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

SERVICE BULLETIN

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

Telex: AIRBU 530526F REVISION TRANSMITTAL SHEET

MODIFICATION No.: 21558K1561 K1563 K1639 K1640 ATA SYSTEM: 21

T I T L E : AIR CONDITIONING - IMPROVE AIRFLOW AT CABIN OUTLETS

Herewith Revision No. 4 of Service Bulletin A320-21-1020.

No additional work is required by this Revision.

REASON

This Revision is issued to include the following changes:

Service Bulletin

Page 1 of 40

- Revision added

Page 33/34

- Restrictor, item 108, detail changed

FILING INSTRUCTIONS:

Replace Service Bulletin Pages 1 of 40 and 33/34.

File this Revision Transmittal Sheet in front of this Service Bulletin.

REVISION SEQUENCE

Original: Jul 02/90
Revision No.: 1- Sep 11/90
Revision No.: 2- Apr 25/91
Revision No.: 3- Jul 08/91
Revision No.: 4- JUL 27/91

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

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

MODIFICATION No.: 21558K1561 K1563 K1639 K1640 ATA SYSTEM: 21

T I T L E : AIR CONDITIONING - IMPROVE AIRFLOW AT CABIN OUTLETS

REASON

(1) History

The manufacturer has performed a series of flight and ground tests in order to improve the passenger compartment air distribution and reduce the noise levels.

(2) Objective/Action

The tests have shown that the desired improvements can be achieved by the following means:

- Introducing new restrictors to equalize the airflow of the air distribution system
- Reducing the airflow across the cabin temperature sensors
- Replacing the material on the muffler walls of the cross-feed ducts by a more efficient glass fabric
- Reducing the recirculation airflow by a reduced diameter fan wheel in the recirculation fans

(3) Advantages

Improvement of the cabin air distribution characteristics, the reduction of perceived sound level in the cabin and the reduction of contamination of the cabin temperature sensors.

(4) Accomplishment Timescale

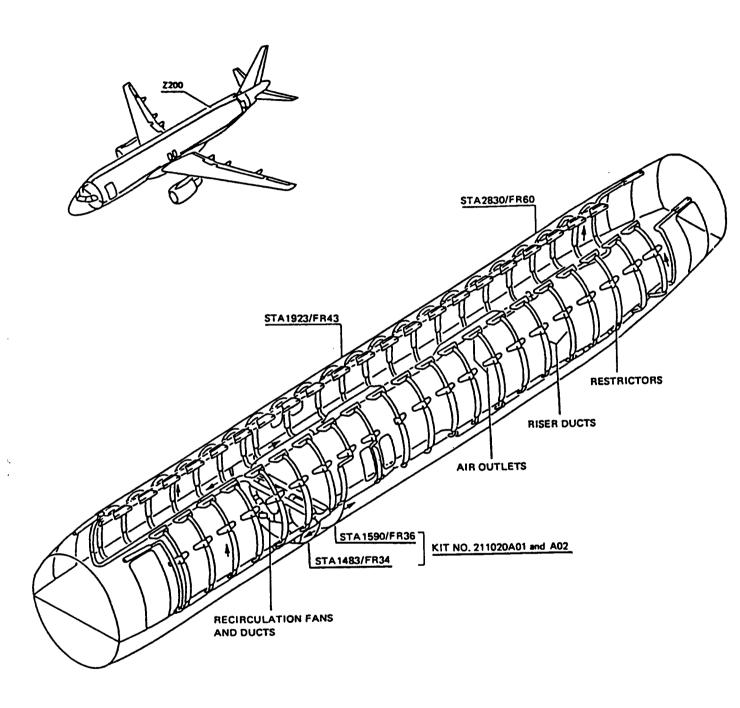
This Service Bulletin can be accomplished at the convenience of the operator. The splitting of the modification into several Mod. Kits (work packages) enables the operator to accomplish this Service Bulletin progressively during night stops.

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DESCRIPTION

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(1) Gaining access to the air conditioning components according to the relevant Kit by freeing passenger seats to allow the removal of sidewall linings. Removing the ceiling, sidewall and floor panels accordingly and the sidewall and partition wall panels in the FWD cargo compartment.

Kit No. 211020A01 and A02

- (2) Modification in the FWD cargo compartment between FR34 and FR36.
 - Replacing the recirculation fans by modified fans.
 - Removing two distributor ducts for modification on bench and installing the modified ducts.
 - Replacing the cross-feed ducts with new ducts.

Kit No. 211020A03

- (3) Modification in the passenger compartment between FR43 and FR60.
 - Replacing the restrictors from the lower end of the riser ducts between FR43 and FR60.
 - Replacing a tube at FR51 with a new tube.

Kit No. 211020A04

- (4) Modification in the passenger compartment between FR60 and FR67
 - Replacing the restrictor from the lower end of the riser ducts between FR60 and FR64.
 - Removing the restrictor from the upper end of the riser duct at FR65.
 - Replacing the caps at the lower air outlets at FR64 with new caps.
 - Replacing the lower air outlets at FR63 with new outlets.

Kit No. 211020A05

- (5) Modification in the passenger compartment between FR33 and FR43.
 - Replacing the lower air outlets at FR36 and FR42 with new air outlets.
 - Replacing the restrictors from the lower end of the riser ducts between FR36 and FR42 with new restrictors.

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- Removing a main supply duct below the floor panels between FR33 and FR42, LH for modification on bench and installing the modified duct.

Kit No. 211020A06

- (6) Modification in the passenger- and avionic compartment between FR21 and FR26 and the FWD cargo compartment between FR24 and FR34.
 - Installing a new restrictor and replacing a hose at FR26 in the passenger compartment.
 - Removing the supply ducts in the FWD cargo compartment between FR24 and FR34, LH and RH for modification on bench and installing the modified ducts.
 - Removing the supply ducts below the passenger compartment floor panels between FR21 and 24, LH and RH for modification on bench and installing the modified ducts.
 - Removing the supply duct in the avionic compartment between FR21 and 23, LH for modification on bench and installing the modified duct.

Kit No. 211020A01 thru A06

- (7) Checking the duct connections for air leaks and performing an operational test of the cabin recirculation fans.
- (8) Close-up.

OPERATIONAL CONSEQUENCES

None

EFFECTIVITY

This Service Bulletin is applicable to the following operators: AAA, ACA, ADR, AFR, BAW, BNF, CYP, DLH, IAC, ITF, NWA, RJA and XP.

This modification is embodied prior to delivery on A/C MSN 108 and subsequent.

NOTE: If an operator accomplishes this Service Bulletin progressively, during night stops for example, the numerical sequence of the kits must be followed. The installation period of the Service Bulletin should be kept to a minimum as the effect on cabin airflow and noise levels during partial embodiment has not been calculated. To minimize these effects the FLOW SELECTOR on the overhead panel should be kept in the NORMAL position and not set to MAXIMUM.

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SERVICE BULLETIN/MODIFICATION TO BE ACCOMPLISHED PREVIOUSLY OR SIMULTANEOUSLY

To achieve the maximum improvement to the cabin noise the accomplishment of this Service Bulletin requires the simultaneous or later accomplishment of Service Bulletin A320-21-1021, Mod. No. 21559.

REFERENCES/REPERCUSSIONS

TFU None 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 YES

COMPLIANCE

Optional

MANPOWER

Kit No. 211020 A01 A02 A03 A04 A05 A06 15.0 15.0 70.0 37.5 40.0 **Manhours** 39.0 Elapsed time (hours) 7.0 7.0 13.0 18.0 12.0 10.0

MATERIAL INFORMATION

<u>Aircraft Data</u>

Kit No. 211020A01 thru A06 comprising: Air outlets, ducts, hose, tube, restrictors and caps.

