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

SERVICE BULLETIN
REVISION TRANSMITTAL SHEET

Telex: AIRBU 530526 F

MODIFICATION NO: 23828K3443

ATA SYSTEM: 21

TITLE : AIR CONDITIONING - CARGO COMPARTMENT HEATING - INSTALL ADDITIONAL BILGE

HEATING

This page transmits Revision No. 1 of Service Bulletin No. A320-21-1076.

No more work is necessary to do this revision.

#### REASON

This Revision is issued to inform the operator about the partnumber change of the heat controller 10HC.

# **CHANGES**

#### Service Bulletin:

- Page 1 of 31	Revision number updated.
- Page 3	Para. DESCRIPTION - Workstep (8) revised.
- Page 5	Para. REFERENCES - AMM reference added.
- Page 7	Para. GENERAL - WARNINGS added.
- Page 8	Para. GENERAL - Workstep added.
- Page 9	Para. GENERAL - Text shifted.
- Page 11	Para. MODIFICATION - Quantity increased.
- Page 13	Para. MODIFICATION - Partnumber deleted.
- Page 15	Para. MODIFICATION - Partnumber changed.
- Page 16	Para. TEST - Circuit breakers added.
- Page 17	Para. EVALUATION - A/C MSN revised.
- Page 18	Para. RESTORATION OF AIRCRAFT TO ITS INITIAL CONFIGURATION - Partnumber changed.
- Page 20	Para. RESTORATION OF AIRCRAFT TO ITS INITIAL CONFIGURATION - Drawing number revised.

# **REVISION SEQUENCES**

Original: Jan 07/94

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# SERVICE BULLETIN REVISION TRANSMITTAL SHEET

Para. RESTORATION OF AIRCRAFT TO ITS INITIAL - Page 21

CONFIGURATION - Partnumber deleted.

Para. RESTORATION OF AIRCRAFT TO ITS INITIAL - Page 22

CONFIGURATION - Quantity increased. Worksteps deleted.

Para. LIST OF COMPONENTS - Partnumber changed. - Page 27

Para. LIST OF COMPONENTS - Partnumber deleted. - Page 28

# FILING INSTRUCTIONS

- Replace the Service Bulletin pages 1 of 31, 3, 5, 7, 8, 9, 11, 13, 15, 16, 17, 18, 20, 21, 22, 27 and 28.

- Put this Revision Transmittal Sheet in front of the Service Bulletin.

# REVISION SEQUENCES

Original: Jan 07/94

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

SERVICE BULLETIN SUMMARY

Telex: AIRBU 530526 F

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

MODIFICATION NO: 23828K3443

ATA SYSTEM: 21

T I T L E : AIR CONDITIONING - CARGO COMPARTMENT HEATING - INSTALL ADDITIONAL

BILGE HEATING

# REASON/DESCRIPTION/OPERATIONAL CONSEQUENCES

To avoid temperature difference between the front part and the rear part of the AFT/Bulk cargo compartment it is proposed to install an additional bulk cargo-compartment heating for the combinded loading of containers in the AFT cargo-compartment and live animals in the bulk cargo-compartment.

This modification consists of the installation of a bilge heating pipe under the AFT cargo compartment in addition to the standard option ''aft cargo-compartment heating (Mod 20084)''. Therefore an additional trim air valve must be installed near FR49, Left side.

The existing heating controller must be replaced by a modified heating controller to control two trim air valves.

To increase the efficiency of the heating system, the insulation at the lower side of the cargo compartment floor-panels has to be replaced by a bilge insulation. The insulation consists of PE-foam to avoid water absorption.

In the cockpit the circuit breaker 31HN on the panel 128VU must be replaced.

NOTE: This Evaluation Service Bulletin covers a prototype solution for in-service evaluation in a Canadian Airlines aircraft.

# **EFFECTIVITY**

This Service Bulletin is applicable to these customer(s): CDN

SERVICE BULLETIN(S) TO BE ACCOMPLISHED PREVIOUSLY OR SIMULTANEOUSLY

None

# REFERENCES/REPERCUSSIONS

TFU : 21.43.00.001

LIFE LIMIT

OEB : None

LINE MAINTENANCE AFFECTED: No

AOT : None SIL : None

OTHER: None

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# NATURE OF THE WORK

AIRCRAFT: YES
EQUIPMENT: NO
HARD: NO
SOFT: NO
OBRM: NO

# COMPLIANCE

Optional

# MANPOWER

# Kit No. 211076A01

TOTAL MANHOURS 51.0

ELAPSED TIME (HOURS) 30.0

Kit No. 211076A02

TOTAL MANHOURS 2.0

ELAPSED TIME (HOURS) 2.0

# MATERIAL INFORMATION

#### AIRCRAFT DATA

Heating pipes, floor panels, insulation mats, brackets and fitting, a circuit breaker, an electrical harness and related hardware.

# EQUIPMENT DATA

None

# **APPENDICES**

None

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MODIFICATION NO: 23828K3443

ATA SYSTEM: 21

T I T L E : AIR CONDITIONING - CARGO COMPARTMENT HEATING - INSTALL ADDITIONAL

**BILGE HEATING** 

# 1. PLANNING INFORMATION

# A. EFFECTIVITY

(1) Aircraft Model: 320-211

(2) Aircraft

· Kit No. Config. Customer and MSN Qty 211076 Fleet No. of Kits No.

CDN 416 404 A01,A02 1 each

(3) Spares

None

# B. REASON

# (1) History

To avoid temperature difference between the front part and the rear part of the AFT/Bulk cargo compartment it is proposed to install additional bulk cargo-compartment heating for the combined Loading of containers in the AFT cargo-compartment and live animals in the bulk cargocompartment.

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# (2) Objective/Action

This modification consists of the installation of a bilge heating pipe under the AFT cargo compartment in addition to the standard option ''AFT cargo-compartment heating (Mod 20084)''. Therefore an additional trim air valve must be installed near FR49, left side.

The existing heating controller must be replaced by a modified heating controller to control two trim air valves.

To increase the efficiency of the heating system, the insulation at the lower side of the cargo compartment floor-panels has to be replaced by a bilge insulation. The insulation consists of PE-foam to avoid water absorption.

In the cockpit the circuit breaker 31HN on the panel 128VU must be replaced.

NOTE: This Evaluation Service Bulletin covers a prototype solution for in-service evaluation in a Canadian Airlines aircraft.

# (3) Advantages

Improved heating in the AFT cargo-compartment and bulk cargo-compartment.

(4) Operational/Maintenance Consequences

None

(5) Accomplishment Timescale

In accordance with the operator's experience.

### C. DESCRIPTION

To accomplish this Service Bulletin it is necessary to:

#### MODIFICATION

# Kit No. 211076A01

- (1) Remove the floor panels between FR48 and FR64, in the AFT cargo-compartment.
- (2) Install new insulation mats between FR47 and FR65.
- (3) Install a bracket, ducts and a trim air valve between FR48 and FR49.
- (4) Install the heating ducts between FR48 and FR64.

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- (5) Install new brackets between FR50 and FR58.
- (6) Install the electrical harness 4609VB between FR48 and FR49, left side, in the belly fairing area.
- (7) Do the routing of electrical wires.
- (8) Install the floor panels between FR48 and FR64, in the AFT cargo-compartment.
- (9) Replace the heating controller 10HC in the FWD avionics compartment, on panel 96VU.

# Kit No. 211076A02

(10) Do the modification to the overhead circuit breaker panel 49VU.

# RESTORATION OF AIRCRAFT TO ITS INITIAL CONFIGURATION

- (1) Do the modification to the overhead circuit breaker panel 40VU.
- (2) Replace the heating controller 10HC in the FWD avionics compartment, on panel 96VU.
- (3) Remove the floor panels between FR48 and FR64, in the AFT cargo compartment.
- (4) Do the rerouting of the electrical wires.
- (5) Remove the electrical harness 4609VB between FR48 and FR49, left side, in the belly fairing area.
- (6) Remove the brackets between FR50 and FR58.
- (7) Remove the heating ducts between FR48 and FR64.
- (8) Remove ducts and a trim air valve between FR48 and FR50.
- (9) Remove the insulation mats between FR47 and FR65.
- (10) Install the floor panels between FR48 and FR64, in the AFT cargo-compartment.

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# 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 approved by the DGAC when they are major, or under the authority of DGAC Design Organisation Approval No. CO1, when they are minor.

