items.
- Install the retained cargo compartment sidewall panels (Ref. AMM 25-55-11, P. Block 401).

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- (3) Install the retained cabin floor panels (Ref. AMM 25-32-12, P. Block 401).
- (4) Install the retained floor covering (Ref. AMM 25-28-41, P. Block 401).
- (5) Install the retained lower sidewall panels (Ref. AMM 25-23-44, P. Block 401).
- (6) Install the retained passenger seats (Ref. AMM 25-21-41, P. Block 401).
- (7) Remove the safety clips and tags and close the circuit breakers opened in para. 2.A.(1)(d).
- (8) Close the AFT cargo compartment door (Ref. AMM 52-30-00, P. Block 201).
- (9) Close the FWD passenger/crew door (Ref. AMM 52-10-00, P. Block 201).
- (10) Remove the access platforms.

E. DOCUMENTATION

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

BENCH

F. REMOVED COMPONENTS AND SPARES

(1) Modification of duct assys, item 1 and 4.

Refer to Figure 2

- (a) Drill and debur a hole of dia. 6mm (0.236in.) in the ducts item (1) and (4) to dimension as shown in detail A.
- (b) Re-identify the modified ducts as:

Item	(1)	D2127101400100	becomes	item 1	D2127101403100
		or			
		D2127101400400	becomes		D2127101403400
		or			
		D2127101400700	becomes		D2127101403700
		or	,		
		D2127101400800	becomes		D2127101403800

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Item (4) D2127101400200 becomes item 4 D2127101403200

or

D2127101400600 becomes D2127101403600

or

D2127101401000 becomes D2127101404000

(2) Modification of duct assy, item 2.

Refer to Figure 3

- (a) Remove the duct insulation, item 5, from the duct, item 2, as necessary for modification.
- (b) Install the nipple D2127115920000, item 10, with adhesive Mat. No. 08-010A onto the duct, item (2) to dimension as shown in section A-A.

CAUTION: OBSERVE MANUFACTURERS INSTRUCTIONS

- (c) After the curing time, drill a hole of dia. 6mm (0.236in.) through the nipple, item 10 in the duct, item (2).
- (d) Cut cross-wise into the duct insulation, item 5, marked in para. 2. B.(1)(a)1 to engage the nipple, item 10.
- (e) Install the duct insulation, item 5, to the modified duct, item 2.
- (f) Cover the cuts with tape D2181000120100, item 11, as shown in detail A.
- (g) Re-identify the modified duct as:

Item (2) D2127102400200 becomes item 2 D2127102406200

or

D2127102400600 becomes D2127102400600

(3) Modification of duct assy, item 3.

Refer to Figure 4

- (a) Remove the duct insulation, item 12, from the duct, item 3, as necessary for modification
- (b) Cut a hole of dia. 40mm (1.575in.) in the duct insulation, item 12, marked in para. 2. B.(1)(a)1 to dimension as shown in detail A.

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- (c) Drill and deburr a hole of dia. 6mm (0.236in.) in the duct, item (3) to dimension as shown in detail A.
- (d) Install the duct insulation, item 12, to the modified duct, item 3.
- (e) Reinforce the hole in the duct insulation, item 12, with tape D2181000120100, item 11, as shown in detail A.
- (f) Re-identify the modified duct assy as:

