## *GA320*

AIRBUS INDUSTRIE

CUSTOMER SERVICES DIRECTORATE

1 Rond Point Maurice Bellonte 31707 BLAGNAC CEDEX FRANCE

SERVICE BULLETIN

Tel : (33) 5 61 93 33 33

Telex : AIRBU 530526F REVISION TRANSMITTAL SHEET

FAX : (33) 5 61 30 01 25

T I T L E : AIR CONDITIONING - AIR COOLING SYSTEM - IMPROVE RAM AIR OUTLET

MODIFICATION No.: 22995K2883

ATA SYSTEM: 21

Herewith Revision No. 2 of Service Bulletin A320-21-1051.

No additional work is required by this Revision.

#### REASON

This Revision is issued to delete levers and inserts which are covered by Service Bulletin A320-21-1098.

#### Service Bulletin Summary

Page 2 of 3 Page 3 of 3	Para. SERVICE BULLETIN(S) MODIFICATION Para. MANPOWER Para. MATERIAL INFORMATION	<ul> <li>Service Bulletin A320-21-1098 added</li> <li>Manhours for Kit A03 and A04 to be corrected.</li> <li>Text for Kit A03 and A04 amended.</li> </ul>
Service Bulletin		
Page 1 of 33		- REVISION No. 1 set to 2
Page 1 of 33 thru 4	Para. 1.A.(2)	- Effectivity updated and Sentence added
Page 4 and 5	Para. 1.B.(2)	- Text for Kit AO3 amended.
Page 5	Para. 1.B. (4)	- Text for Kit AO4 amended.
Page 6	Para. 1.C.	<ul> <li>Worksteps (10) and (16) added, (11) text amended.</li> </ul>
Page 6	Para. 1.D.	- Approval sentence amended.
Page 7	Para. 1.E.	<ul> <li>Manhours for Kit AO3 and AO4 corrected.</li> </ul>
Page 8	Para. 1.F.(2)	<ul> <li>Costs for Kit AO3 and Kit AO4 amended.</li> </ul>
Page 8	Para. 1.G.	- Special tool deleted.
Page 8	Para. 1.I.	<ul> <li>Service Bulletin</li> <li>A320-21-1098 added</li> </ul>
Page 11 thru 14		- Page numbering shifted.
Page 15	Para. 2.F.(4)(c)	- Text amended.

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#### SERVICE BULLETIN

#### REVISION TRANSMITTAL SHEET

Page	16	Para. 2.F.(5)	<ul> <li>Worksteps (c) thru (e) de- leted.</li> </ul>
Page	16	Para. 2.F.(5)(b)	<ul> <li>Workstep amended and NOTE added.</li> </ul>
Page	17	Para. 2.F.(7)(b)	- Text corrected.
Page	17	Para. 2.F.(7)(c)	<ul> <li>Equivalent Lockwire AMS4026 added</li> </ul>
Page	17	Para. 2.F.(7)(e)	<ul><li>NOTE extended.</li></ul>
Page	18	Para. 2.F.(8)(a) thru (h)	<ul> <li>Worksteps deleted.</li> </ul>
Page	18	Para. 2.F.(8)(a)	<ul> <li>AMM reference (adjustment) added.</li> </ul>
Page	19/20	Figure 1, Sheet 1 of 2	<ul> <li>Qty of sheets amended.</li> </ul>
Page	21/22	Figure 1, Sheet 2 of 2	<ul> <li>Qty of sheets amended.</li> </ul>
Page	23/24	Figure 2, Sheet 1 of 3	<ul> <li>New sheet created, PN of rivet, item 73, changed from NSA54216-040-030 to NAS1921B05S02.</li> </ul>
Page	25/26	Figure 2, Sheet 2 of 3	<ul> <li>New sheet created, PN of rivet, item 73, changed from NSA54216-040-030 to NAS1921B05S02. Rivets, item 76, item 77 and item 78 added.</li> </ul>
Page	27/28	Figure 2, Sheet 3 of 3	- Qty of sheets amended.
_		Figure_4	- Deleted.
Page	32	Para. 3.A.	<ul> <li>PN of rivet, item 73, changed from NSA54216-040-030 to NAS1921B05S02, Qty of item 71 enlarged. Rivets, item 76, item 77 and item 78 added.</li> </ul>
Page	33	Para. 3.C.	<ul> <li>Equivalent Lockwire AMS4026 added</li> </ul>