# E. MANPOWER

This Service Bulletin is written for an aircraft in a maintenance condition. The manhours/eleapsed time estimates do not include the time to prepare for the modification, non-productive elapded times or administration.

MODIFICATION	Manhours/aircraft
KIT No. 211076A01	
Gain access	4.5
Modification	40.0
Test	1.0
Close-up Total Manhours	6.0 51.1
Elapsed time (hours)	30.0
Kit No. 211076A02	
Gain access	0.5
Modification	1.0
Test	
Close-up	0.5
Total manhours	2.0
Elapsed time (hours)	2.0

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# RESTORATION

#### manhours/aircraft

Gain access	5.0
Modification	41.0
Test	1.0
Close-up Total monhours	6.5 53.5
Elapsed time (hours)	31.0

### F. MATERIAL - COST AND AVAILABILITY

#### (1) Material

Will be supplied against a free of charge order by:

AIRBUS INDUSTRIE AIRSPARES MATERIAL SUPPORT CENTER WEG BEIM JAEGER 150 22335 HAMBURG GERMANY

# (2) Cost and Availability

There will be no charge for this Evaluation Service Bulletin.

# G. TOOLING - PRICE AND AVAILABILITY

None

# H. WEIGHT AND BALANCE

# Kit No. 211076A01

Manufacturers Empty Weight: +5.36 kg (+11.82 lb.)
Effect on Balance : +139.35 Kgm (+1007.92 lb.ft.)

Kit No. 211076A02

No affect

#### I. REFERENCES

Aircraft Maintenance Manual (AMM): 06-31-53, 06-41-52, 12-34-24, 21-43-00, 21-43-34, 24-41-00, 25-52-22, 25-55-11, 25-80-00, 29-12-41

Consumable Materials List (CML)

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# The subsequent Airbus Industrie drawings:

# Kit No. 211076A01

Top Drawing No.	Sheet(s)
D21470320 Issue A	1
Drawing No.	Sheet(s)
D21470309000 D21470310000 D21470311000 D21470312000 D21470313000 D21470314002	1 1, 2, 3, 4, 5 1 1, 2, 3, 4, 5 All
D25870003022	16
D53672802000 D53672803000	1, 2 1, 2
D92090381002	
D92492250002	2 thru 7
D92891899002 D92892045010	4 thru 12 17, 18, 19
Kit No. 211076A02	
Drawing No.	Sheet(s)
D92512158	1

# J. PUBLICATIONS AFFECTED

Illustrated Parts Catalog (IPC): 21-43-04, 25-53-04, 25-81-04, 53-42-04

NOTE: The IPC will be updated after the evaluation period.

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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 ENGINES, THE APU OR A GROUND SOURCE.

WARNING: OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU USE CLEANING AGENT (MAT. NO. 11-003A). THIS CLEANING AGENT IS DANGEROUS.

WARNING: OBEY THE HYDRAULIC SAFETY PROCEDURES.

WARNING: MAKE SURE THAT THE GROUND SAFETY-LOCKS ARE IN POSITION ON THE LANDING GEAR.

# (1) Preparation

- (a) Electrically ground the aircraft (Ref. AMM 12-34-24, P. Block 201).
- (b) Make sure that the warning notices are in position to tell the persons not to activate the cargo compartment heating.
- (c) De-energize the aircraft electrical circuits (Ref. AMM 24-41-00, P. Block 201).
- (d) Open, safety and tag these circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
49VU	HYD/HYDPWR/B WARN/&CTL	2702GJ	C12
49VU	AIR COND/AFT CARGO/VENT & HTG/CTL & MONG	31HN	C07
49VU	AIR COND/FLOW/CTL & IND1	1HB	D07
121VU	COM NAV/ILS/2	1RT2	K09
	HYDRAULIC/LOW/LVL/IND	1832GQ	N32
	HYDRAULIC/HYD/QTY/IND	1831GQ	P35
	AFT CARGO VENT AND HTG/FAN	30HN	<b>\$22</b>
122VU	AIR CIND/FLOW/MIXER/FLAP	ЗНВ	V22
122VU	AIR COND/FLOW/CTL & IND2	2HB	V21
122VU	AIR COND/ZONE TEMP TL/28VDC/SYS2	4HK	V20
122VU	AIR COND/ZONE TEMP CTL/28VDC/SYS1	ЗНК	V19
122VU	AIR COND/ZONE TEMP CTL/115VAC/SYS2	2HK	V18
122VU	AIR COND/ZONE TEMP CTL/115VAC/SYS1	1HK	V17
122VU	AIR COND/PACK TEMP/CTL	21HH	W22
	SYS1/2/115VAC		
122VU	AIR COND/PACK TEMP/CTL SYS1/2/28VDC	23HH	W21
122VU	AIR COND/PACK TEMP/CTL SYS1/1/115VAC	1НН	X22
122VU	AIR COND/PACK TEMP/CTL SYS1/1/28VDC	3HH	X21

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# **SERVICE BULLETIN**

PANEL	SERVICE	IDENT.	LOCATION
122VU	AIR COND/PACK TEMP/CTL SYS2/2/28VDC	24HH	Y21
122VU	AIR COND/PACK TEMP/CTL SYS2/2/115VAC	22НН	Y20
122VU	AIR COND/PACK TEMP/CTL SYS2/1/28VDC	4HH	Y19
122VU	AIR BLEED/ENG2/MONG	2HA2	Z22
122VU	AIR COND/PACK TEMP/CTL SYS2/1/115VAC	2HH	Y 18
122VU A	IR BLEED/ENG2/CTL	3HA2	<b>Z</b> 23
122VU E	_EC/GEN1/OFF/BTC2 SPLY	14XU	T30
122VU EI	_EC/GCU/2	2XU2	T27
122VU EI	_EC/IDG2/DISC	2XT	T25
122VU A	PU GEN/EGIU2/28VDC	26XU2	Y31
122VU GI	EN2/EGIU2/28DC	24XU2	Y30
122VU A	IR COND/CAB PRESS/CTL/MAN	3HL	Y23
122VU A	IR COND/CAB PRESS/CTL/2	2HL	Y22
123VU AF	PU GEN/ENGIU2/115VAC	.23XS	AAO8
123VU G	EN2/EGIU2/115VAC	23XU2	AFO1
123VU H	/D/ELEC PUMP	2701GJ	AB09

- (d) In the AFT cargo-compartment remove the sidewall panels, as necessary, to get access to the modification area (Ref. AMM 25-55-11, P. Block 401).
- (e) In the AFT cargo-compartment remove the ball mats to get access to the modification area (Ref. AMM 25-52-22, P. Block 401).
- (f) Remove the bleed air ducts between FR48 and FR56, as necessary, to get better access to the modification area.
- (g) Remove the wastewater pipes between FR48 and FR56, as necessary, to get better access to the modification area.
- (h) Remove the thermal and sound insulation, as necessary, to get access to the modification area (Ref. AMM 25-80-00, P. Block 001).
- (i) Remove the belly fairing access-panel 197BB, to get access to the outer skin and structure of the aircraft (Ref. AMM 06-41-52, P. Block 001).
- (j) Remove the blue hydraulic reservoir (Ref. AMM 29-72-41, P. Block 401).
- (k) In the Aft cargo-compartment, remove and retain the movable support struts where necessary.

# (2) Standard Practices

(a) Tag all parts during the removal to make the installation easier.

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# SERVICE BUILDETIN

- (b) Refer to the CML for the specification of the material numbers (Mat. No.).
- (c) For staton/frame (STA/FR) identification, refer to AMM 06-31-53.
- (d) After the installation of electrical harnesses or single wires do a continuity test.
- (e) Remove burrs from the holes that you must drill in the aircraft structure.
- (f) Apply polyurethane primer (Mat. No. 16-001) and polyurethane top coat (Mat. No. 16-002) to all new drilled holes and to the rivets.
- (g) Apply thread sealant (Mat. No. 05-002) to all threaded fasteners before you install them.
- (h) Refer to AMM 20-28-00 for the electrical bonding procedure.
- (i) Apply Nycote (Mat. No. 16-003) to all bonding contact points and identification placards.
  - WARNING: OBEY THE MANUFACTURERS INSTRUCTIONS WHEN YOU USE CLEANING AGENT (MAT. NO. 11-003A). THIS CLEANING AGENT IS DANGEROUS.
- (j) Clean the area with cleaning agent (Mat. No. 11-003A) where you must bond identification placards.