Item (3) D2127102400000 becomes item 3 D2127102406000

or

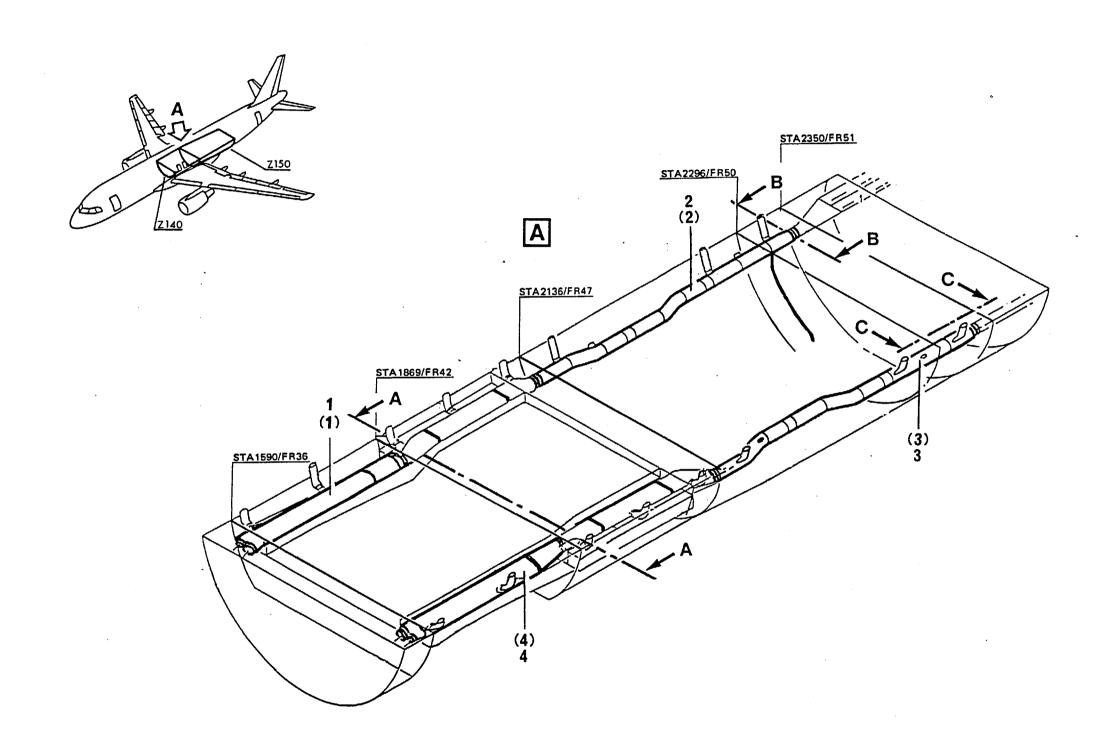
D2127102400400 becomes D2127102406400

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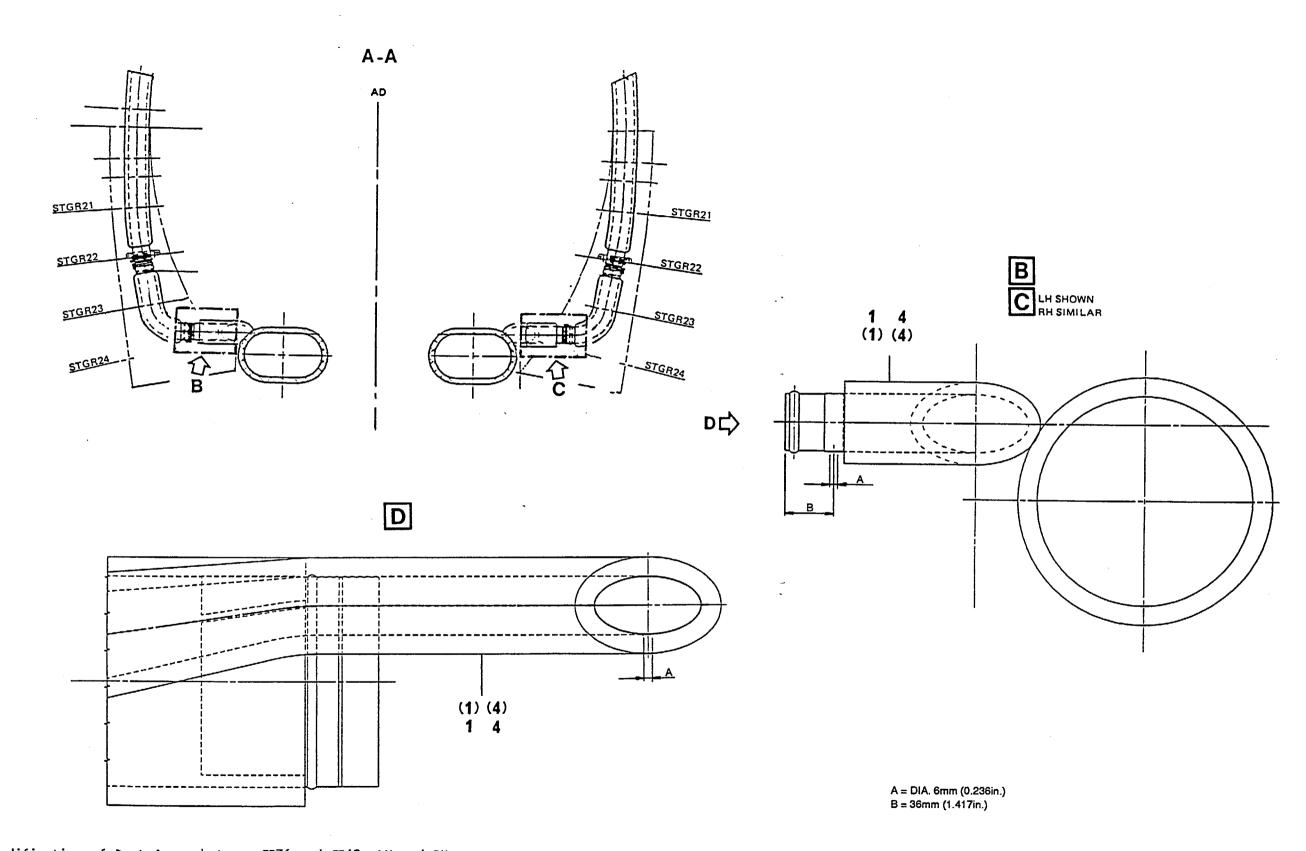
Location of Duct Assys Figure 1, Sheet 1 of 4