#### FILING INSTRUCTIONS:

Remove Service Bulletin Summary Pages 2 of 3 and 3 of 3 and Service Bulletin Pages 1 of 35, 2, 3, 4, 5, 6, 7, 8, 9 thru 27/28, 32, 33 and 35.

Insert Service Bulletin Summary Pages 2 of 3 and 3 of 3 and Service Bulletin Pages 1 of 33, 2, 3, 4, 5, 6, 7, 8, 11 thru 27/28, 32 and 33.

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

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## REVISION SEQUENCE

Original: Oct 14/93 Revision No.: 1-Aug 03/94 Revision No.: 2- Aug 01/97

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Printed in France



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

TITLE: AIR CONDITIONING - AIR COOLING SYSTEM - IMPROVE RAM AIR OUTLET

MODIFICATION No.: 22995K2883 ATA SYSTEM: 21

#### REASON/DESCRIPTION/OPERATIONAL CONSEQUENCES

Several operators have reported damage to the ram air outlet flaps due to over-travel of the guides and excessive mechanism backlash.

This Service Bulletin introduces three solutions to fulfil the requirements of the modification 22995K2883 which ensures correct function of the ram air outlet assembly:

- A complete new ram air outlet assembly.
- A new flap (with Service Bulletin A320-21-1098 being accomplished simultaneously).
- A modified flap (with Service Bulletin A320-21-1098 being accomplished simultaneously).

This Service Bulletin should be accomplished in case of findings following the accomplishment of the Inspection Service Bulletin A320-21-1057.

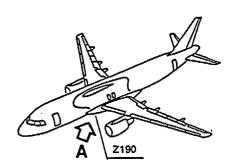
The accomplishment of this Service Bulletin:

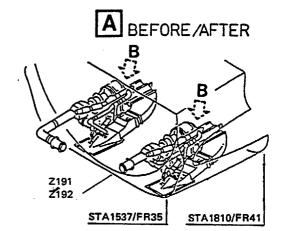
- Kit A01 and A02 or

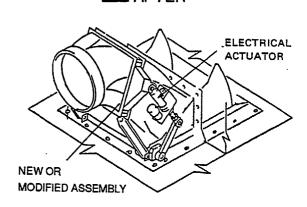
6 DATE : Oct 14/93

- Kit AO3 or AO4 with Service Bulletin A320-21-1098

supersedes further inspection requirements in accordance with the Service Bulletin A320-21-1057.







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#### **EFFECTIVITY**

This Service Bulletin is applicable to the following operator: AAA, ACA, ADR, AFR, AIB, ALK, AMC, ANA, BAW, BV, CDN, CYP, DLH, FHA, GFA, HP, IAC, IBE, ITF, KAC, NON, MSR, MXA, NWA, OYC, RJA, SAA, SHK, TAR, XF, XP, XR, XW and XZ.

This modification 22995K2883 is embodied prior to delivery on A/C MSN 364, 385, 412 and subsequent.

SERVICE BULLETIN(S)/MODIFICATION TO BE ACCOMPLISHED PREVIOUSLY OR SIMULTANEOUSLY

Service Bulletin A320-21-1098 should be accomplished simultaneously.