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# B. MODIFICATION

NOTE: You must read the related drawings and manuals (which we refer to) carefully before you start this modification.

NOTE: Send to stores all parts that you must remove and retain for installation after the evaluation period.

### Kit No. 211076A01

(1) Between FR48 and FR64, in the AFT cargo-compartment, remove the floor panels.

Refer to drawings D53672802000 and D53672803000.

(a) Between FR47 and FR59, remove these floor panels:

Refer to drawing D53672802000.

1 floor panel	D5367215100200	item O	retain
1 floor panel	D5367215100300	item 1	retain
1 floor panel	D5367215300000	item 2	retain
1 floor panel	D5367216100000	item 4	retain
1 floor panel	D5367215200000	item 6	retain
1 floor panel	D5367216200000	item 8	retain
1 floor panel	D5367216000200	item 10	retain
1 floor panel	D5367216300200	item 12	retain

Retain the hardware for the installation of the new floor panels.

(b) Between FR59 and FR65, remove these floor panels:

Refer to drawing D53672803000.

1	floor panel	D5367204100200	item	0	retain
1	floor panel	D5367204200000	item	2	retain

Retain the hardware for the installation of the new floor panels.

(2) Between FR47 and FR65, install new insulation mats.

Refer to drawing D258700003022.

(a) Between FR53 and FR54, Left side, remove these insulation mats:

1 insulation mat	D2587061400000	item (	) retain
1 insulation mat	D2587066400000	item 2	? retain

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(b) Between FR47 and FR65, install these insulation mats:

1	insulation mat	D2587061407000	item	1
1	insulation mat	D2587066407000	item	3
80	brackets	F2587003020000	item	4
80	washers	DAN365-01	item	5
35m2	foam insulation	DAN381L20	item	6
	or	DAN381H20	item	906

NOTE: Cut the foam insulation, item 6, or, item 906, to the dimensions given in the drawing D25870003022.

(3) Between FR48 and FR49, install a bracket, ducts and a trim air valve.

Refer to drawings D21470309000 and D21470311000.

(a) At FR49, Left side, in the belly fairing area, install:

Refer to drawings D21470309000.

1 bracket D2147103600000 21 rivets LN9198-3200BF item O

NOTE: Wet install the bracket, item 0, and the rivets with (Mat. No. 09-013) and apply Nycote (Mat. No. 16-003).

(b) At FR49, Left side, in the belly fairing area, remove:

Refer to drawings D21470311000.

1 angled duct assy D2147100500000 item 22 1 venturi assy D2147100300000 item 24

(c) At FR49, Left side, in the belly fairing area, install:

Refer to drawings D21470311000.

1	bypass	D2147100500200	item	2
1	bypass	D2147100500400	item	4
1	trim air valve	600700-00-500	item	6
2	clamps	NSA8603-262	item	8
5	0-rings	NSA8206225	item	10
2	spacers	D2147103820000	item	12
1	clamp	ABS0396C32FC	item	14
2	bolts	NAS 1303-3	item	16
6	washers	AN960C10	item	18
1	screw	NAS 1096-3-7	item	30
27	nuts	MS21042-3	item	32
2	bolts	NAS 1303-8	item	33

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(4) Between FR48 and FR64, install the heating ducts.

Refer to drawings D21470310000 and D21470312000.

(a) Between FR49 and FR55, Left side, remove:

1 heating duct

D2147101300000

item (

(b) Between FR48 and FR64, install:

NOTE: In the modification area, between FR53 and FR59, under the cargo compartment, you must adapt the drain pipes when you install the new heating ducts.

Refer to drawing D21470312000.

1	heating duct	D2147101300200	item	2
	heating duct	D2147101300600	item	4
	heating duct	D2147101300400	item	6
	heating duct	D2147101300800	item	8
1	heating duct	D2147101301000	item	10
	heating duct	D2147101301200	item	12
	distributor	D2147100500600	item	14
1	nozzle	D2147100501000	item	16
1	nozzle	D2147100500800	item	18
1	heating duct	D2147103420000	item	20
1	heating duct	D2147103400000	item	22
1	heating duct	D2147103420200	item	24
1	heating duct	D2147103420800	item	26
1	heating duct	D2147103421000	item	28
1	heating duct	D2147103421200	item	30
1	heating duct	D2147103400200	item	32
1	restrictor	D2147100525000	item	34
	restrictor	D2147100525200	item	36
1	restrictor	D2147100525400	item	38
	spacers	D2147103820000	item	40
1	hose	A2127053433200	item	44
	clamps ·	ABS0396C32FC	item	_
	clamps	ABS0396C40FA	item	
	clamps	A2121101100400	item	
	clamps	NSA8601-04	item	56
	clamps	NSA8601-07	item	58
	clamps	NSA5528-070	item	60
3	sleeves	A2101039621100	item	66
1	sleeve	A2121024021000	item	68
6	0-rings	\$2L-224	item	74
2	flanges	GC1060-28	item	76
2	sleeves	GC1066-28	item	78
4	spacers	NSA5527-03-06	item	84
26	washers	NSA5305-4C	item	86
2	spacers	NSA5527-03-14	item	88

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9	bolts	NAS 1303-8	item	100
6	bolts	NAS 1303-3	item	102
6	bolts	NAS 1303-11	item	104
26	bolts	NAS 1304-5	item	106
3	screws	NAS 1096-3-7	item	108
26	nuts	MS21042-4	item	112
36	washers	AN960C10	item	114
68	washers	AN960C1216	item	116

NOTE: You must install item 36. Store the restrictors, item 34 and 38, for air flow variation during the test phase.

(c) Attach the heating ducts to the aircraft structure with:

Refer to drawing D21470310000.

1	bracket	D2147103720000	item	0
1	bracket	D2147103720200	item	2
1	bracket	D2147103700000	item	4
1	traverse	D2147103721800	item	6
1	bracket	D2147103721200	item	8
1	section	D2147103700800	item	10
4	sections	D2147103700400	item	12
1	bracket	D2147103723200	item	14
1	section	D2147103701200	item	16
4	sections	D2147103700600	item	18
1	bracket	D2147103723600	item	20
5	sections	D2147103701000	item	22
24	shims	D2147103700200	item	24
20	spacers	NSA5527-03-01	item	30
6	bolts	NAS 1303-13	item	40
19	bolts	NAS 13003-12	item	42
2	bolts	NAS 1303-2	item	44
26	nuts	MS21042-03	item	50
52	washers	AN960C10	item	60
30	rivets	LN9198-3200BF	item	70

(5) Between FR50 and FR58, install new brackets.

Refer to drawing D92492250002.

(a) From the floor structure of the AFT cargo-compartment remove:

1 bracket	b92491 <b>7</b> 2720200	item 3
4 brackets	D9249177520000	item 6
1 bracket	b9249177520400	item 7
1 bracket	b9249179320000	item 8

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# (b) At the floor structure of the AFT cargo-compartment, install:

5 brackets	D9249177020400	item	5
rivets	LN9198-3200BF	item	632
1 bracket	D9249172721000	item	4

(6) Between FR48 and FR49, left side, in the belly fairing area, install the electrical harness 4609VB.

Refer to drawing D92892045010.

- (a) Remove one screw NAS1096-2-28, item 100.
- (b) Install:

1	electrical 460VB	harness	D9299226000000	item	0
10	cable ties		NAS935401-04	item	-
1	clamp		NSA935807-06	item	4
1	screw		NAS 1096-32	item	6

(7) Do the routing of electrical wires.

Refer to drawings D92090381002 and D92891899002.

#### Remove:

5 nuts

6 washers

3	screws brackets bracket	NAS 1096-2-28 ABS 0354-01 NSA 935513-01	item 3 item 29 item 27
Ins	stall:	•	
1	spacer	NSA5527-03-03	item 21
6	screws	NAS 1096-2-18	item 2
27	screws	NAS 1096-3-10	item 4
3	screws	NAS 1096-2-8	item 5
	clamps	A2101101100400	item 6
	nuts	MS21042L3	item 7
27	washers	AN960KD10L	item 10
12	cable ties	NSA935401-03	item 36
13	cable ties	NSA935504-01	item 8
	spacers	NSA5527-03-01	item 20
	nuts	NSA5566-08-2	item 15

AN960KD8L

MS21042L08

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item 9

(8) Between FR48 and FR64, in the AFT cargo compartment, install the floor panels.