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Equipment Data

Designation
Supplier
Service Bulletin No.
Part Number Before
Part Number After
Interchangeability code
Intermixability

Recirculation Fans
AOA apparatebau gauting
VD3900-21-02
VD3900-02
VD3900-03
O3
None

APPENDICES

None

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AIRBUS INDUSTRIE
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1 Rond Point Maurice BELLONTE

31707 BLAGNAC CEDEX FRANCE Tel: (33) 61-93-33-33 Telex: AIRBU 530526F

T I T L E : AIR CONDITIONING - IMPROVE AIRFLOW AT CABIN OUTLETS

MODIFICATION No.: 21558K1561 K1563 K1639 K1640 ATA SYSTEM: 21

1. PLANNING INFORMATION

A. EFFECTIVITY

(1) Aircraft Models: A320-111, -211, -231

(2) Aircraft

Customer and Fleet No.	MSN	Qty of Kit No. 211020 A01 and A03 A02 thru A06 thru A06
AAA 001-008	022, 023, 024, 025, 026, 027, 029, 030	8 each
ACA 201-204	059, 068, 073, 084	4 each
ADR 001	043	1 each
AFR 001-002,	005, 007	2 each
004-008	014, 019, 020, 021, 002	5 each
AFR 031-036	061, 062, 063, 100, 101, 102	6 each
BAW 001-008	006, 008, 011, 017, 018, 039 042, 103	8 each
CYP 001-004	028, 035, 037, 038	4 each
DLH 001-011	069, 070, 071, 072, 078, 083, 086, 093, 094, 104, 105	11 each
HP 620-622 624-629 631-637	052, 053, 054, 055, 064, 065, 066, 067, 076, 077, 081, 082, 091, 092, 098, 099	16 each
IAC 001-012 014-019	045, 046, 047, 048, 049, 050, 051, 056, 057, 058, 074, 075, 080, 089, 090, 095, 096, 097	18 each
ITF 001-010	010, 012, 013, 015, 016, 033, 036, 044, 004, 003	10 each
NWA 301-308	031, 032, 034, 040, 041, 060, 106, 107	8 each

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Customer and Fleet No.

MSN

Qty of Kit No. 211020 A01 and A03 A02 thru A06 thru A06

RJA 001-002

087, 088

2 each

XP 001

085

1 each

This modification is embodied prior to delivery on A/C MSN 108 and subsequent.

NOTE: If an operator accomplishes this Service Bulletin progressively, during night stops for example, the numerical sequences of the kits must be followed. The installation period of this Service Bulletin should be kept to a minimum as the effect on cabin airflow and noise levels during partial embodiment has not been calculated. To minimize these effects the FLOW SELECTOR on the overhead panel should be kept in the NORMAL position and not set to MAXIMUM.

NOTE: To achieve the maximum improvement to the cabin noise the accomplishment of this Service Bulletin requires the simultaneous or later accomplishment of Service Bulletin A320-21-1021, Mod. No. 21559.

(3) Spares

The Recirculation Fan PN VD3900-02 has to be returned to AOA apparatebau gauting for accomplishment of AOA Service Bulletin No. VD3900-21-02.

B. REASON

(1) History

The manufacturer has performed a series of flight and ground tests in order to improve the passenger compartment air distribution and reduce the noise levels.

(2) Objective/Action

The tests have shown that the desired improvements can be achieved by the following means:

- Introducing new restrictors to equalize the airflow of the air distribution system.
- Reducing the airflow across the cabin temperature sensors.
- Replacing the material on the muffler walls of the cross-feed ducts by a more efficient glass fabric.
- Reducing the recirculation airflow by a reduced diameter fan wheel in the recirculation fans.

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(3) Advantages

Improvement of the cabin air distribution characteristics, the reduction of perceived sound level in the cabin and the reduction of contamination of the cabin temperature sensors.

(4) Accomplishment Timescale

This Service Bulletin can be accomplished at the convenience of the operator. The splitting of the modification into several Mod. Kits (work packages) enables the operator to accomplish this Service Bulletin progressively during night stops.

C. DESCRIPTION

(1) Gaining access to the air conditioning components according to the relevant Kit by freeing passenger seats to allow the removal of sidewall linings. Removing the ceiling, sidewall and floor panels accordingly and the sidewall and partition wall panels in the FWD cargo compartment.

Kit No. 211020A01 and A02

- (2) Modification in the FWD cargo compartment between FR34 and FR36.
 - Replacing the recirculation fans by modified fans.
 - Removing two distributor ducts for modification on bench and installing the modified ducts.
 - Replacing the cross-feed ducts with new ducts.

Kit No. 211020A03

- (3) Modification in the passenger compartment between FR43 and FR60.
 - Replacing the restrictors from the lower end of the riser ducts between FR43 and FR60.
 - Replacing a tube at FR51 with a new tube.

Kit No. 211020A04

- (4) Modification in the passenger compartment between FR60 and FR67
 - Replacing the restrictor from the lower end of the riser ducts between FR60 and FR64.
 - Removing the restrictor from the upper end of the riser duct at FR65.

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- Replacing the caps at the lower air outlets at FR64 with new caps.
- Replacing the lower air outlets at FR63 with new outlets.

Kit No. 211020A05

- (5) Modification in the passenger compartment between FR26 and FR43.
 - Replacing the lower air outlets at FR36 and FR42 with new air outlets.
 - Replacing the restrictors from the lower end of the riser ducts between FR36 and FR42 with new restrictors.
 - Installing a new restrictor and replacing a hose at FR26.
 - Removing a main supply duct below the floor panels between FR33 and FR42, LH for modification on bench and installing the modified duct.

Kit No. 211020A06

- (6) Modification in the passenger- and avionic compartment between FR21 and FR26 and the FWD cargo compartment between FR24 and FR34.
 - Installing a new restrictor and replacing a hose at FR26 in the passenger compartment.
 - Removing the supply ducts in the FWD cargo compartment between FR24 and FR34, LH and RH for modification on bench and installing the modified ducts.
 - Removing the supply ducts below the passenger compartment floor panels between FR21 and 24, LH and RH for modification on bench and installing the modified ducts.
 - Removing the supply duct in the avionic compartment between FR21 and FR23, LH for modification on bench and installing the modified duct.

Kit No. 211020A01 thru A06

- (7) Checking the duct connections for air leaks and performing an operational test of the air conditioning system.
- (8) Close-up.

D. APPROVAL

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

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E. MANPOWER

	Manhours					
	Kit No. 211020					
	A 01	A02	A03	A04	A05	A06
Gain access	4.0	4.0	14.0	26.0	12.0	7.0
Modification/Aircraft	4.0	4.0	6.0	7.0	7.0	14.0
Modification/Bench	1.0	1.0			0.5	7.0
Test	1.0	1.0	1.0	1.0	1.0	2.0
Close-up	5.0	5.0	18.0	36.0	17.0	10.0
TOTAL MANHOURS	15.0	15.0	39.0	70.0	37.5	40.0
ELAPSED TIME (HOURS)	7.0	7.0	13.0	18.0	12.0	10.0

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.

F. MATERIAL - COST AND AVAILABILITY

(1) Material

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

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

The recirculation fan should be modified as per terms stated in AOA apparatebau gauting Service Bulletin No. VD3900-21-02.

(2) Cost and Availability

Kit No.	Cost	Availability*
	(US Dollars)	
211020A01	32647	270
211020A02	32201	270
211020A03	924	270
211020A04	2505	270
211020A05	5448	270
211020A06	832	180

* Calendar days from receipt of order.

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

A discount of ten (10) per cent 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. REFERENCES

Aircraft Maintenance Manual: 06-41-53, 12-34-24, 20-31-00, 21-21-00, 21-21-51, 24-41-00, 25-21-41, 25-23-41,

21-21-51, 24-41-00, 25-21-41, 25-23-41, 25-23-43, 25-23-44, 25-28-41, 25-43-43, 29-10-00, 29-14-00, 52-30-00, 52-36-18,

53-32-12

AOA apparatebau

Service Bulletin: VD3900-21-02

J. PUBLICATIONS AFFECTED

Illustrated Parts Catalog: 21-21-01, 21-21-02, 21-21-03, 21-21-04,

21-23-02, 21-23-04

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2. ACCOMPLISHMENT INSTRUCTIONS

AIRCRAFT

A. GENERAL

NOTE: Due to different passenger compartment lay-outs of the operators, the removal and installation of additional equipment may be necessary but will not be described in the preparations of the work packages.