#### REFERENCES/REPERCUSSIONS

TFU 21.61.52.02

LIFE LIMIT

None

0EB None

LINE MAINTENANCE AFFECTED

NO

AOT None

SIL None

**OTHERS** 

RFW D0113/90 AND D0164/91

#### NATURE OF THE MODIFICATION

**AIRCRAFT** 

YES

**EQUIPMENT** 

NO

HARD

NO

SOFT

NO

**OBRM** 

NO

#### COMPLIANCE

Desirable

#### MANPOWER

Kit No. 211051	A01	A02	A03	A04
Manhours	10.00	10.00	8.00	8.00
Elapsed Time (hours)	8.50	8.50	6 -50	6.50

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#### MATERIAL INFORMATION

AIRCRAFT DATA

The following kits are for modification of one air conditioning pack. The modification of one aircraft requires two kits.

Kit AO1

1 ram air outlet assembly, RH

Kit AO2

1 ram air outlet assembly, LH

Kit AO3

One new flap and associated hardware.

Kit AO4

Two new flap guide plates and associated hardware.

**EQUIPMENT DATA** 

None

**APPENDICES** 

None

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1 Rond Point Maurice Bellonte
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Tel : (33) 5 61 93 33 33

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FAX : (33) 5 61 30 01 25

TITLE: AIR CONDITIONING - AIR COOLING SYSTEM - IMPROVE RAM AIR OUTLET

MODIFICATION No.: 22995K2883 ATA SYSTEM: 21

#### 1. PLANNING INFORMATION

#### A. EFFECTIVITY

(1) Aircraft Models: A320-111, -211, -212 and -231

#### (2) Aircraft

Customer and Fleet No.	MSN	Kit No. 211051	Qty of Kits
AAA 001-012	022, 023, 024, 025, 026, 027, 029, 030, 140, 142, 157, 229	A01 thru A04	*
ACA 201-233	059, 068, 073, 084, 122, 126, 127, 141, 149, 150, 154, 159, 183, 233, 242, 248, 253, 254, 255, 265, 277, 290, 310, 311, 324, 330, 333, 341, 342, 350, 359, 378, 384	A01 thru A04	*
ADR 001-003	043, 113, 114	A01 thru A04	*
AFR 001-002	005, 007	A01 thru A04	*
004-013	014, 019, 020, 021, 002, 004, 003, 010, 012, 013	A01 thru A04	*
015	016		*
031-048	061, 062, 063, 100, 101, 102, 128, 129, 133, 186, 187, 188, 226, 227, 228, 285, 286, 287	AO1 thru AO4	*
066-068	033, 036, 044	A01 thru A04	*
071-078	108, 115, 130, 155, 156, 184, 214, 239	A01 thru A04	*
080-085	278, 337, 352, 236, 237, 377	A01 thru A04	*
201-202	144, 145	A01 thru A04	*
226-227	131, 132	A01 thru A04	*
301-302	204, 211	A01 thru A04	*
305	085	A01 thru A04	*
322-323	203, 220	A01 thru A04	*

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Customer and Fleet No.	MSN	Kit No. 211051	Qty of Kits
401-403	215, 244, 270	A01 thru A04	*
AIB 001,	258	AO1 thru AO4	*
401-402	376, 386	A01 thru A04	*
ALK 001-002	374, 406	A01 thru A04	*
AMC 001-002	112, 293	A01 thru A04	*
ANA 001-014	138, 139, 148, 151, 167, 170, 196, 212, 219, 245, 300, 328, 365, 383	A01 thru A04	*
BAW 001-010	006, 008, 011, 017, 018, 039, 042, 103, 109, 120	AO1 thru AO4	*
BV 051-052	185, 191	AO1 thru AO4	*
CDN 401-405, 407-411, 415-416	174, 175, 210, 231, 232, 283, 284, 302, 305, 309, 403, 404	AO1 thru AO4	*
CYP 001-008	028, 035, 037, 038, 180, 256, 295, 316	AO1 thru AO4	*
DLH 001-010, 012-034	069, 070, 071, 072, 078, 083, 086, 093, 094, 104, 110, 111, 116, 117, 135, 137, 147, 161, 162, 172, 200, 201, 202, 209, 216, 217, 218, 267, 268, 269, 346, 382, 401	AO1 thru AO4	*
FHA 001-002	332, 369	A01 thru A04	*
GFA 801-804	313, 325, 345, 375	A01 thru A04	*
HP 620-622, 624-629, 631-637	052, 053, 054, 055, 064, 065, 066, 067, 076, 077, 081, 082, 091, 092, 098, 099	AO1 thru AO4	*
IAC 001-012, 014-021	045, 046, 047, 048, 049, 050, 051, 056, 057, 058, 074, 075, 080, 089, 090, 095, 096, 097, 396, 398	AO1 thru AO4	*
IBE 001-022	134, 136, 143, 146, 158, 173, 176, 177, 199, 207, 223, 224, 240, 241, 246, 264, 266, 274, 303, 312, 323, 356	AO1 thru AO4	<b>, *</b>
KAC 001-003	181, 182, 195	A01 thru A04	*