Refer to drawings D53672802000 and D53672803000.

(a) Between FR47 and FR59, install these floor panels:

Refer to drawing D53672802000.

1	floor	panel	D5367215100400	item 20
1	floor	panel	D5367215100500	item 21
1	floor	panel	D5367215300200	item 22
1	floor	panel	D5367216100200	item 24
1	floor	panel	D5367215200200	item 26
1	floor	panel	D5367216200200	item 28
1	floor	panel	D5367216000400	item 30
1	floor	panel	D5367216300400	item 32

(b) Between FR59 and FR65, install these floor panels:

Refer to drawing D53672803000.

1 floor panel	D5367204100800	item 10
1 floor panel	D5367204200200	item 12

- (9) In the FWD avionics compartment, on panel 96VU, replace the heat controller 10HC (Refer to AMM 21-43-34, P. Block 401.).
  - (a) Remove the heat controller 10HC, 600611-00-506 or 600611-00-505.
  - (b) Install the heat controller 10HC, 600611-00-506/T0001/94 Amdt. A

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- (10) Do the modification to the overhead circuit-breaker panel 49VU Refer to drawing D92512158.
  - (a) In position O7C, remove:

1 circuit breaker 31HN NSA931320-030 retain

(b) In position O7C, install:

NSA931320-050 1 circuit breaker 31HN

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# C. TEST

- (1) Install the bleed air ducts, which you removed in para. 2.A.(1)(e).
- (2) Install the wastewater pipes, which you removed in para. 2.A.(1)(f).

NOTE: Do a check for leaks at all re-installed wastewater pipes. Leaks are not permitted.

- (3) Energize the aircraft electrical circuits (Ref. AMM 24-41-00, P. Block 201).
- (4) Remove all safety clips and tags and close these circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
49VU	HYD/HYD PWR/B WARN/&CTL	2702GJ	C12
49VU	AIR CIND/AFT CARGO/VENT & HTG/CTL & MONG	31HN	C07
49VU	AIR COND/FLOW/CTL & IND1	1HB	<b>DO7</b>
121VU	COM NAV/ILS/2	1RT2	K09
121VU	HYDRAULIC/LOW/LUL/IND	1832GQ	N32
121VU	HYDRAULIC/HYD/QTY/IND	1831GQ	P35
122VU	AFT CARGO VENT AND HTG/FAN	30HN	<b>S22</b>
122VU	AIR COND/FLOW/MIXER/FLAP	3HB	V22
122VU	AIR COND/FLOW/CTL & IND2	2HB	V21
122VU	AIR COND/ZONE TEMP CTL/28VD/SYS2	4HK	V20
122VU	AIR COND/ZONE TEMP CTL/28VDC/SYS1	3нк	V19
122VU	AIR COND/ZONE TEMP CTL/115VAC/SYS2	2HK	v18
122VU	AIR COND/ZONE TEMP CTL/115VAC/SYS1	HK	V17
122VU	AIR COND/PACK TEMP/CTL	21HH	W22
122VU	SYS1/2/115VAC AIR COND/PACK TEMP/CTL SYS1/2/28VDC	23НН	W21
122VU	AIR COND/PACK TEMP/CTL	1нн	X22
	SYS1/115VAC		
122VU	AIR CIND/PACK TEMP/CTL SYS1/1/28VDS	ЗНН	X21
122VU	AIR COND/PACK TEMP/CTL SYS2/2/28VDS	24HH	Y21
122VU	AIR COND/PACK TEMP/CTL SYS2/2/115VAC	22HH	Y20
122VU	AIR COND/PACK TEMP/CTL SYS2/1/28VDC	4нн	Y 19
122VU	AIR BLEED/ENG2/MONG	2HA2	<b>Z</b> 22
122VU	AIR BLEED/ENG2/CTL	3HA2	<b>Z</b> 23
122VU	ELEC/GEN1/OFF/BTC2 SPLY	14XU	Т30
122VU	AIR COND/PACK TEMP/CTL	2НН	Y18
122VU	SYS2/1/115VAC ELEC/GCU/2	2XU2	Т27
	ELEC/IDG2/DISC	2XT	T25
	APU GEN/EGIU2/28VDC	26XU2	Y31
	GEN2/EGIU2/28VDC	24XU2	Y30

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PANEL	SERVICE	IDENT.	LOCATION
122VU	AIR COND/CAB PRESS/CTL/MAN AIR COND/CAB PRESS/CTL/2 APU GEN/EGIU2/115VAC GEN2/EGIU2/115VAC B HYD/ELEC Pump	3HL	Y23
122VU		2HL	Y22
123VU		23XS	AA08
123VU		23XU2	AF01
123VU		2701GJ	AB09

- (5) Do these operational tests:
  - Aft Cargo-Compartment-Heating System (Refer to AMM 21-43-00 P. Block 501).
- (6) De-energize the aircraft electrical circuits (Ref, AMM 24-41-00, P. Block 201).

# D. CLOSE-UP

- (1) Install the retained thermal and sound insulation Ref. AMM 25-80-00, P. Block 001).
- (2) Install the retained AFT cargo-compartment sidewall-panels (Ref. AMM 25-55-11, P. Block 401).
- (3) Install the blue hydraulic reservoir (Ref. AMM 29-12-41, P. Block 401).
- (4) Install the retained belly fairing access-panel 1978B (Ref. AMM 06-41-52, P. Block 001).
- (5) Install the retained ball mats (Ref. AMM 25-52-22, P. Block 4001).
- (6) Make sure that the modification area is clean and clear of tools and other items of equipment.

#### E. DOCUMENTATION

Write in the applicable aircraft records that you have done all the work given in this Service Bulletin.

#### F. EVALUATION

This modification will remain in the A/C MSN 404 for an evaluation period of three months which starts with the accomplishment of this Evaluation Service Bulletin.

After this period a decision will be taken whether the material listed under para. 3.A. LIST OF COMPONENTS will remain in the aircraft or not.

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# G. RESTORATION OF AIRCRAFT TO ITS INITIAL CONFIGURATION

(1) Do the modification to the overhead circuit breaker panel 49VU.

Refer to drawing D92512158.

(a) In position O7C, remove:

1 circuit breaker

31HN

NSA931320-050

(b) In position O7C, install:

1 circuit breaker

31HN

NSA931320-030

(2) In the FWD avionics compartment, on panel 96VU, replace the heat controller 10HC.

Refer to AMM 21-43-34, P. Block 401.

- (a) Remove the heating controller 10HC, 600611-00-506/T0001/94 Amdt.A
- (b) Install the heating controller 10HC, 600611-00-506 or 600611-00-505.
- (3) Between FR48 and FR64, in the AFT cargo-compartment, remove the floor panels.

Refer to drawings D53672802000 and D53672803000.

(a) Between FR47 and FR59, remove these floor panels:

Refer to drawing D53672802000.

1 floor panel	D5367215100400	item 20
1 floor panel	D5367215100500	item 21
1 floor panel	D5367215300200	item 22
1 floor panel	D5367216100200	item 24
1 floor panel	D5367215200200	item 26
1 floor panel	D5367216200200	item 28
1 floor panel	D5367216000400	item 30
1 floor panel	D5367216300400	item 32

retain the hardware for the installation of the retained floor panels.

(b) Between FR59 and FR65, remove these floor panels:

Refer to drawing D53672803000.

1 floor panel D5367204100800 item 10 1 floor panel D5367204200200 item 12

retain the hardware for the installation of the retained floor panels.

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(4) Do the re-routing of the electrical wires.

Refer to drawings D92090381002 and D92891899002.

1	spacer	NSA5527-03-03	item 21
6	screws	NAS 1096-2-18	item 2
27	screws	NAS 1096-3-10	item 4
	screws	NAS 1096-2-8	item 5
	clamps	A2101101100400	item 6
	nuts	MS21042L3	item 7
	washers	AN960KD10L	item 10
	cable ties	NSA935401-03	item 36
13	cable ties	NSA935504-01	item 8
	spacers	NSA5527-03-01	item 20
	nuts	NSA5566-08-2	item 15
6	washers	AN960KD8L	item 11
	nuts	MS21042L08	item 9

# Install:

2	screws	NAS 1096-2-28	item 3
3	brackets	ABS0354-01	item 29
1	bracket	NSA935513-01	item 27

(5) Between FR48 and FR49, Left side, in the belly fairing area, remove the electrical harness 4609VB.