Accomplishment of each Kit in this Service Bulletin includes these operations:

(1) Preparation

- (a) De-energize the aircraft electrical circuits (Ref. AMM 12-34-24, P. Block 201) and electrically ground the aircraft (Ref. AMM 24-41-00, P. Block 201).
- (b) Put the access platforms in position.
- (c) Open, safety and tag these circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
122VU	AIR COND/RECIRC FAN/L/CTL	2HG	X20
122VU	AIR COND/RECIRC FAN/L/SPLY	1HG	X18
122VU	AIR COND/RECIRC FAN/R/CTL	11HG	W 20
122VU	AIR COND/RECIRC FAN/R/SPLY	3HG	W18

(2) Standard Procedures

- (a) It may be necessary to loosen the clamps and the supports on the next ducts to permit the removal/installation of the ducts and restrictors affected by this Service Bulletin.
- (b) Make certain that the clamps and supports which have been loosened are installed correctly on completion of this Service Bulletin.
- (c) Blank open ends of ducts if the replacement duct/restrictor is not installed immediately.
- (d) For specification of materials (Mat. No.) given in this Service Bulletin refer to AMM 20-31-00.

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B. MODIFICATION

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

Kit No. 211020A01 and A02

- (1) Modification in the FWD cargo compartment between FR34 and FR36.
 - (a) Preparation
 - Open the FWD cargo compartment door (Ref. AMM 52-30-00, P. Block 1).
 - Remove the partition panels 131NW, 131PW and 132PW from the aft partition wall in the FWD cargo compartment.
 - Disconnect the passenger seats between FR32 and FR35, LH and remove the floor panel 231YF from the outer floor panel row, LH. (Ref. AMM 25-21-41, P. Block 401).

NOTE: This procedure is only required on aircraft were the water tank of the fresh water system is installed in the work area.

(b) Modification procedure

Refer to Figure 1

- 1 From the cross-feed duct, item (1) remove the temperature sensor 16 HK and the overheat sensor 19HK and retain.
- Remove and do not re-use the cross-feed ducts, item (1), (3), (6) and (7). Retain the connecting parts.
- Disconnect and remove the distribution ducts, item (14) and (15) for modification on bench and modify in accordance with Para. F. (1) and (2). Retain the connecting parts.
- 4 Remove the fans, item (8) (Ref. AMM 21-21-51, P. Block 401) and return to the vendor for modification.
- 5 Install the modified fans VD3900-03, item 8 (Ref. AMM 21-21-51, P. Block 401).
- 6 Install the modified distribution ducts D2127100600900, item 14 and D2127100600800, item 15 with the retained connecting parts.
- 7 Install the retained temperature sensor 16HK and the overheat sensor 19HK on the new cross-feed duct D2127100000800, item 1.

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8 Install these new cross-feed ducts with the retained connecting parts:

D2127100000800 item 1 D2127100000600 item 3 D2127101001000 item 6

Kit No. 211020A01

D2127101001400 item 7

Kit No. 211020A02

D2127101001200 item 7

(c) Do an operational test of the Cabin Recirculation Fans 14HG and 15HG (Ref. AMM 21-21-00, P. Block 501) and at the same time check the duct connections for air leaks.

(d) Close-up

- Make sure that the work area is clean and clear of tools and other items.
- Install the partition panels 131NW, 131PW and 132PW of the aft partition wall in the FWD cargo compartment.
- Solution Street Stre
- 4 Install the floor panel 231YF (Ref. AMM 53-32-12, P. Block 401) and replace the passenger seats (Ref. AMM 25-21-41, P. Block 401).

NOTE: The procedure is only required on aircraft were the water tank of the fresh water system is installed in the work area.

5 Put the aircraft in pre-flight condition.

Kit No. 211020A03

- (2) Modification in the passenger compartment between FR43 and FR60.
 - (a) Preparation
 - 1 Remove the ceiling panel 251CC between FR51 and FR53 (Ref. AMM 25-23-41, P. Block 401).

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- Disconnect the passenger seats between FR43 and FR60, LH and RH to get access to the lower sidewall panels and the outer row of floor panels (Ref. AMM 25-21-41, P. Block 401).
- 3 Remove the lower sidewall panels between FR43 and FR60, LH and RH (Ref. AMM 25-23-44, P. Block 401).
- 4 Remove the outer row of floor panels, LH and RH between FR43 and FR60 (Ref. AMM 53-23-12, P. Block 401).
- (b) Modification procedure

Refer to Figure 2, Sheet 1 of 2 and 2 of 2

1 Remove and do not re-use the restrictors, item (19), (20), (21), (22) and (23) between FR43 and FR60, LH and RH.

NOTE: Due to poor accessability at FR54, RH if necessary, remove the restrictor, item (21) with a hook or equivalent tool through the upper duct connection.

Install these new restrictors with Silicon Compound, Mat. No. 08-004A as shown in Section A-A:

D2127111321800	item 30
D2127111322000	item 31
D2127111322400	item 32
D2127111322600	item 33
D2127111322800	item 34
D2127111323000	item 35
D2127111323200	item 36

NOTE: At FR54, RH install the restrictor D2127111323200, item 36 on the upper duct connection if the old restrictor has been removed with a tool (see Note at step b1).

Refer to Figure 3

- 3 Remove and retain the screws, item 62 and the washers, item 63.
- 4 Loosen and do not remove the clamps, item 65 and 66.
- 5 Remove and do not re-use the tube, item (61).
- 6 Remove and retain the clamps, item 64 from the tube.
- Put the retained clamps, item 64 on the new tube D2127503000200, item 61.
- 8 Install the tube D2127503000200, item 61 and tighten the clamps, item 65 and item 66.

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- 9 Put the clamps, item 65 and 66 in position and install the retained screws, item 62 and washers, item 63 and tighten.
- (c) Check the duct connections for air leaks.

(d) Close-up

- Make sure that the work area is clean and clear of tools and other items.
- 2 Install the outer row of floor panels, LH and RH (Ref. AMM 53-32-12, P. Block 401).
- 3 Install the lower sidewall panels (Ref. AMM 25-23-44, P. Block 401).
- 4 Install the ceiling panel 251CC (Ref. AMM 25-23-41, P. Block 401).
- 5 Install the passenger seats (Ref. AMM 25-21-41, P. Block 401).
- 6 Put the aircraft in pre-flight condition.

Kit No. 211020A04

- (3) Modification in the passenger compartment between FR60 and FR67.
 - (a) Preparation
 - 1 Remove the light cover panels 251CX (252CX) between FR63 and FR64.
 - Remove the upper sidewall panels 251BX (252BX) (Ref. AMM 25-23-43, P. Block 401).
 - Disconnect the passenger seats between FR60 and FR64, LH and RH to get access to the lower sidewall panels (Ref. AMM 25-21-31, P. Block 401).
 - 4 Remove the outer row of floor panels, LH and RH between FR60 and FR64 (Ref. AMM 53-32-12, P. Block 401).
 - 5 Remove the lower sidewall panels, LH and RH between FR60 and FR64 (Ref. AMM 25-23-44, P. Block 401).
 - 6 Remove the AFT Lavatory, LH and RH (Ref. AMM 25-43-43, P. Block 401).

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(b) Modification procedure

Refer to Figure 2, Sheet 1 of 2 and 2 of 2

- 1 Remove and do not re-use the LH outlet at FR64, item (47).
- 2 Install the new outlet D2127107901000, item 47.
- 3 Remove and do not re-use the RH outlet at FR64, item (48).
- 4 Install the new outlet D2127107901100, item 48.
- 5 Remove and do not re-use the caps, item (52).
- 6 Install the new caps A2157031121200, item 52 with the existing clamps as shown in detail D.
- 7 Remove and do not re-use the restrictors, item (17), (23) and (24) between FR60 and FR64, LH and RH.
- 8 Install these new restrictors with Silicon Compound, Mat. No. 08-004A as shown in Section A-A:

D2127111322600	item 33
D2127111323000	item 35
D2127111323400	item 37
D2127111323600	item 38
D2127111324600	item 39
D2127111324800	item 40

- 9 Disconnect the ducts as shown in detail E and remove and do not re-use the restrictors, item (53).
- 10 Remove the exisiting restrictor D2127111320000, item 41 from the lower riser duct at FR65 and replace the restrictor with Silicon Compound, Mat. No. 08-004A.
- 11 Re-connect the ducts.
- (c) Check the duct connections for air leaks.
- (d) Close-up
 - Make sure that the work area is clean and clear of tools and other items.
 - Install the outer row of floor panels, LH and RH (Ref. AMM 53-32-12, P. Block 401).
 - 3 Install the light cover panels 251CX (252CX).

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- 4 Install the AFT lavatory, LH and RH (Ref. AMM 25-43-43, P. Block 401).
- 5 Install the upper sidewall panels 251BX (252BX) (Ref. AMM 25-23-43, P. Block 401).
- 6 Install the lower sidewall panels (Ref. AMM 25-23-44, P. Block 401).
- 7 Install the passenger seats (Ref. AMM 25-21-41, P. Block 401).
- 8 Put the aircraft in pre-flight condition.