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	tomer and et No.				MSN				(it No 211051		Qty of Kits
MON	001-002	379,	389					A01	thru	A04	*
MSR	001-007	165, 366	166,	178,	194,	198,	351,	A01	thru	A04	*
MXA	001-010, 012			260, 321,			276,	A01	thru	A04	*
NWA	301-348	106, 153, 208, 281, 318, 358,	107, 160, 213, 282, 319, 360,	034, 118, 171, 262, 297, 329, 367, 399,	121, 192, 263, 298, 339, 372,	125, 197, 272, 306, 340, 380,	152, 206, 273, 307, 355, 381,	A01	thru	A04	*
OHY	001-002	385,	364								
OYC	001-006	163,	164,	168,	169,	179,	193	A01	thru	A04	*
RJA	001-002	087,	880					A01	thru	A04	*
SAA	001-006	243,	249,	250,	251,	334,	335	A01	thru	A04	*
SHK	001-003	322,	326,	344				A01	thru	A04	*
TAR	001-007	119, 123	124,	205,	370,	390,	402,	A01	thru	A04	*
XF	001-002	393,	394					A01	thru	A04	*
	008-009	405,	361					A01	thru	A04	*
	504-506	371,	397,	409				A01	thru	A04	*
	551	279						A01	thru	A04	*
	053-059, 062-063	-	222, 391,	294, 392	299,	301,	348,	A01	thru	A04	*
	502-503	362,	363					A01	thru	A04	*
XR	501-517	280,	291,	238, 292, 327,	304,	308,		A01	thru	A04	*
XW	501-505	347,	354,	357,	373,	411		A01	thru	A04	*
XZ	003-004	189,	190					A01	thru	A04	*
	101-108	234, 395,		288,	289,	331,	343,	A01	thru	A04	*

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Customer and Fleet No.

MSN

Kit No. 211051

Qty of Kits

\* The quantity of kits depends on findings. The relevant kits AO1 thru AO4 required depend on the solution selected.

This modification is embodied prior to delivery on A/C MSN 364, 385, 412 and subsequent.

The accomplishment of this Service Bulletin Kit AO1 and AO2 or AO3 or AO4 with Service Bulletin A320-21-1098 supersedes further inspections in accordance with Service Bulletin A320-21-1057.

(3) Spares

None

#### **B. REASON**

(1) History

Several operators have reported damage of the ram air outlet flaps due to over-travel of the guides and excessive mechanism backlash.

(2) Objective/Action

This Service Bulletin introduces three solutions to fulfil the requirements of the modification 22995K2883 which ensures correct function of the ram air outlet assembly. The solution to be accomplished depends on the inspection results of Inspection Service Bulletin A320-21-1057.

The solution with kit AO1 and AO2 introduces:

A new improved ram air outlet assembly without the electrical actuator.

NOTE: To complete this solution, the electrical actuator has to be removed from the old assembly and re-installed to the new assembly.

The solution with kit AO3 introduces:

- A new flap.
- Modification of the inner and outer flap guides of the ram air outlet housing for adaptation of the new flap with lengthening of the flap guides.