Refer to drawing D92892045010.

# (a) Remove:

1	electrical harness 4609VB	D9299226000000	item	0
10	cable ties	NAS935401-04	item	2
1	clamp	NSA935807-06	item	4
1	screw	NAS 1096-2-32	item	6

- (b) Install one screw NAS1096-2-28, item 100.
- (6) Between FR50 and FR58, remove the brackets.

Refer to drawing D92492250002.

(a) At the floor structure of the AFT cargo-compartment, remove:

5 brackets	D9249177020400	item	5
rivets	LN9198-3200BF	item	632
1 bracket	D9249172721000	item	4

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# (b) At the floor structure of the Aft cargo-compartment, install:

1 bracket	D9249172720200	item 3
4 brackets	D9249177520000	item 6
1 bracket	D9249177520400	item 7
1 bracket	D9249179320000	item 8

(7) Between FR48 and FR64, remove the heating ducts.

Refer to drawings D21470310000 and D21470312000.

(a) From the aircraft structure and from the heating ducts remove:

Refer to drawing D21470310000.

1	bracket	D2147103720000	item	0
1	bracket	D2147103720200	item	2
1	bracket	D2147103700000	item	4
1	traverse	D2147103721800	item	6
1	bracket	D2147103721200	item	8
1	section	D2147103700800	item	10
4	sections	D2147103700400	item	12
1	bracket	D2147103723200	item	14
1	section	D2147103701200	item	16
	sections	D2147103700600	item	18
1	bracket	D2147103723600	item	20
5	sections	D2147103701000	item	22
	shims	D2147103700200	item	24
20	spacers	NSA5527-03-01	item	30
	bolts	NAS 1303-13	item	40
19	bolts	NAS 13003-12	item	42
2	bolts	NAS 1303-2	item	44
26	nuts	MS 1042~03	item	50
52	washers	AN960C10	item	60
30	rivets	LN9198-3200BF	item	70

(b) Between FR48 and FR64, remove:

Refer to drawing D21470312000.

1 heating duct	D2147101300200	item	2
1 heating duct	D2147101300600	item	4
1 heating duct	D2147101300400	item	6
1 heating duct	D2147101300800	item	8
1 heating duct	D2147101301000	item	10
1 heating duct	D2147101301200	item	12
1 distributor	D2147100500600	item	14
1 nozzle	D2147100501000	item	16
1 nozzle	D2147100500800	item	18
1 heating duct	D2147103420000	item	20
1 heating duct	D2147103400000	item	22

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1	heating duct	D2147103420200	item	24
1	heating duct	D2147103420800	item	26
1	heating duct	D2147103421000	item	28
1	heating duct	D2147103421200	item	30
1	heating duct	D2147103400200	item	32
1	restrictor	D2147100525000	item	34
1	restrictor	D2147100525200	item	36
1	restrictor	D2147100525400	item	38
6	spacers	D2147103820000	item	40
1	hose	A2127053433200	item	44
4	clamps	ABS0396C32FC	item	50
2	clamps	ABS0396C40FA	item	52
13	clamps	A2121101100400	item	54
4	clamps	NSA8601-04	item	56
2	clamps	NSA8601-07	item	58
10	clamps	NSA5528-070	item	60
3	sleeves	A2101039621100	item	66
	sleeve ·	A2121024021000	item	
6	0-rings		item	
2	<b>3</b>	GC1060-28	item	76
2	sleeves	GC1066-28	item	78
	spacers	NSA5527-03-06	item	
	washers	NSA5305-4C	item	86
2	spacers	NAS5527-03-14	item	88
9		NAS 1303-8	item	
	bolts	NAS 1303-3	item	
	bolts	NAS 1303-11	item	
	bolts	NAS 1304-5	item	106
	screws	NAS 1096-3-7	item	108
_	nuts	MS21042-4	item	112
	washers	AN960C10	item	
68	washers	AN960C1216	item	116

(c) Between FR50 and FR52, Left side, install:

1 heating duct D2147101300000 item

(8) Between FR48 and FR50, remove ducts and a trim air valve.

Refer to drawings D21470309000 and D21470311000.

(a) At FR49, left side, in the belly fairing area, remove:

Refer to drawing D21470311000.

1	bypass	D2147100500200	item	2
	bypass	D2147100500400	item	4
	trim air valve	600700-00-500	item	6
	clamps	NSA8603-262	item	8
	0-rings	NSA8206225	item	10
	snacers	02147103820000	item	12

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1	clamp	ABS0396C32FC	item	14
2	bolts	NAS1303-3	item	16
6	washers	AN960C10	item	18
1	screw	NAS1096~3-7	item	30
26	nuts	MS21042-3	item	32
2	holts	NAS1303-8	item	33

(b) At FR49, Left side, in the belly fairing area, install:

Refer to drawing D21470311000.

1 angled duct assy D2147100500000 item 22 1 venturi assy D2147100300000 item 24

(9) Between FR47 and FR65, remove the insulation mats.

Refer to drawing D258700003022.

(a) Between FR47 and FR65, Left side, remove these insulation mats:

1	insulation mat	D2587061407000	item 1
1	insulation mat	D2587066407000	item 3
80	brackets	F2587003020000	item 4
80	washers	DAN365-01	item 5
35m2	foam insulation	DAN381L20	item 6
	or	DAN381H20	item 906

(b) Between FR53 and FR54, left side, install these insulation mats:

1 insulation mat D2587061400000 item 0 retain 1 insulation mat D2587066400000 item 2 retain

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(10) Between FR48 and FR64, in the AFT cargo compartment, install the floor panels.

Refer to drawings D53672802000 and D53672803000.

(a) Between FR47 and FR59, install these floor panels:

Refer to drawings D53672802000.

1	floor panel	D5367215100200 item	0
	floor pane		1
	floor pane		2
1	floor pane	D5367216100000 item	4
	floor pane	D5367215200000 item	6
1	floor pane	L D5367216200000 item	8
1	floor pane	L D5367216000200 item	10
	floor pane		12

(b) Between FR59 and FR65, install these floor panels:

Refer to drawing D53672803000.

1	floor	panel	D5367204100200	item	0
	floor	•	D5367204200000	item	2

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# H. TEST

- (1) Install the bleed air ducts, which you remove in para. 2.A.(1)(e).
- (2) Install the wastewater pipes, which you removed in para. 2.A.(1)(f).

NOTE: Do a check for leaks at all re-installed wastewater pipes. Leaks are not permitted.

- (3) Energize the aircraft electrical circuits (Ref. AMM 24-41-00, P. Block 201).
- (4) Remove all safety clips and tags and close these circuit breakers:

	SERVICE	IDENT.	LOCATION
	AIR COND/AFT CARGO/VENT & HTG/CTL & MONG		c07
49VU	AIR COND/FLOW/CTL & IND1 COM NAV/ILS/2 AFT CARGO VENT AND HTG/FAN AIR COND/FLOW/MIXER/FLAP AIR COND/FLOW/CTL & IND2	1HB	D07
121VU	COM NAV/ILS/2	1RT2	K09
122VU	AFT CARGO VENT AND HTG/FAN	30HN	<b>S22</b>
122VU	AIR COND/FLOW/MIXER/FLAP	3HB	V22
122VU	AIR COND/FLOW/CTL & IND2	2HB	V21
122VU	AIR COND/ZONE TEMP CTL/28VDC/SYS2	4HK	V20
122VU	AIR COND/ZONE TEMP CTL/28VDC/SYS1	3HK	V19
122VU	AIR COND/ZONE TEMP CTL/115VAC/SYS2		V18
122VU	AIR COND/ZONE TEMP CTL/115VAC/SYS1	1HK	C17
122VU	AIR COND/PACK TEMP/CTL SYS1/2/115VAC	21HH	W22
122VU		23нн	W21
122VU	AIR COND/PACK TEMP/CTL	1HH	X22
	SYS1/1/115VAC		,,
122VU	AIR COND/PACK TEMP/CTL SYS1/128VDC	2нн	X21
122VU	AIR COND/PACK TEMP/CTL SYS2/28VDC	24HH	Y21
122VU	AIR COND/PACK TEMP/CTL	22HH	Y20
400	SYS2/2/115VAC		
122VU	AIR COND/PACK TEMP/CTL SYS2/1/28VDC	4HH	Y 19
122VU	AIR BLEED/ENG2/MONG	2HA2	Z22
122VU	AIR BLEED/ENG2/CTL	3HA2	Z23
122VU	ELEC/GEN1/OFF/BICZ SPLY	14XU	T30
122VÚ	AIR CONDIPACK TEMPICIL	2HH	Y18
122VU	AIR COND/PACK TEMP/CTL SYS2/1/28VDC AIR BLEED/ENG2/MONG AIR BLEED/ENG2/CTL ELEC/GEN1/OFF/BTC2 SPLY AIR COND/PACK TEMP/CTL SYS2/115VAC ELEC/GCU/2 ELEC/IDG2/DISC APU GEN/EGIU2/28VDC GEN2/EGIU2/28VDC AIR COND/CAB PRESS/CTL/MAN AIR COND/CAB PRESS/CTL/2	21112	T27
122VU	FI FC/ING2/NISC	2YT	T25
122VU	APIL GEN/EGTU2/28VDC	261112	Y31
122VU	GEN2/EGTU2/28VDC	244115	Y30
122VU	ATR COND/CAR PRESS/CTI /MAN	7HI	Y23
122VU	AIR COND/CAB PRESS/CTL/2	2HL	Y22
122VU	AIK COMPTICAD INCOSTOTETE	23XS	AAO8
123VU	GEN2/EGIU2/115VAC	23XU2	AFO1