Kit No. 211020A05

- (4) Modification in the passenger compartment between FR26 and FR43.
 - (a) Preparation
 - 1 Remove the light cover panels from above the upper sidewall panels between FR34 and FR43.
 - Remove the upper sidewall panels 231YW (232YW) and 241PW (242PW) between FR34 and FR43 (Ref. AMM 25-23-43, P. Block 401).
 - Disconnect the passenger seats between FR36 and FR43, LH and RH and on the LH side to FR47 to get access to the lower sidewall panels and the outer floor panel row, LH and RH (Ref. AMM 25-21-41, P. Block 401).
 - 4 Remove the lower sidewall panels, between FR36 and FR43, LH and RH (Ref. AMM 25-23-44, P. Block 401).
 - Remove the outer row of floor panels, LH and RH between FR35 and FR42 and on the LH side to FR47 (Ref. AMM 53-32-12, P. Block 401).
 - (b) Modification procedure

Refer to Figure 2, Sheet 1 of 2 and 2 of 2

- 1 Remove and do not re-use the LH outlet at FR36, item (45).
- 2 Install the new outlet D2127107600400, item 45.
- 3 Remove and do not re-use the RH outlet at FR36, item (46).
- 4 Install the new outlet D2127107600500, item 46.
- 5 Remove and do not re-use the LH outlet at FR42, item (47).

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- 6 Install the new outlet D2127107901000, item 47.
- 7 Remove and do not re-use the RH outlet at FR42, item (48).
- 8 Install the new outlet D2127107901100, item 48.
- 9 Remove and do not re-use the restrictors, item (17), (18) and (20) between FR36 and FR43, LH and RH.
- 10 Install these new restrictors with Silicon Compound, Mat. No. 08-004A as shown in Section A-A:

D2127111320400	item 25
D2127111320800	item 26
D2127111321200	item 27
D2127111321400	item 28
D2127111321600	item 29

- 11 Remove the duct, item (50) for modification on bench and modify in accordance with Para. F.(3).
- 12 Install the modified duct D2127101400000, item 50.
- (c) Check the duct connections for air leaks.
- (d) Close-up
 - Make sure that the work area is clean and clear of tools and other items.
 - Install the outer row of floor panels, LH and RH (Ref. AMM 53-32-12, P. Block 401)
 - 3 Install the lower sidewall panels (Ref. AMM 25-23-44, P. Block 401).
 - 4 Install the upper sidewall panels (Ref. AMM 25-23-43, P. Block 401).
 - 5 Install the light cover panels above the removed upper sidewall panels.
 - 6 Install the passenger seats (Ref. AMM 25-21-41, P. Block 401).
 - 7 Put the aircraft in pre-flight condition.

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Kit No. 211020A06

- (5) Modification in the passenger- and avionic compartment between FR21 and FR26 and the FWD cargo compartment between FR24 and FR34.
 - (a) Preparation
 - 1 Remove the ceiling panel between FR26 and FR28 (Ref. AMM 25-23-41, P. Block 401).
 - 2 Disconnect the passenger seats between FR24 and FR28, RH (Ref. AMM 25-21-41, P. Block 401).
 - 3 Remove the floor covering between FR24 and FR28, RH (Ref. AMM 25-28-41 or 25-28-42, P. Block 401).
 - 4 Remove the floor panels 232PF and 232MF (Ref. AMM 06-41-53, P. Block 1).
 - Open the FWD cargo compartment door (Ref. AMM 52-30-00, P. Block 1).
 - 6 Remove the sidewall panels 131MW, 131HW, 131GW, 131PW, 131BW, 131DW, 132MW, 132KW, 132JW, 132PW, 132BW and 132EW (Ref. AMM 06-41-53, P. Block 1) in the cargo compartment.
 - 7 Remove the partition panels 131BW, 131DW, 132BW and 132EW (Ref. AMM 06-41-53, P. Block 1).
 - 8 Open the avionic compartment door 824 (Ref. AMM 06-41-53, P. Block 201).
 - 9 De-pressurize the Yellow hydraulic system (Ref. AMM 29-10-00, P. Block 201).
 - 10 De-pressurize the hydraulic reservoir (Ref. AMM 29-14-00, P. Block 201).
 - 11 Remove the FWD cargo compartment door actuators (Ref. AMM 52-36-18, P. Block 401).
 - 12 Remove the ceiling moulds underneath the door actuators.
 - (b) Modification procedure

Refer to Figure 4

- 1 Remove and retain the clamps, item 74.
- 2 Remove and do not re-use the hose, item (70).

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- 3 With abrasive paper, strip off the end of duct, item (72) over a length of 15 mm (0.590 in.) without removal of the duct.
- 4 Affix the new restrictor D2121113520000, item 73 with adhesive Mat. No. 08-001.
- 5 Identify the modified duct to D2121090700100, item 72 (Ref. Para. 3.D.).
- 6 Install the new hose D2101001722100, item 70 with the retained clamps, item 74.

Refer to Figure 5

- Disconnect and remove the distribution ducts, RH, item (112), (113), (114) and (115) for modification on bench and modify in accordance with Para.F.(4) thru (7). Retain the connecting parts.
- <u>8</u> Disonnect and remove the distribution ducts, LH, item (116), (117), (118), (119) and (120) for modification on bench and modify in accordance with Para.F.(8) thru (12). Retain the connecting parts.
- 9 Install the modified distribution ducts with the retained connecting parts:

D2121030900500	item 112
D2121031200600	item 113
D2121031200500	item 114
D2121032400600	item 115
D2121032400700	item 116
D2121030500300	item 117
D2121030600400	item 118
D2121030800300	item 119
D2121030600400	item 120

Refer to Figure 6

- 10 Remove the distribution ducts, item (121) and (122) for modification on bench and modify in accordance with Para.F.(13) and (14). Retain the connecting parts.
- 11 From the avionic compartment, remove the distribution duct, item (123) for modification on bench and modify in accordance with Para.F.(15). Retain the connecting parts.
- 12 Install the modified distribution ducts with the retained connecting parts.

D2121061400500

item 121

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D2121020300400 item 122 D2121067800200 item 123

- (c) Check the duct connections for air leaks
- (d) Close-up
 - Make sure that the work areas are clean and clear of tools and other items.
 - Install the ceiling panel between FR26 and FR28 (Ref. AMM 25-23-41, P. Block 401).
 - 3 Install the floor panel 232PF and 232MF and the removed floor covering (Ref. AMM 25-28-41 or 25-28-42, P. Block 401).
 - 4 Install the passenger seats between FR24 and FR28 (Ref. AMM 25-21-41, P. Block 401).
 - 5 Install all removed sidewall and partition panels in the FWD cargo compartment.
 - <u>6</u> Install the ceiling moulds underneath the FWD cargo compartment door actuators.
 - 7 Install the FWD cargo compartment door actuators (Ref. AMM 52-36-18, P. Block 401).
 - 8 Close the FWD cargo compartment door (Ref. AMM 52-30-00, P. Block 1).
 - 9 Close the avionic compartment door 824.
 - 10 Put the aircraft in pre-flight condition.

C. TEST

As discribed in the relevant work package.

D. CLOSE-UP

- (1) Remove the safety clips and the tags and close these circuit breakers 1HG, 2HG, 3HG and 11HG.
- (2) Remove the access platforms.

E. DOCUMENTATION

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

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BENCH

F. ACCOMPLISHMENT INSTRUCTIONS — REMOVED COMPONENTS AND SPARES

NOTE: Make sure that the ducts are clean and free of contamination after modification.

(1) Modification of the duct D2127100600500, item (14).

Refer to Figure 1

- (a) Drill out the rivets and remove and do not re-use the restrictor, item (2).
- (b) Seal the rivet holes with rivets MS20470AD3, item 16.
- (c) Remove and do not re-use the restrictor, item (11).
- (d) Remove the remaining sealant from the installation area.
- (e) Install the new restrictor D2127111322400, item 12 with Silicon Compound, Mat. No. 08-004A.
- (f) Re-identify the duct to D2127100600900, item 14.
- (2) Modification of the duct D2127100600400, item (15).