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Modification of Duct Assys between FR36 and FR42, LH and RH Figure 1, Sheet 2 of 4

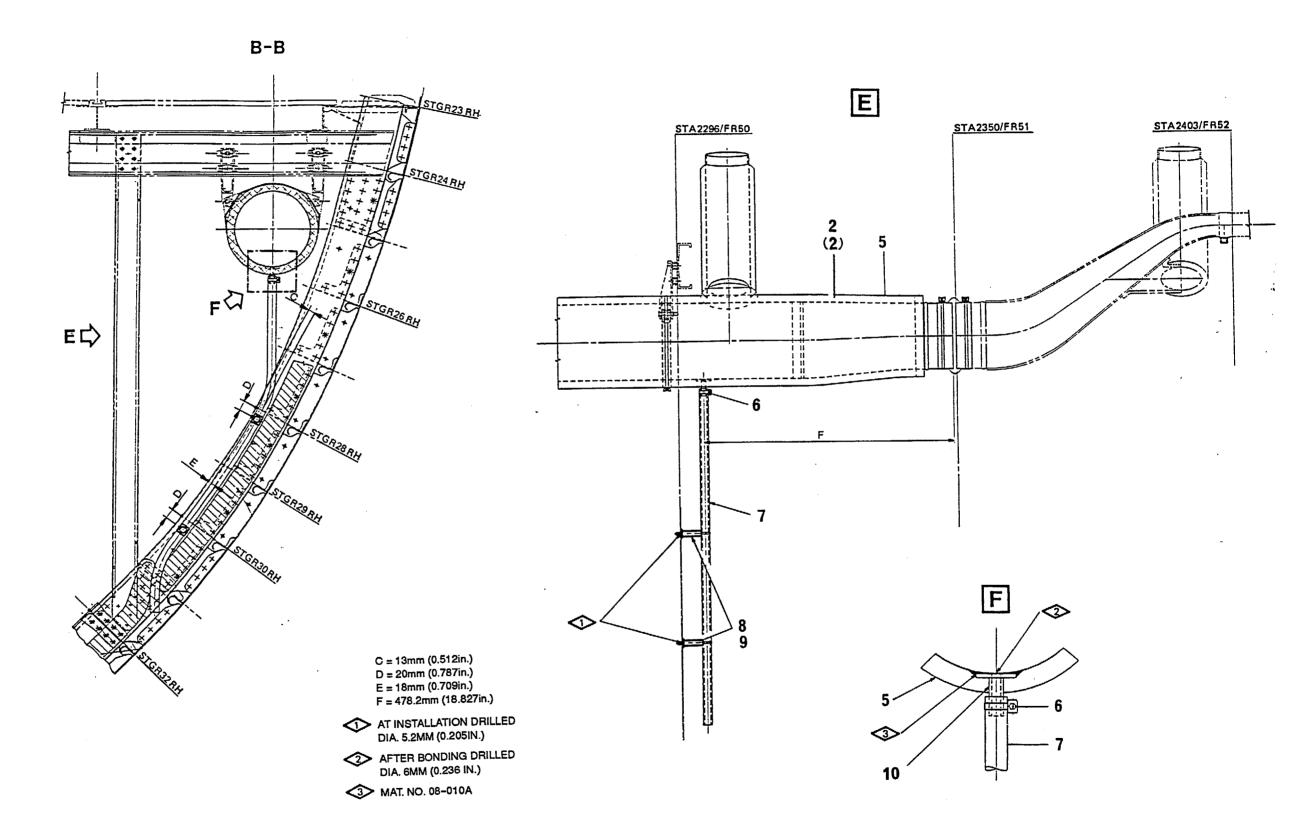
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Removal/Installation of Duct Assy between FR47 and FR51 RH Figure 1, Sheet 3 of 4