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# (5) Do these operational tests:

- Aft cargo compartment-Heating System (Refer to AMM 21-43-00 P. Block 501).
- (6) De-energize the aircraft electrical circuits (Ref, AMM 24-41-00, P. Block 201).

# I. CLOSE-UP

- (1) Install the retained thermal and sound insulation (Ref. AMM 25-80-00, P. Block 001).
- (2) Install the retained AFT cargo-compartment sidewall-panels (Ref. AMM 25-55-11, P. Block 401).
- (3) Install the retained belly fairing access-panel 197BB (Ref. AMM 06-41-52, P. Block 001).
- (4) Install the retained ball mats (Ref. AMM 25-52-22, P. Block 401).
- (5) Make sure that the modification area is clean and clear of tools and other items of equipment.
- (6) In the Aft cargo compartment, install the retained movable support struts.

#### J. DOCUMENTATION

Write in the applicable aircraft records that you have done all the work given in this Service Bulletin.

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# 3. MATERIAL INFORMATION

# A. LIST OF COMPONENTS

QTY .	NEW PART NO.	KEYWORD	DRAWING NO.	ITEM	INST DISP
KIT 2	11076A01				
1	D9299226000000	Elec. equipment	D92892045010	0	
14	NSA935401-04	Cable tie	D92892045010	2	
2	NSA935807-06	Clamp	D92892045010	4	
2	NAS 1096-2-32	Screw	D92892045010	6	
1	D2587061407000	Insulation mat	D25870003022	1	
1	D2587066407000	Insulation mat	D25870003022	3	
80	F2587003020000	Bracket	D25870003022	4	
91	DAN365-01	Washer	D25870003022	5	
35m2	DAN381L20	Plate	D25870003022	6	
1	D5367215100400	Floor panel	D53672802000	20	
1	D5367215100500	Floor panel	D53672802000	21	
1	D5367215300200	Floor panel	D53672802000	22	
1	D5367216100200	Floor panel	D53672802000	24	
1	D5367215200200	Floor panel	D53672802000	26	
1	D5367216200200	Floor panel	D53672802000	28	
1	D5367216000400	Floor panel	D53672802000	30	
1	D5367216300400	Floor panel	D53672802000	32	
1	D5367204100800	Floor panel	D53672803000	10	
1	D5367204200200	Floor panel	D53672803000	12	
1	D2147100500200	Bypass	D21470311000	2	
1	D2147100500400	Bypass	D21470311000	4	
2	NSA8603-262	Clamp	D21470311000	8	
6	NSA8206-225	0-ring	D21470311000	10	
2	D2147103820000	Spacer	D21470311000	12	
5	ABS0396C32FC	Clamp	D21470311000	14	
11	NAS1303-3	Bolt	D21470311000	16	
110	AN960C10	Washer	D21470311000	18	
6 -	NAS 1096-3-7	Screw	D21470311000	30	
27	MS21042-3	Nut	D21470311000	32	
14	NAS 1303-8	Bolt	D21470311000	33	
1	600700-00-500	Valve	D21470311000	6	
1	600611-00-506/ T0001/94 Amdt. A	Controller 10HC	No drawing		
1	D2147103600000	Bracket	D21470309000	0	

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QTY	NEW PART NO.	KEYWORD	DRAWING NO.	ITEM	INST DISP
1	D2147101300200	Duct	D21470312000	2	
1 .	D2147101300600	Duct	D21470312000	4	
1	D2147101300400	Duct	D21470312000	6	
1	D2147101300800	Duct	D21470312000	8	
1	D2147101301000	Duct	D21470312000	10	
1	D2147101301200	Duct	D21470312000	12	
1	D2147100500600	Distributor	D21470312000	14	
1	D2147100501000	Nozzle	D21470312000	16	
1	D2147100500800	Nozzle	D21470312000	18	
1	D2147103420000	Duct	D21470312000	20	
1	D2147103400000	Duct	D21470312000	22	
1	D2147103420200	Duct	D21470312000	24	
1	D2147103420800	Duct	D21470312000	26	
1	D2147103421000	Duct	D21470312000	28	
1	D2147103421200	Duct	D21470312000	30	
1	D2147103400200	Duct	D21470312000	32	
1	D2147100525000	Restrictor	D21470312000	34	
1	D2147100525200	Restrictor	D21470312000	36	
1	D2147100525400	Restrictor	D21470312000	38	
6	D2147103820000	Spacer	D21470312000	40	
1	A2127053433200	Hose	D21470312000	44	
4	ABS0396C40FC	Clamp	D21470312000	50	
2	ABS0396C40FA	Clamp	D21470312000	52	
13	A2101101100400	Clamp	D21470312000	54	
4	NSA8601-04	Clamp	D21470312000	56	
2	NSA8601-07	Clamp	D21470312000	58	
11	NSA5528-270	Clamp	D21470312000	60	
3	A2101039621100	Sleeve	D21470312000	66	
1	A2121024021000	Sleeve	D21470312000	68	
6	S2L-224	0-ring	D21470312000	74	
2	GC1060-28	Flange	D21470312000	76	
2	GC1066-28	SLeeve	D21470312000	78	
6	NSA5527-03-06	Spacer	D21470312000	84	
28	NSA5305-4C	Washer	D21470312000	86	
3	NSA5527-03-14	Spacer	D21470312000	88	
8	NAS1303-11	Bolt	D21470312000	104	
31	NAS1304-5	Bolt	D21470312000	106	
26	MS21042-4	Nut	D21470312000	112	BFE
76	AN960C1216	Washer	D21470312000	116	
1	D2147103720000	Bracket	D21470310000	0	
1	D2147103720200	Bracket	D21470310000	2	
1	D2147103700000	Bracket	D21470310000	4	
1	D2147103721800	Traverse	D21470310000	6	
1	D2147103721200	Bracket	D21470310000	8	
1	D2147103700800	Section	D21470310000	10	
4	D2147103700400	Section	D21470310000	12	

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QTY	NEW PART NO.	KEYWORD	DRAWING NO.	ITEM	INST DISP
1	D2147103723200	Bracket	D21470310000	14	
1	D2147103701200	Section	D21470310000	16	
4	D2147103700600	Section	D21470310000	18	
1	D2147103723600	Bracket	D21470310000	20	
5	D2147103701000	Section	F21470310000	22	
24	D2147103700200	Shim	D21470310000	24	
24	NSA5527-03-01	Spacer	D21470310000	30	
8	NAS 1303-13	Bolt	D21470310000	40	
22	NAS1303-12	Bolt	D21470310000	42	
4	NAS 1303-2	Bolt	D21470310000	44	
133	LN9198-3210BF	Rivet	D21470310000	70	
6	D9249177020400	Bracket	D92492250002	5	
	LN9198-3200BF	Rivet	D92492250002	632	
1	D9249172721000	Bracket	D92492250002	4	
1	NSA5527-03-03	Spacer	D92391899002	21	
6	NAS 1096-2-18	Screws	D92891899002	2	
27	NAS 1096-3-10	Screws	D92891899002	4	
3	NAS 1096-2-8	Screws	D92891899002	5	
5	A2101101100400	Clamps	D92891899002	6	
27	MS21042L3	Nuts	D92891899002	7	
27	AN960KD10L	Washers	D92891899002	10	
12	NSA935401-03	Cable ties	D92891899002	36	
3 2	NSA5527-03-01	Spacer	D92891899002	20	
	NSA5566-08-2	Nuts	D92891899002	15	
6	AN960KD8L	Washers	D92891899002	11	
13	NSA935504-01	Cable ties	D92891899002	8	
5	MS21042L08	Nuts	D92891899002	. 9	