Refer to Figure 1

- (a) Drill out the rivets and remove and do not re-use the restrictor, item (5).
- (b) Seal the rivet holes with rivets MS20470AD3, item 16.
- (c) Remove and do not re-use the restrictor, item (13).
- (d) Remove the remaining sealant from the installation area.
- (e) Install the new restrictor D2127111322400, item 12 with Silicon compound, Mat. No. O8-O04A.
- (f) Re-identify the duct to D2127100600800, item 15.
- (3) Modification of the duct D2127101400200, item (50).

Refer to Figure 2, Sheet 1 of 2

- (a) Drill out the rivets and remove and do not re-use the restrictor, item (51).
- (b) Seal the rivet holes with rivets MS20470AD3, item 16.

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- (c) Re-identify the duct to D2127101400000 item 50.
- (4) Modification of the duct D2121030900400, item (112)

Refer to Figure 5

- (a) Drill out the rivets, item (111) and remove and do not re-use the restrictor, item (106).
- (b) Install the new restrictors D2121096420200, item 107 and D2121096420400, item 109 with rivets ASNA2051DCJ2410, item 111.
- (c) Re-identify the duct to D2121030900500, item 112.
- (5) Modification of the duct D2121031200300, item (113).

Refer to Figure 5

- (a) Drill two holes with a dia. of 6 mm (0.236 in.) in the restrictor, item (125) as shown in detail D and re-identify the restrictor to D2121096420100, item 106.
- (b) Re-identify the duct to D2121031200600, item 113.
- (6) Modification of the duct D2121031200400, item (114).

Refer to Figure 5

- (a) Drill out the rivets, item (111) and remove and do not re-use the restrictor, item (106).
- (b) Install the new restrictor D2121096420300, item 108 with rivets ASNA2051DCJ2410, item 111.
- (c) Re-identify the duct to D2121031200500, item 114.
- (7) Modification of the duct D2121032400500, item (115).

Refer to Figure 5

- (a) Drill out the rivets, item (111) and remove and do not re-use the restrictor, item (107).
- (b) Install the new restrictor D2121096420100, item 106 with rivets ASNA2051DCJ2410, item 111.
- (c) Re-identify the duct to D2121032400600, item 115.
- (8) Modification of the duct D2121032400400, item (116).

Refer to Figure 5

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- (a) Drill out the rivets, item (111) and remove and do not re-use the restrictor, item (106).
- (b) Install the new restrictor D2121096420400, item 109 with rivets ASNA2051DCJ2410, item 111.
- (c) Re-identify the duct to D2121032400700, item 116.
- (9) Modification of the duct D2121030500200, item (117).

Refer to Figure 5

- (a) Drill out the rivets, item (111) and remove and do not re-use the restrictor, item (107).
- (b) Install the new restrictor D2121096420000, item 105 with rivets ASNA2051DCJ2410, item 111.
- (c) Re-identify the duct to D2121030500300, item 117.
- (10) Modification of the duct D2121030600200 or D2121030600300, item (118).

Refer to Figure 5

- (a) If a restrictor D2121096420400, item (106) is installed, drill out rivets, item (111) and remove and do not re-use the restrictor.
- (b) Install the new restrictor D2121096420300, item 108 with rivets ASNA2051DCJ2410, item 111.
- (c) If a restrictor D2121096420200, item (107) is installed, drill two holes with a dia. of 6 mm (0.236 in.) as shown in Detail E.
- (d) Re-identify the modified restrictor to D2121096420300, item 108.
- (e) Re-identify the duct to D2121030600400, item 118.
- (11) Modification of the duct D2121030800200, item (119).

Refer to Figure 5

- (a) Drill out the rivets, item (111) and remove and do not re-use the restrictor, item (108).
- (b) Install the new restrictor D2121096420400, item 109 with rivets ASNA2051DCJ2410, item 111.
- (c) Re-identify the duct to D2121030800300, item 119.
- (12) Modification of the duct D2121030600200, item (120).

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Refer to Figure 5

- (a) Drill two holes with a dia. of 6 mm (0.236 in.) in the restrictor, item (107) as shown in detail E and re-identify the restrictor to D2121096420300, item 108.
- (b) Re-identify the duct to D2121030600400, item 120.
- (13) Modification of the duct D2121061400400, item (121).

Refer to Figure 6

- (a) Drill out the rivets, item (111) and remove and do not re-use the restrictor, item (106).
- (b) Install the new restrictor D2121096420400, item 109 with rivets ASNA2051DCJ2410, item 111.
- (c) Re-identify the duct to D2121061400500, item 121.
- (14) Modification of the duct D2121020300200, item (122).

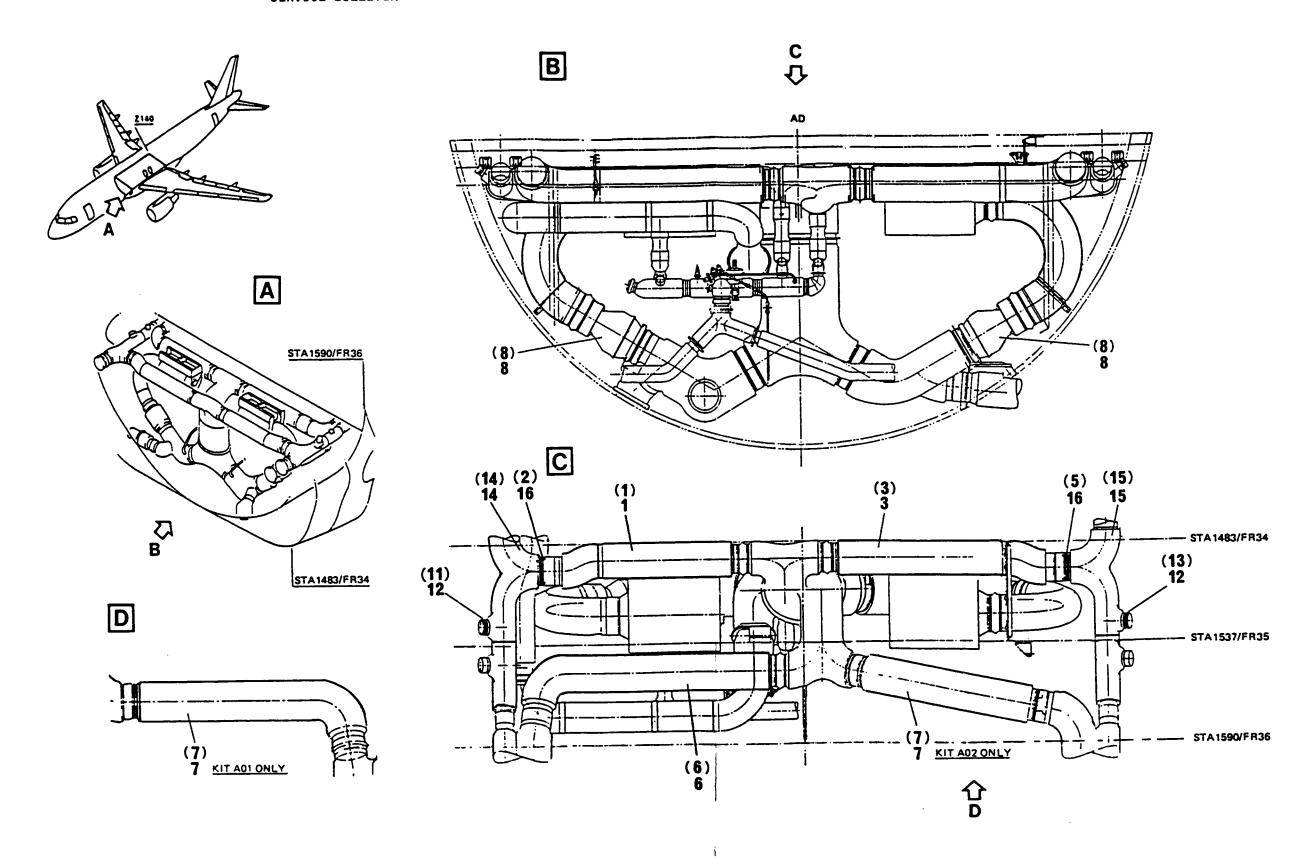
Refer to Figure 6

- (a) Drill one hole with a dia. of 6 mm (0.236 in.) in the restrictor, item (108) as shown in detail F and re-identify the restrictor to D2121107620100, item 110.
- (b) Re-identify the duct to D2121020300400, item 122.
- (15) Modification of the duct D2121067800000, item (123).