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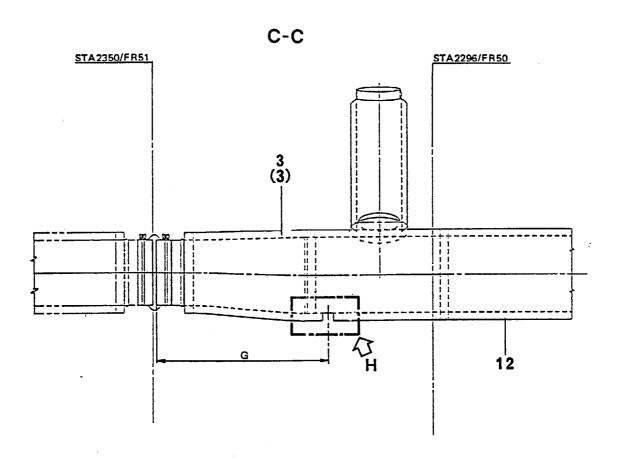
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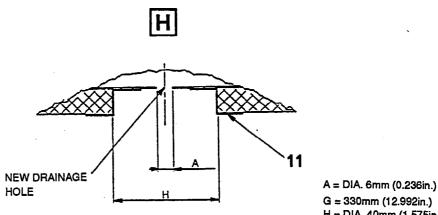
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G = 330mm (12.992in.)

H = DIA. 40mm (1.575in.)

Modification of Duct Assy between FR47 and FR51 LH Figure 1, Sheet 4 of 4

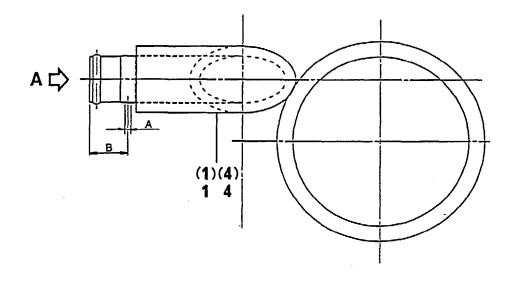
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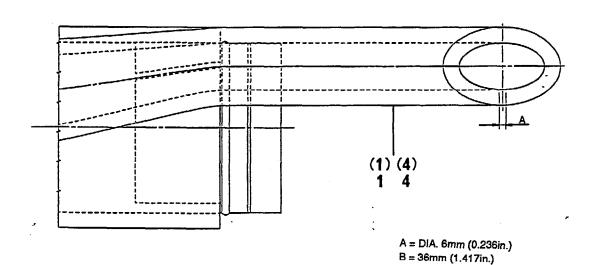
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Modification of Duct Assy Figure 2

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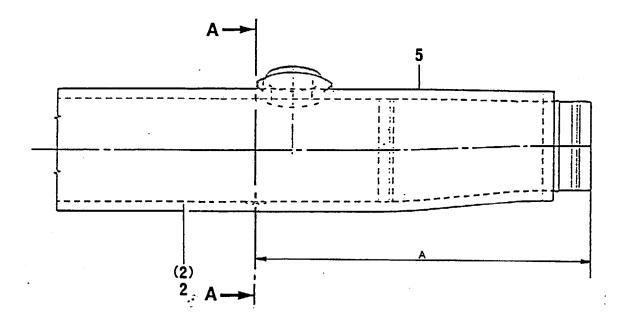
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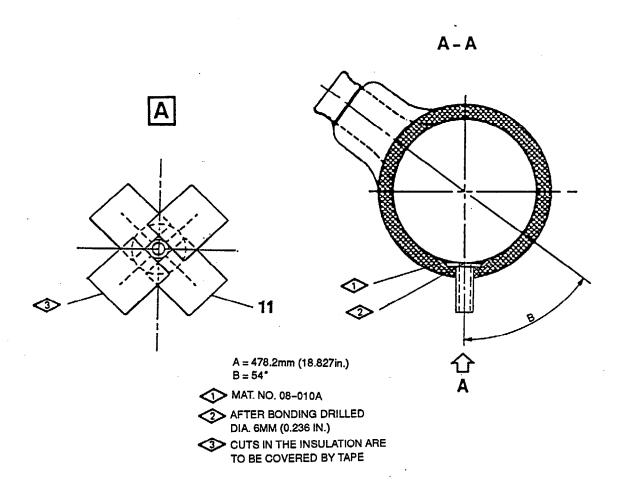
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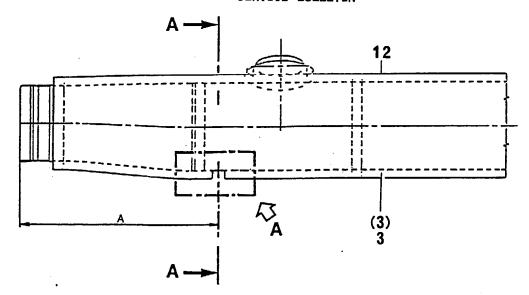
Modification of Duct Assy RH between FR47 and FR51 Figure 3