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DISP  1  D2147100500000  Angled duct assy  D21470311000  22  * 1  D2147100300000  Venturi assy  D21470311000  24  *  1  D2147101300000  Duct assy  D21470312000  0  *  1  D9249172720200  Bracket   D92492250002  3  * 4  D9249177520400  Brackets   D92492250002  6  * 1  D9249177520400  Bracket   D92492250002  7  * 1  D9249179300000  Bracket   D92492250002  8  *  1  D2587061400000  Insulation mat  D25870003022  0  * 1  D2587066400000  Insulation mat  D25870003022  2  *  1  D5367215100200  Floor panel   D53672802000  0  * 1  D5367215100300  Floor panel   D53672802000  1  * 1  D5367215100000  Floor panel   D53672802000  2  * 1  D5367216100000  Floor panel   D53672802000  4  * 1  D5367216200000  Floor panel   D53672802000  6  * 1  D5367216200000  Floor panel   D53672802000  6  * 1  D5367216200000  Floor panel   D53672802000  8  * 1  D5367216300200  Floor panel   D53672802000  10  * 1  D5367216300200  Floor panel   D53672802000  12  *  1  D5367204200000  Floor panel   D53672803000  0  * 1  D5367204200000  Floor panel   D53672803000  2  *  1  NSA931320-030   Circuit breaker   D92512158	QTY	NEW PART NO.	KEYWORD	DRAWING NO.	ITEM	INST DISP
### B. LIST OF REMOVED COMPONENTS    QTY   NEW PART NO.   KEYWORD   DRAWING NO.   ITEM   INST DISP	KIT 2	211076A02				
D2147100500000	1	NSA931320-050	Circuit breaker	D92512158		
DISP     D2147100500000	B. <u>L1</u>	ST OF REMOVED COM	PONENTS			
1       D2147100300000       Venturi assy       D21470311000       24       *         1       D2147101300000       Duct assy       D21470312000       0       *         1       D9249172720200       Bracket       D92492250002       3       *         4       D9249177520400       Brackets       D92492250002       6       *         1       D9249177520400       Bracket       D92492250002       7       *         1       D92491779300000       Bracket       D92492250002       7       *         1       D9249179300000       Bracket       D92492250002       8       *         1       D92587061400000       Insulation mat       D25870003022       0       *         1       D2587066400000       Insulation mat       D25870003022       0       *         1       D5367215100200       Floor panel       D53672802000       0       *         1       D5367215100300       Floor panel       D53672802000       1       *         1       D5367216300000       Floor panel       D53672802000       6       *         1       D5367216300200       Floor panel       D53672802000       1       *         1	QTY	NEW PART NO.	KEYWORD	DRAWING NO.	ITEM	INST DISP
1	1	D2147100500000	Angled duct assy	D21470311000	22	*
1 D9249172720200 Bracket D92492250002 3 * 4 D9249177520000 Brackets D92492250002 6 * 1 D9249177520400 Bracket D92492250002 7 * 1 D9249179300000 Bracket D92492250002 8 *  1 D2587061400000 Insulation mat D25870003022 0 * 1 D2587066400000 Insulation mat D25870003022 2 *  1 D5367215100200 Floor panel D53672802000 0 * 1 D5367215100300 Floor panel D53672802000 1 * 1 D5367215300000 Floor panel D53672802000 1 * 1 D5367215100000 Floor panel D53672802000 4 * 1 D5367215200000 Floor panel D53672802000 6 * 1 D5367216200000 Floor panel D53672802000 6 * 1 D5367216200000 Floor panel D53672802000 6 * 1 D5367216200000 Floor panel D53672802000 8 * 1 D5367216300200 Floor panel D53672802000 10 * 1 D5367216300200 Floor panel D53672802000 10 * 1 D5367204100200 Floor panel D53672802000 12 *  1 NSA931320-030 Circuit breaker D53672803000 0 * 1 D5367204200000 Floor panel D53672803000 2 *  1 NSA931320-030 Circuit breaker D92512158 * 1 600611-00-506 Controller 10HC	1	D2147100300000	Venturi assy	D21470311000	24	*
4       D9249177520000       Brackets       D92492250002       6       *         1       D9249177520400       Bracket       D92492250002       7       *         1       D9249179300000       Bracket       D92492250002       8       *         1       D2587061400000       Insulation mat       D25870003022       0       *         1       D2587066400000       Insulation mat       D25870003022       2       *         1       D5367215100200       Floor panel       D53672802000       0       *         1       D5367215100300       Floor panel       D53672802000       1       *         1       D5367215300000       Floor panel       D53672802000       2       *         1       D5367216100000       Floor panel       D53672802000       4       *         1       D5367216200000       Floor panel       D53672802000       8       *         1       D5367216300200       Floor panel       D53672802000       10       *         1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       0       *         1 <td>1</td> <td>D2147101300000</td> <td>Duct assy</td> <td>D21470312000</td> <td>0</td> <td>*</td>	1	D2147101300000	Duct assy	D21470312000	0	*
4       D9249177520000       Brackets       D92492250002       6       *         1       D9249177520400       Bracket       D92492250002       7       *         1       D9249179300000       Bracket       D92492250002       8       *         1       D2587061400000       Insulation mat       D25870003022       0       *         1       D2587066400000       Insulation mat       D25870003022       2       *         1       D5367215100200       Floor panel       D53672802000       0       *         1       D5367215100300       Floor panel       D53672802000       1       *         1       D5367215200000       Floor panel       D53672802000       2       *         1       D5367216200000       Floor panel       D53672802000       6       *         1       D5367216200000       Floor panel       D53672802000       10       *         1       D5367216300200       Floor panel       D53672802000       12       *         1       D5367204100200       Floor panel       D53672802000       12       *         1       D5367204200000       Floor panel       D53672803000       0       *         1<	1	D9249172720200	Bracket	D92492250002	3	*
1       D9249177520400       Bracket       D92492250002       7       *         1       D9249179300000       Bracket       D92492250002       8       *         1       D2587061400000       Insulation mat       D25870003022       0       *         1       D2587066400000       Insulation mat       D25870003022       2       *         1       D5367215100200       Floor panel       D53672802000       0       *         1       D5367215100300       Floor panel       D53672802000       1       *         1       D5367215300000       Floor panel       D53672802000       4       *         1       D5367216200000       Floor panel       D53672802000       4       *         1       D5367216200000       Floor panel       D53672802000       8       *         1       D5367216300200       Floor panel       D53672802000       10       *         1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       0       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       M						*
1       D9249179300000       Bracket       D92492250002       8       *         1       D2587061400000       Insulation mat       D25870003022       0       *         1       D2587066400000       Insulation mat       D25870003022       2       *         1       D5367215100200       Floor panel       D53672802000       0       *         1       D5367215100300       Floor panel       D53672802000       1       *         1       D5367215300000       Floor panel       D53672802000       2       *         1       D5367216100000       Floor panel       D53672802000       4       *         1       D5367216200000       Floor panel       D53672802000       6       *         1       D5367216000200       Floor panel       D53672802000       10       *         1       D5367216300200       Floor panel       D53672802000       12       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1						*
1 D2587066400000 Insulation mat D25870003022 2 *  1 D5367215100200 Floor panel D53672802000 0 *  1 D5367215100300 Floor panel D53672802000 1 *  1 D5367215300000 Floor panel D53672802000 2 *  1 D5367216100000 Floor panel D53672802000 4 *  1 D5367215200000 Floor panel D53672802000 6 *  1 D5367216200000 Floor panel D53672802000 8 *  1 D5367216200000 Floor panel D53672802000 10 *  1 D5367216300200 Floor panel D53672802000 10 *  1 D5367216300200 Floor panel D53672802000 12 *  1 D5367204100200 Floor panel D53672803000 0 *  1 D5367204200000 Floor panel D53672803000 0 *  1 D5367204200000 Floor panel D53672803000 0 *  1 NSA931320-030 Circuit breaker D92512158 *  1 600611-00-506 Controller 10HC				D92492250002		*
1 D5367215100200 Floor panel D53672802000 0 * 1 D5367215100300 Floor panel D53672802000 1 * 1 D5367215300000 Floor panel D53672802000 2 * 1 D5367216100000 Floor panel D53672802000 4 * 1 D5367215200000 Floor panel D53672802000 6 * 1 D5367216200000 Floor panel D53672802000 8 * 1 D5367216200000 Floor panel D53672802000 10 * 1 D5367216300200 Floor panel D53672802000 10 * 1 D5367216300200 Floor panel D53672802000 12 *  1 D5367204100200 Floor panel D53672802000 12 *  1 D5367204200000 Floor panel D53672803000 0 * 1 D5367204200000 Floor panel D53672803000 2 *  1 NSA931320-030 Circuit breaker D53672803000 2 *  1 NSA931320-030 Circuit breaker D53672803000 2 *  2 NAS1096-2-28 Screws D92891899002 3 * 3 ABS0354-01 Brackets D92891899002 29 *	1	D2587061400000	Insulation mat	D25870003022	0 .	*
1       D5367215100300       Floor panel       D53672802000       1       *         1       D5367215300000       Floor panel       D53672802000       2       *         1       D5367216100000       Floor panel       D53672802000       4       *         1       D5367216200000       Floor panel       D53672802000       6       *         1       D5367216200000       Floor panel       D53672802000       10       *         1       D5367216300200       Floor panel       D53672802000       10       *         1       D5367216300200       Floor panel       D53672802000       12       *         1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       600611-00-506       Controller 10HC       *       *         0       600611-00-505       Controller 10HC       *       *         2       NAS1096-2-28       Screws       D92891899002       3       *         3       ABS0354-01       Brackets       D928	1	D2587066400000	Insulation mat	D25870003022	2	*
1       D5367215100300       Floor panel       D53672802000       1       *         1       D5367215300000       Floor panel       D53672802000       2       *         1       D5367216100000       Floor panel       D53672802000       4       *         1       D5367216200000       Floor panel       D53672802000       6       *         1       D5367216200000       Floor panel       D53672802000       10       *         1       D5367216300200       Floor panel       D53672802000       12       *         1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       600611-00-506       Controller 10HC       *       *         0r       600611-00-505       Controller 10HC       *       *         2       NAS1096-2-28       Screws       D92891899002       3       *         3       ABS0354-01       Brackets       D92891899002       29       *	1	D5367215100200	Floor panel	D53672802000	. 0	*
1       D5367216100000       Floor panel       D53672802000       4       *         1       D5367215200000       Floor panel       D53672802000       6       *         1       D5367216200000       Floor panel       D53672802000       10       *         1       D5367216300200       Floor panel       D53672802000       12       *         1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       600611-00-506       Controller 10HC       *       *         0r       600611-00-505       Controller 10HC       *       *         2       NAS 1096-2-28       Screws       D92891899002       3       *         3       ABS0354-01       Brackets       D92891899002       29       *	1	D5367215100300	Floor panel	D53672802000		*
1       D5367215200000       Floor panel       D53672802000       6       *         1       D5367216200000       Floor panel       D53672802000       8       *         1       D5367216000200       Floor panel       D53672802000       10       *         1       D5367216300200       Floor panel       D53672802000       12       *         1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       600611-00-506       Controller 10HC       *       *         0       600611-00-505       Controller 10HC       *       *         2       NAS1096-2-28       Screws       D92891899002       3       *         3       ABS0354-01       Brackets       D92891899002       29       *	1	D5367215300000	Floor panel	D53672802000	2	*
1       D5367216200000       Floor panel       D53672802000       8       *         1       D5367216000200       Floor panel       D53672802000       10       *         1       D5367216300200       Floor panel       D53672802000       12       *         1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       600611-00-506       Controller 10HC       *       *         or       600611-00-505       Controller 10HC       *       *       1)         2       NAS1096-2-28       Screws       D92891899002       3       *         3       ABS0354-01       Brackets       D92891899002       29       *	1	D5367216100000	Floor panel	D53672802000	4	*
1       D5367216000200       Floor panel       D53672802000       10       *         1       D5367216300200       Floor panel       D53672802000       12       *         1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       600611-00-506       Controller 10HC       *       *         or       600611-00-505       Controller 10HC       *       *       1)         2       NAS1096-2-28       Screws       D92891899002       3       *         3       ABS0354-01       Brackets       D92891899002       29       *	1	D5367215200000	Floor panel	D53672802000	6	*
1       D5367216300200       Floor panel       D53672802000       12       *         1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       600611-00-506       Controller 10HC       *       *         or       600611-00-505       Controller 10HC       *       *       1)         2       NAS1096-2-28       Screws       D92891899002       3       *         3       ABS0354-01       Brackets       D92891899002       29       *	1	D5367216200000	Floor panel	D53672802000	. 8	*
1       D5367204100200       Floor panel       D53672803000       0       *         1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       600611-00-506       Controller 10HC       *         or       600611-00-505       Controller 10HC       *         2       NAS1096-2-28       Screws       D92891899002       3       *         3       ABS0354-01       Brackets       D92891899002       29       *	1	D5367216000200	Floor panel	D53672802000		*
1       D5367204200000       Floor panel       D53672803000       2       *         1       NSA931320-030       Circuit breaker       D92512158       *         1       600611-00-506       Controller 10HC       *         or       600611-00-505       Controller 10HC       *         2       NAS1096-2-28       Screws       D92891899002       3       *         3       ABS0354-01       Brackets       D92891899002       29       *	1	D5367216300200	Floor panel	D53672802000	12	*
1 NSA931320-030 Circuit breaker D92512158 * 1 600611-00-506 Controller 10HC	1	D5367204100200	Floor panel	D53672803000		*
1 600611-00-506 Controller 10HC * or 600611-00-505 Controller 10HC * 1) 2 NAS1096-2-28 Screws D92891899002 3 * 3 ABS0354-01 Brackets D92891899002 29 *	1	D5367204200000		D53672803000	2	*
or 600611-00-505 Controller 10HC	1	NSA931320-030	Circuit breaker	D92512158		*
or 600611-00-505 Controller 10HC	1	600611-00-506	Controller 10HC			*
3 ABS0354-01 Brackets D92891899002 29 *	or	600611-00-505	Controller 10HC			* 1)
3 ABS0354-01 Brackets D92891899002 29 *	2	NAS 1096-2-28	Screws	D92891899002	3	*
	3	ABS0354-01	Brackets	D92891899002	29	*
		NSA935513-01	Bracket	D92891899002	27	*