Refer to Figure 6

- (a) Enlarge the existing hole in the restrictor, item (124) to a dia. of 90 mm (3.543 in.) as shown in detail G, debur and re-identify the restrictor to D2121087220400, item 124.
- (b) Re-identify the duct to D2121067800200, item 123.

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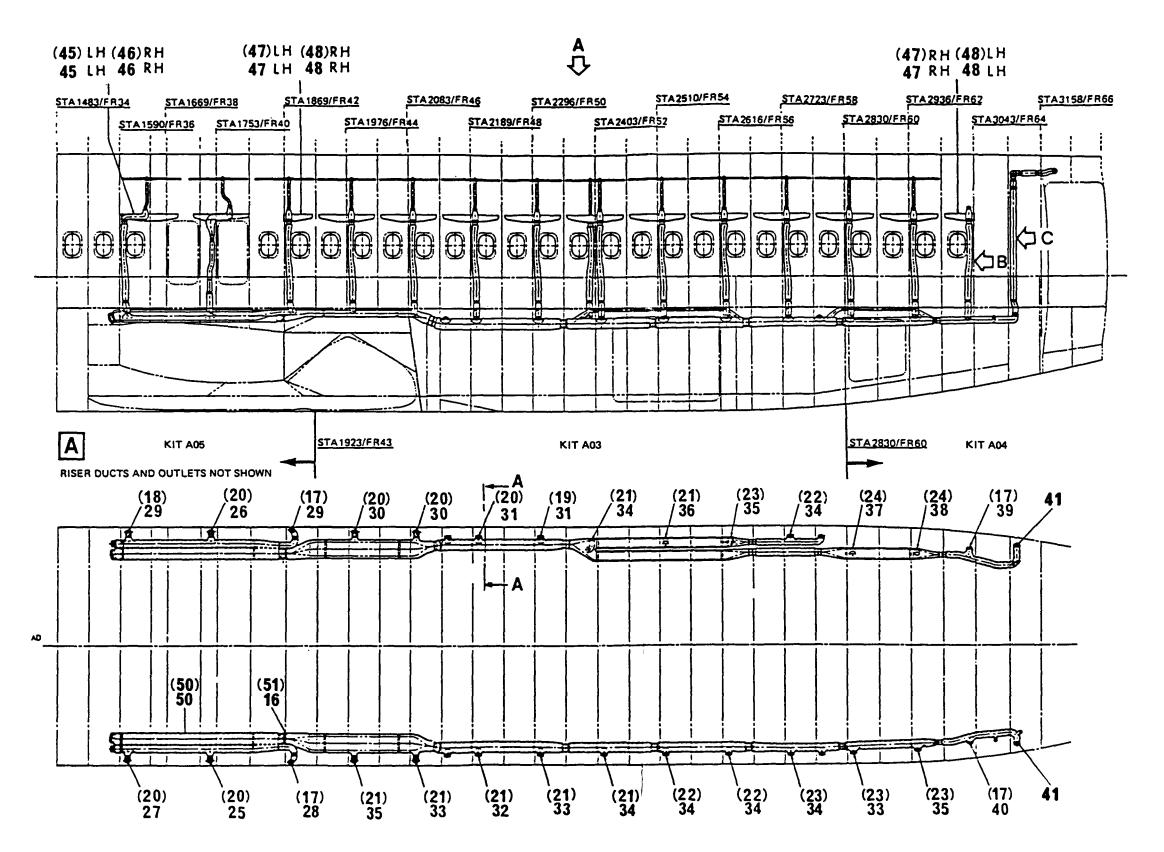
Modification/Installation of Recirculation Fans and Ducts at the FWD Cargo Compartment Figure 1

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Installation of Air Outlets and Restrictors in the Passenger Compartment Figure 2, Sheet 1 of 2

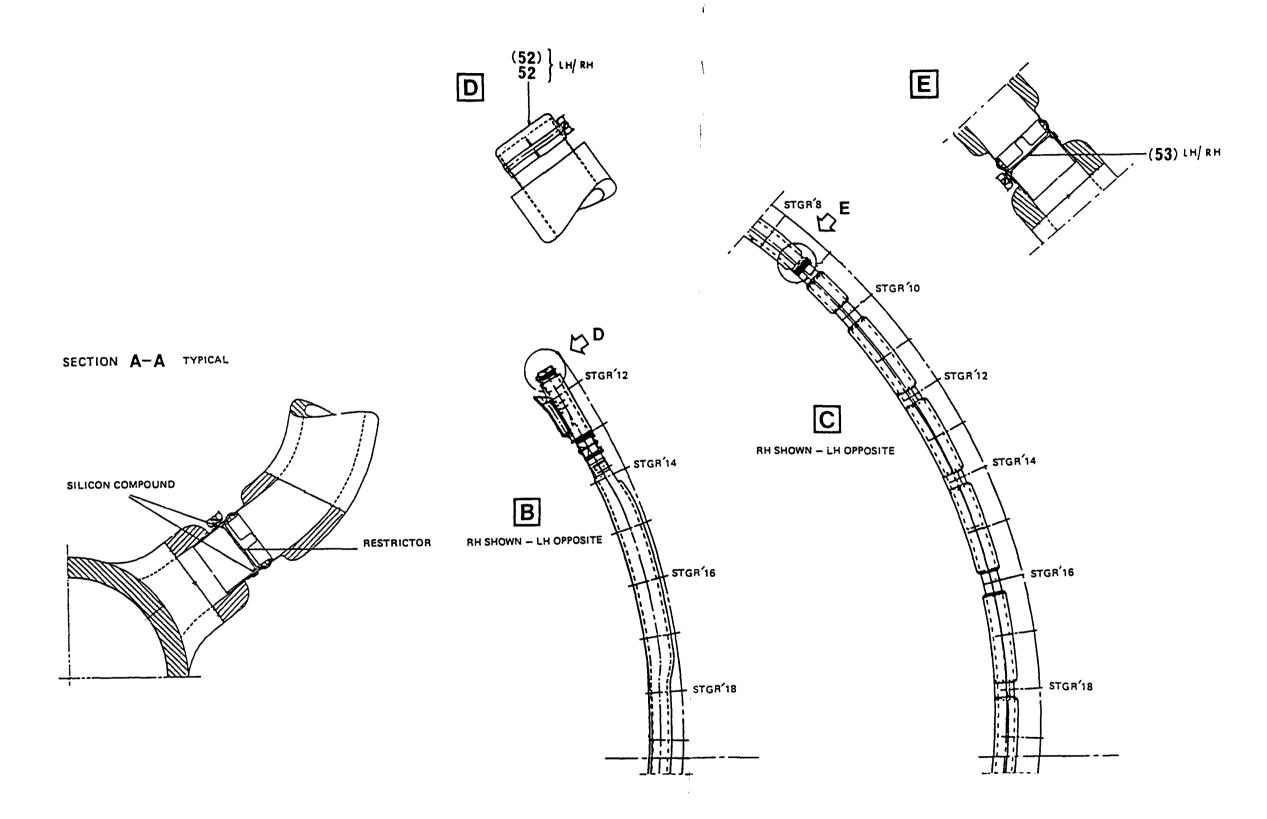
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Installation of Air Outlets and Restrictors in the Passenger Compartment Figure 2, Sheet 2 of 2