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The solution with kit AO4 introduces:

- Modification of the old flap with new flap guides to prevent distortion.
- Modification of the inner and outer flap guides of the ram air outlet housing for adaptation of the new flap with lengthening of the flap guides.

#### (3) Advantages

This modification ensures correct function of the ram air outlet and supersedes further inspection requirements in accordance with Service Bulletin A320-21-1057.

(4) Accomplishment Timescale

This Service Bulletin should be accomplished in case of findings after accomplishment of the Inspection Service Bulletin A320-21-1057.

#### C. DESCRIPTION

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

#### **AIRCRAFT**

#### Kit A01 thru A04

- (1) Gaining access to the work area.
- (2) Removing the ram air outlet assembly, LH and/or RH from the aircraft for disassembly and modification on bench.
- (3) Installing a new or modified ram air outlet assembly, LH and/or RH equipped with electrical actuator to the aircraft.
- (4) Performing an operational test of the pack temperature control system.
- (5) Close-up.

#### BENCH

#### Kit A01 and A02

- (6) Removal of the electrical actuator from the old ram air outlet assembly and installation to the new ram air outlet assembly.
- (7) Connecting the lever and adjusting the flap.

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#### Kit AO3

- (8) In case of deformation at the flap: removing the flap for modification of the ram air outlet housing.
- (9) Modifying the housing by welding of plates manufactured by the operator.
- (10) Installing a new lever and inserts (Refer to Service Bulletin A320-21-1098).
- (11) Installing a new flap and adjusting the flap.
- (12) Close-up.

#### Kit A04

- (13) In case of no deformation at the flap, but to reach the new standard: removing the flap for modification of the flap and the ram air outlet housing.
- (14) Modifying the housing by welding of plates, manufactured by the oper-ator.
- (15) Modifying the flap by installing new guide plates and inserts.
- (16) Installing a new lever and inserts (Refer to Service Bulletin A320-21-1098).
- (17) Installing the modified flap and adjusting the flap.
- (18) Close-up.

#### D. APPROVAL

The technical information including design data contained in this Service Bulletin has been approved under the Authority of DGAC Design Organisation Approval No. F.JA.O2. The changes specified in this Service Bulletin have been approved by the DGAC when they are major, or under the Authority of DGAC Design Organisation Approval No. F.JA.O2 when they are minor.

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#### E. MANPOWER

		Manho	urs	
Kit No 211051	<u>A01</u>	<u>A02</u>	<u>A03</u>	<u>A04</u>
Gain access	1 -00	1 -00	1.00	1.00
Modification	4 -50	4 <b>-</b> 50	4 -50	4.50
Bench	2 _00	2.00		
Close-up	1.50	1 .50	1.50	1.50
Test	1.00	1.00	1.00	1.00
TOTAL MANHOURS	10.00	10 -00	8.00	8.00
ELAPSED TIME (HOURS)	8.50	8.50	6.50	6.50

NOTE: The manhours are given for one ram air outlet assembly.

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

Customers with aircraft shown in paragraph 1.A.(2) should send a purchase order to Airbus Industrie. Quote the number of this Service Bulletin. The address is:

AIRBUS INDUSTRIE
MATERIEL SUPPORT CENTER
P.O.BOX 630262
22312 HAMBURG
GERMANY

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#### (2) Cost and Availability

Kit No.	Cost	Availability*		
	(US Dollar)			
211051A01	19,388	180		
211051A02	19,388	180		
211051A03		180		
211051A04		180		

<sup>\*</sup> Calendar days from receipt of order.

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

#### G. TOOLING - PRICE AND AVAILABILITY

None

#### H. WEIGHT AND BALANCE

Kit No. 211051A01

: -3.845 kg (-8.478 lb)

Effect on balance

: -67.418 kgm (-487.769 lb ft.)

Kit No. 211051A02

M.E.W.

M.E.W.

: -3.593 kg (-7.923 lb)

Effect on balance

: -62.999 kgm (-455.798 lb ft.)

Kit No. 211051A03

M.E.W.