<sup>\*</sup> Send these parts to the stores and retain for re-installation after the evaluation period.

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<sup>1)</sup> Alternative part



# C. SPECIAL TOOLS

None

# D. LIST OF MATERIALS - OPERATOR SUPPLIED

DESIGNATION	REFERENCE CML	QTY PER A/C		
Special Material	05-002 09-013	As required As required		
Sealant Cleaning Agent	11-003A	As required		
Special Material Special Material	16-001 16-002	As required As required		
Special Material	16-003	As required		

# E. PARTS TO BE RE-IDENTIFIED BY OPERATOR

None

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AIRBUS INDUSTRIE
PRODUCT SUPPORT DIRECTORATE
1 Rond Point Maurice BELLONTE
31707 BLAGNAC CEDEX FRANCE
Tel: (33) 61-93-33-33
Telex: AIRBU 530526 F



MODIFICATION NO: 23828K3443

ATA SYSTEM: 21

T I T L E : AIR CONDITIONING - CARGO COMPARTMENT HEATING - INSTALL ADDITIONAL

BILGE HEATING

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 :	Please	return	to:	
AIRLINE :			AIRBUS INDUSTRIE PRODUCT SUPPORT DIRECTORATE 1 Rond Point Maurice BELLONTE 31707 BLAGNAC CEDEX FRANCE	
•••••			Att.: AI/SP - Technical Publication Department	on
NAME :				
•••••			•	
DATE:		-		
19				

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