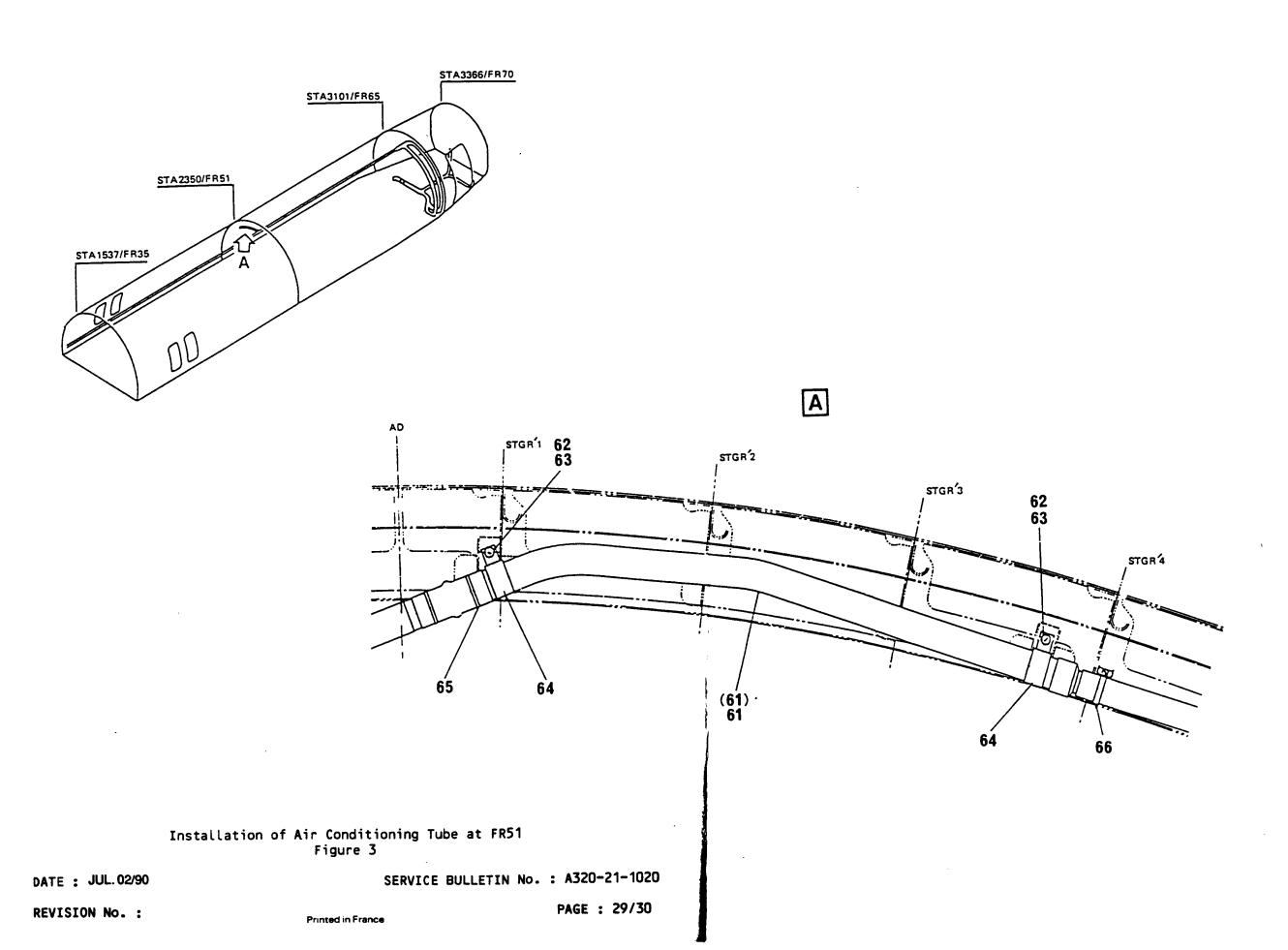
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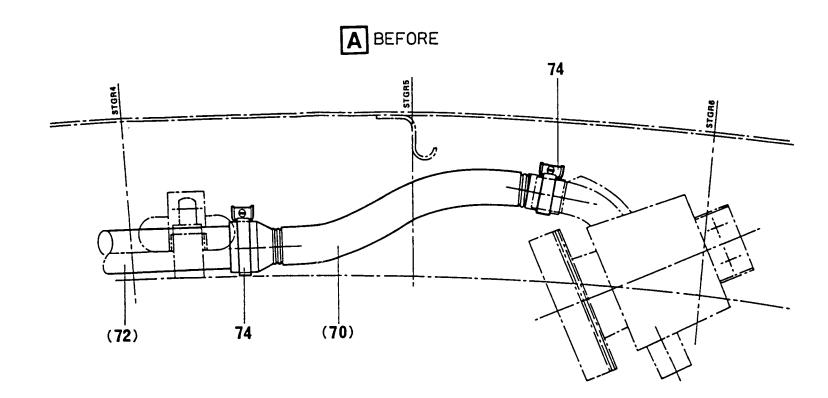
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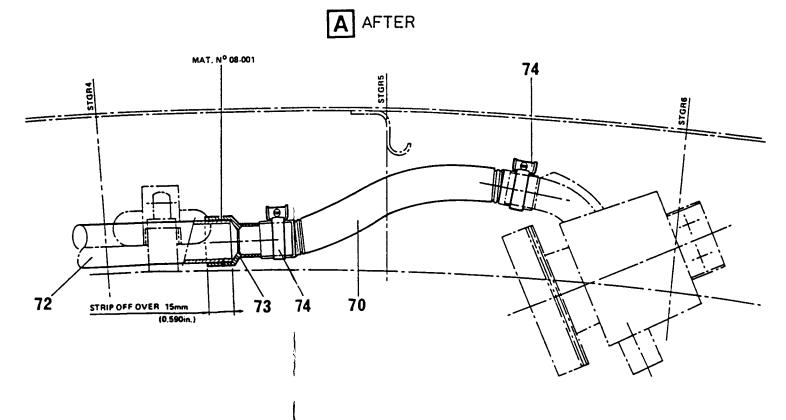
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STA 1057/FR26





Installation of Air Conditioning Hose at FR26 Figure 4

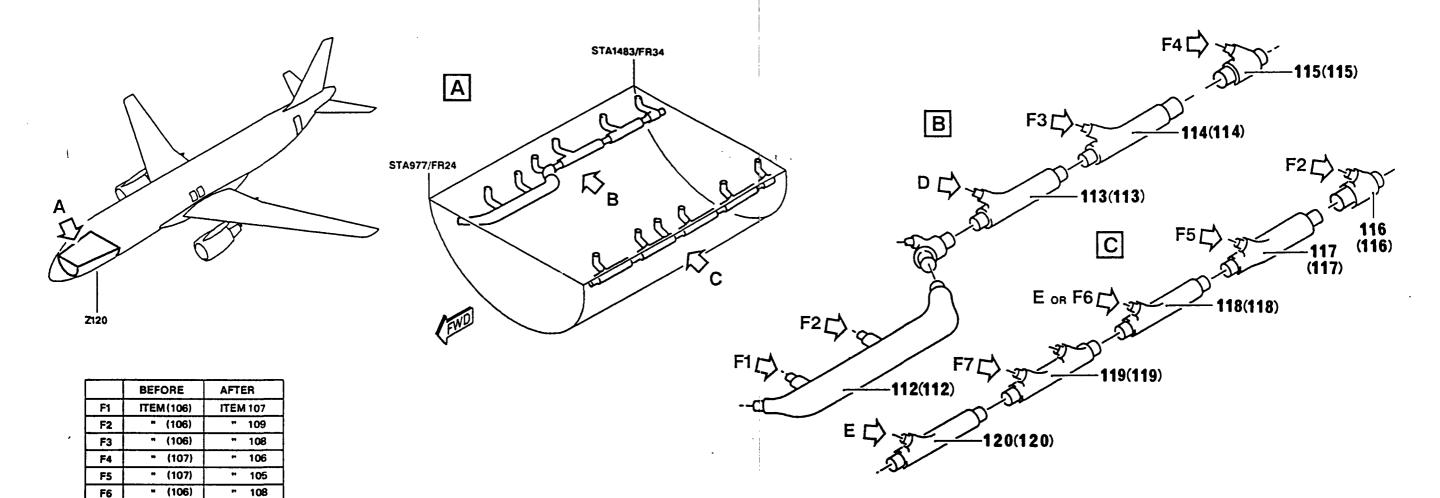
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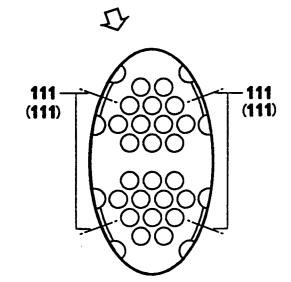
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" 109

- (108)

BEFORE AFTER

BEFORE AFTER

DIA 6mm
(0.236in.)