: -9.810 kg (-21.631 lb)

Effect on balance

: -172.009 kgm (-1244.485 lb ft.)

Kit No. 211051A04

M.E.W.

: -11.714 kg (-25.829 lb)

Effect on balance

: -205.393 kgm (-1486.018 lb ft.)

#### I. REFERENCES

Aircraft Maintenance Manual (AMM): 12-34-24, 20-21-12, 20-28-00, 20-31-00,

21-52-00, 21-61-00, 21-61-52, 53-35-13

Service Bulletin:

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#### J. PUBLICATIONS AFFECTED

Aircraft Maintenance Manual (AMM): 21-61-52

Illustrated Parts Catalog (IPC): 21-52-03, 21-61-03

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#### 2. ACCOMPLISHMENT INSTRUCTIONS

#### AIRCRAFT

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

#### A. GENERAL

Accomplishment of this Service Bulletin includes these operations:

#### (1) Preparation

- (a) Electrically ground the aircraft (Ref. AMM 12-34-24, P.Block 201).
- (b) Open, safety and tag these circuit breakers:

PANEL	SERV	/ICE			IDENT.	LOCATION	
FOR 9HH							
122VU	AIR	COND/PACK	TEMP/	TL	SYS1/1/115VAC	1HH	X22
122VU	AIR	COND/PACK	TEMP/0	CTL	SYS1/1/28VDC	3HH	X21
122VU	AIR	COND/PACK	TEMP	CTL	SYS2/1/28VDC	<b>4</b> HH	Y19
122VU	AIR	COND/PACK	TEMP	CTL	SYS2/1/115VAC	2HH	Y18
FOR 29H	1						
122VU	AIR	COND/PACK	TEMP	CTL	SYS1/2/115VAC	21HH	W22
122VU	AIR	COND/PACK	TEMP	CTL	SYS1/2/28VDC	23HH	W21
122VU	AIR	COND/PACK	TEMP	CTL	SYS2/2/28VDC	24HH	Y21
122VU	AIR	COND/PACK	TEMP	CTL	SYS2/2/115VAC	22HH	Y20

- (c) Put a warning notice in the cockpit to tell persons not to operate the air cooling system (Ref. AMM 21-52-00, P.Block 501).
- (d) Remove the access panels 191KB and 192KB (Ref. AMM 53-35-13, P.Block 401).

#### (2) Standard Procedures

WARNING: METHYLETHYLKETONE (MEK) (MAT. NO. 11-003) IS DANGEROUS. AVOID INHALING FUMES. USE IN A WELL VENTILATED AREA. METHYLETHYLKETONE IS A SKIN IRRITONE IS HIGHLY FLAMMABLE. METHYLETHYLKETONE IS A SKIN IRRITANT. WEAR PROTECTIVE GLOVES OR USE A BARRIER CREAM. WASH IMMEDIATELY WITH CLEAN WATER IF SKIN IS SPLASHED WITH SOLVENT.

(a) Clean the work area with solvent, Methylethylketone (MEK) Mat. No. 11-003.

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- (b) Do electrical bonding in accordance with the AMM 20-28-00, P. Block 201.
- (c) Install screws with anti-corrosion compound, Mat. No. 05-002.
- (d) To torque threaded components refer to AMM 20-21-12.
- (e) For specification of materials (Mat. No.) given in this Service Bulletin refer to AMM 20-31-00.
- (f) Renew protective finish with wash primer, Mat. No. 16-005, poly-urethane primer, Mat. No. 16-001 and polyrurethane top coat, Mat. No. 16-002.

#### **B. MODIFICATION**

NOTE: Item numbers in brackets show parts which have to be modified or discarded. Part numbers of removed parts are specified in Para. 3 Material Information.