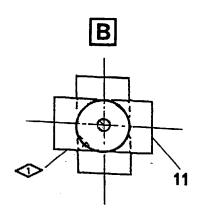
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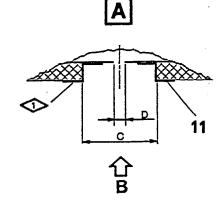
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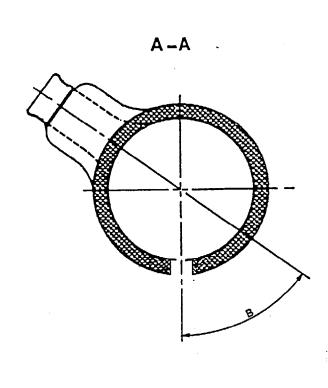
GA320

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A = 330mm (12.992in.)

B = 54°

C = DIA. 40mm (1.575in.)

D = DIA. 6mm (0.236in.)

HOLE REINFORCED BY TAPE

Modification of Duct Assy LH between FR47 and FR51 Figure 4

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3. MATERIAL INFORMATION

Basis for the following material data is per aircraft

A. LIST OF COMPONENTS

I T E M	NEW	PART	NO.	QTY	DESCRIPTION	I T E M	OLD	PART	NO.	I N T	INSTRUCTIONS/ DISPOSITION
------------------	-----	------	-----	-----	-------------	------------------	-----	------	-----	-------------	------------------------------

Kit No.211061A01

6	ASNA0032-022	1	Clamp
7	NSA3629-12-17	800mm (31.496in.)	Tube
8	NSA935513-05	2	Mount
9	NSA935401-03	2	Tie
10	D2127115920000	1	Nipple
11	A2181000120100	500mm (19.685in.)	Tape

B. SPECIAL TOOLS

None

C. LIST OF MATERIALS - OPERATOR SUPPLIED

DESCRIPTION	REFERENCE AMM 20-31-00	QTY PER A/C
Adhesive	Mat. No. 08-010A	As required
Cleaning agent	Mat. No. 11-002	As required
Polyurethane top grey	Mat. No. 16-002	As required
Eooxy primer polyamide chemical	Mat. No. 16-006	As required

D. PARTS TO BE RE-IDENTIFIED BY OPERATOR

ITEM	NEW PN	DESIGNATION	ITEM	OLD PN
1	D2127101403100 or	Duct Assy	(1)	D2127101400100
	D2127101403400 or	Duct Assy		D2127101400400
	D2127101403700	Duct Assy		D2127101400700

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ITEM	NEW PN	DESIGNATION	ITEM	OLD PN
	or			
	D2127101403800	Duct Assy		D2127101400800
2	D2127102406200	Duct Assy	(2)	D2127102400200
	or			
	D2127102406600	Duct Assy		D2127102400600
3	D2127102406000	Duct Assy	(3)	D2127102400000
	or			
	D2127102406400			D2127102400400
4	D2127101403200	Duct Assy	(4)	D2127101400200
	or			
	D2127101403600	Duct Assy		D2127101400600
	or			
	D2127101404000	Duct Assy		D2127101401000

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AIRBUS INDUSTRIE
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1 Rond Point Maurice BELLONTE
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Tel: (33) 61-93-33-33 Telex: AIRBU 530526F

MODIFICATION No.: 23191K2776

ATA SYSTEM: 21

T I T L E : AIR CONDITIONING - DISTRIBUTION - INSTALL DRAINAGE DEVICES ON CABIN

AIR DISTRIBUTION DUCTS

IS BEING HEREWITH SUBMITTED TO YOU FOR REVIEW

Please fill:

... REJECTED

... WILL BE EMBODIED

... EFFECTIVITY

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.

FROM:

<u>AIRLINE</u>:

<u>NAME</u>:

<u>DATE</u>:

19....

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PRODUCT SUPPORT DIRECTORATE
1 Rond Point Maurice BELLONTE
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Att. : AI/SP - Technical Publications
Department

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