(107)

(107)

(125)

(125)

Modification of Restrictors between FR24 and FR34 Figure 5

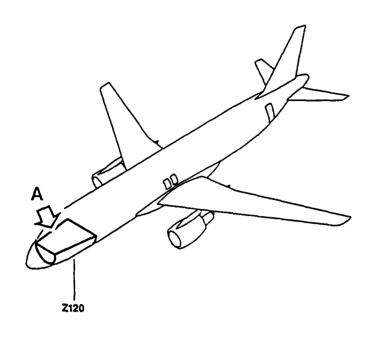
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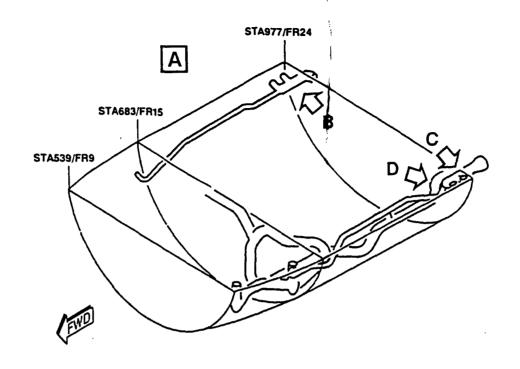
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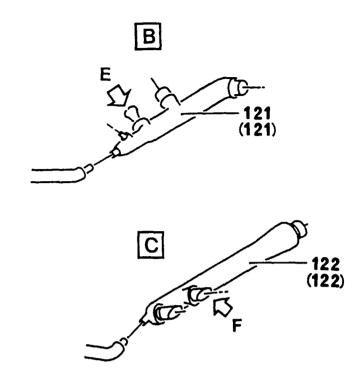
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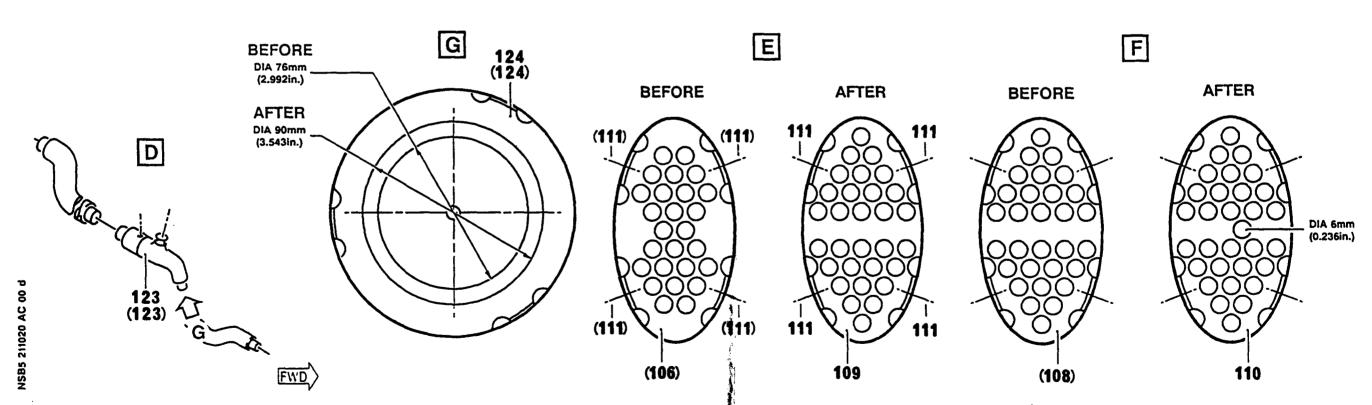
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Modification of Restrictors between FR21 and FR24 Figure 6

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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.	Q.	ΤΥ	DESCRIPTION	I T E M	OLD PART NO.	I N T	INSTRUCTIONS/ DISPOSITION
Kit	No. 211020	<u>A01</u>	<u>A02</u>					
1 3 6 7 7 12	D2127100000800 D2127100000600 D2127101001000 D2127101001400 D2127101001200 D2127111322400	1 1 1 1	1 1 1 2	Duct Duct Duct Duct Duct Restrictor Restrictor	(1) (3) (6) (7) (7) (11) (13) (2) (5)	D2127100000200 D2127100000000 D2127101000600 D2127101000000 D2127101000800 D2127111320600 D2127111321400 A2127028667600 A2127028667400		discard discard discard discard discard discard discard discard
<u>Kit</u>	No. 211020	<u>A03</u>						
30 31 32 33 34 35 36	D2127111321800 D2127111322000 D2127111322400 D2127111322600 D2127111322800 D2127111323000 D2127111323200 D2127503000200	2 2 1 2 6 2 1		Restrictor Restrictor Restrictor Restrictor Restrictor Restrictor Restrictor Tube	(61)	D2127503000000		discard



REVISION No. :

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I T E M	NEW PART NO.	Q	ΓΥ	DESCRIPTION	I T E M	OLD PART NO.	I N T	INSTRUCTIONS DISPOSITION
Kit	No. 211020	<u>A04</u>	<u>A05</u>					
47	D2127107901000	1	1	Outlet	(47)	D2127107900400		discard
48	D2127107901100	1	1	Outlet	(48)	D2127107900500		discard
52	D2157031121200	2		Cap	(52)	D2127110900600		discard
33	D2127111322600	1		Restrictor				
35	D2127111323000	1		Restrictor				
37	D2127111323400	1		Restrictor				
38	D2127111323600	1		Restricor				
39	D2127111324600	1		Restrictor				
40	D2127111324800	1		Restrictor				
				Restrictor	(53)	D2127111320000		discard
45	D2127107600400		1	Outlet	· (45)	D2127107600200		discard
46	D2127107600500		1	Outlet	(46)	D2127107600300		discard
25	D2127111320400		1	Restrictor				
26	D2127111320800		1	Restrictor				
27	D2127111321200		1	Restrictor				
28	D2127111321400		1	Restrictor				
29	D2127111321600		2	Restrictor				
				Restrictor	(51)	A2127028666200		discard



I T E M	NEW PART NO.	QTY	DESCRIPTION	I T E M	OLD PART NO.	I N T	INSTRUCTIONS/ DISPOSITION
(it	No. 211020	A06					
70	D2101001722100	1	Hose	(70)	D212090820000		discard
73	D2121113520000	1	Restrictor				
105	D2121096420000	1	Restrictor	(107)	D2121096420200		discard
106	D2121096420100	1	Restrictor	(107)	D2121096420200		discard
107	D2121096420200	1	Restrictor	(106)	D2121096420100		discard
801	D2121096420300	2	Restrictor	(106)	D2121096420100 or	•	discard
					D2121096420200 or	•	discard
					D2121096420400		discard
109	D2121096420400	4	Restrictor	(106)	D2121096420100 or	•	discard
					D2121096420300 or	•	discard
					D2121107620200		discard
111	ASNA2051DCJ2410	50	Rivets				

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B. SPECIAL TOOLS

None

C. LIST OF MATERIALS - OPERATOR SUPPLIED

DESCRIPTION	REFERENCE AMM 20-31-00	QTY PER A/C
Araldite AW106	Mat. No. 08-001	as required
Silicon Compound	Mat. No. 08-004A	as required
Rivet, MS20470AD3		30

D. PARTS TO BE RE-IDENTIFIED BY OPERATOR

ITEM	NEW PN	QTY	DESIGNATION	ITEM	OLD PN	INT
62	D2121090700100	1	Hose	(62)	D2121090700000	
14	D2127100600900	1	Duct	(14)	D2127100600500	
15	D2127100600800	1	Duct	(15)	D2127100600400	
50	D2127101400000	1	Duct	(50)	D2127101400200	
72	D2121090700100	1	Duct	(72)	D2121090700000	
112	D2121030900500	1	Duct	(112)	D2121030900400	
113	D2121031200600	1	Duct	(113)	D2121031200300	
114	D2121031200500	1	Duct	(114)	D2121031200400	
115	D2121032400600	1	Duct	(115)	D2121032400500	
116	D2121032400700	• 1	Duct	(116)	D2121032400400	
117	D2121030500300	1	Duct	(117)	D2121030500200	
118	D2121030600400	1	Duct	(118)	D2121030600200	
					or	
				•	D2121030600300	
119	D2121030800300	1	Duct	(119)	D2121030800200	
120	D2121030600400	1	Duct	(120)	D2121030600200	
121	D2121061400500	1	Duct	(121)	D2121061400400	
122	D2121020300400	1	Duct	(122)	D2121020300200	
123	D2121067800200	1	Duct	(123)	D2121067800000	
124	D2121087220400	1	Restrictor	(124)	D2121087220200	
106	D2121096420100	1	Restrictor	(125)	D2121096420000	-
108	D2121096420300	2	Restrictor	(107)	D2121096420200	
110	D2121107620100	1	Restrictor	(108)	D2121096420400	

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