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

#### Kit A01 thru A04

(1) Removal of the ram air outlet assembly

Refer to Figure 1

- (a) Disconnect the electrical connector 9HH-A (LH assy) and/or 29HH-A (RH assy).
- (b) Remove and retain bolts, items 1 and 7 and washers, item 8 of the ram air outlet, item (3).
- (c) Loosen the clamp, item 5.
- (d) Disconnect the ram air outlet assy, item (3) from the rod, item 6. Retain the fastening parts for later re-installation.
- (e) Remove the ram air outlet assy, item (3) from the bellows, item 9 and retain the clamp, item 5.

#### Kit AO1 and AO2

(2) Modify the new ram air outlet assembly on bench as described in Para. 2. F.(2) and (3).

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#### Kit AO3

(3) Modify the ram air outlet assembly on bench as described in Para. 2.F.(4) and (6) thru (8).

#### Kit AO4

(4) Modify the ram air outlet assembly on bench as described in Para. 2.F.(4) thru (8).

#### Kit A01 thru A04

(5) Installation of the equipped new or modified ram air outlet assembly.

#### Refer to Figure 1

(a) Install the assembly with retained clamp, item 5, bolts, items 1 and 7 and washers, item 8 to the aircraft.

NOTE: Torque-tighten the bolts, item 1 and 7 to 0.36 m.daN (31.86 lb.in.).

- (b) Put the clamp, item 5 in position and connect the assembly to the bellows, item 9.
- (c) Connect the rod, item 6 at the assembly.
- (d) Connect the electrical connector 9HH-A (LH assy) and/or 29HH-A (RH assy).
- (e) Make sure that the work area is clean and clear of tools and other items.

#### C. TESTS

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

PANEL	SERV	/ICE		IDENT.	LOCATION		
FOR 9HH							
122VU	AIR	COND/PACK	TEMP	CTL	SYS1/1/115VAC	1нн	X22
122VU	AIR	COND/PACK	TEMP	CTL	SYS1/1/28VDC	3HH	X21
122VU	AIR	COND/PACK	TEMP	CTL	SYS2/1/28VDC	4нн	Y19
122VU	AIR	COND/PACK	TEMP	CTL	SYS2/1/115VAC	2HH	Y18
FOR 29HH							
122VU	AIR	COND/PACK	TEMP	CTL	SYS1/2/115VAC	21HH	W22
122VU	AIR	COND/PACK	TEMP	CTL	SYS1/2/28VDC	23HH	W21

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PANEL	SERVICE	IDENT.	LOCATION
122VU	AIR COND/PACK TEMP CTL SYS2/2/28VDC	24HH	Y21
122VU	AIR COND/PACK TEMP CTL SYS2/2/115VAC	22HH	Y20

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

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

#### D. CLOSE-UP

- (1) Install the access panels 191KB and 192KB (Ref. AMM 53-35-13, P. Block 401). Remove the warning notice from the cockpit.
- (2) Restore the aircraft to normal operating condition.

#### E. DOCUMENTATION

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

#### **BENCH**

#### F. ACCOMPLISHMENT INSTRUCTIONS - REMOVED COMPONENTS AND SPARES

NOTE: The procedure is given for the ram air outlet assembly LH; RH is similar. Designations in brackets are given for the RH assembly.

#### Kit A01 and A02

(1) Disassembly of the old ram air outlet assembly.

Refer to Figure 1, details B and C

- NOTE: This procedure describes the worksteps to transfer the electrical actuator from the old assembly to the new assembly. The procedure also includes the adjustment of the flap (gap) without any special tools.
- (a) Disconnect the bonding lead, item 10 from the electrical actuator.
- (b) Remove the electrical actuator 9HH or (29HH) in accordance with the AMM 21-61-52, P. Block 401; retain the electrical actuator and the fastening parts, item 11.
- (c) Do not re-use the LH or RH ram air outlet assembly, item (3).

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(2) Equipping of the new ram air outlet assembly with the electrical actuator

Refer to Figure 1, details B and C

- (a) Install the retained actuator to the LH assy D2157109200000, item 3 and/or to the RH assy D2157109000000, item 23 (Ref. AMM 21-61-52, P.Block 401) but do not connect the lever at this stage.
- (b) Connect the bonding lead, item 10 at the electrical actuator 9HH (29HH).
- (c) Connect the lever to the electrical actuator with the retained fastening parts, item 16.

NOTE: Do not fully tighten the fastening parts at this stage.

(3) Do the procedure as described in 2.F.(8).

#### Kit A03 and A04

(4) Disassembly of the ram air outlet

Refer to Figure 1, details C, E and F and section B-B.

- (a) Disconnect the bonding lead, item 10 from the electrical actuator 9HH (29HH).
- (b) Remove the electrical actuator 9HH (29HH) in accordance with the AMM 21-62-52, P. Block 401; retain the electrical actuator and the fastening parts, items 36 thru 38 for later re-installation.
- (c) Remove and discard the lever, item (35) with fastening parts, items 30 thru 34 and retain the fastening parts, items 30 and 31.
- (d) Remove the cover plates, items 46 and 49 and retain with fastening parts.
- (e) Remove and discard the Lockwire, item (47).
- (f) Remove the flap, item (40) with shafts, items 56 and 55 and fastening parts, items 50, 30 and 31. Retain both shafts and fastening parts.

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#### Kit AO4

(5) Modification of the flap

Refer to Figure 2

(a) Remove and discard rivets, items (71) thru (75) and both flap guide plates, item (66).

NOTE: Do not remove rivets, item 70.

(b) Drill additional rivet holes and install new flap guide plates D2157103520800, item 66 with rivets, items 71 thru 78 and sealant Mat. No. 09-023.

NOTE: For installation of the inserts and lever refer to Service Bulletin A320-21-1098.

- (c) Bond the profiles D2157103020200, item 65 to the flap guides with bonding compound Mat. No. 08-010.
- (d) Renew the protective finish.
- (e) Re-identify the flaps as per Para. 3.D.

#### Kit AO3 and AO4

(6) Modification of the outlet housing

Refer to Figure 3

(a) Manufacture two parts each of items 61 and 62; shown on sheet 2. Material and dimensions are given in the figure.

NOTE: Item 62 mirror image of item 61.

- (b) Cut the flap guide channels on both sides (cut line 1). Dimensions are given on sheet 1.
- (c) Open both flap guide channels at the cut line 2 for later reworking of the inside of channels.
- (d) Remove the protection finish at and near the later weld seams 1 thru 3 (inside and outside of the housing).
- (e) Weld the items 61 and 62 first to the flap guide channels at the lines named weld seam 1.
- (f) Rework the weld seams 1 on the inside of the channels until the surfaces are smooth.

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(g) Weld in sequence the weld seam 2, then weld seam 3.

NOTE: Make certain that no welding metal penetrates into the interior to ensure proper operation of the flap to be installed later.

- (h) Temporarily install the flap as described in Para. 2.F.(7) to check the unlimited motion as follows:
  - Move the flap in and out and check the unlimited motion of the flap thru the fully closed position ('mechanical stop'), refer to figure 1, section A-A.
  - Motion should be unrestricted and these should be no signs of abrasion marks at the flap, otherwise the outlet chamber (weld seam 3) has to be reworked.
- (i) Renew the protective finish.
- (j) Re-identify the outlet housing as per Para. 3.D.
- (7) Reassembly of the ram air outlet

Refer to Figure 1, details C, E and F and section B-B.

- (a) Install the new or modified flap D2157103000200, item 40 with retained shafts, items 55 and 56 and the retained fastening parts.
- (b) Torque tighten the bolts, item 50 to 0.6 m.daN (53.09 lb.in.).
- (c) Secure the bolts, item 50 with lockwire LN9224.1.4314.9-0.8, or AMS4026, item 47.
- (d) Install the electrical actuator 9HH (29HH) with retained fastening parts, items 36 thru 38 and in accordance with the AMM 21-62-52, P. Block 401.
- (e) Install the new lever D2157104600400, item 35 with bolt NSA1304-8, item 34, nut NAS509-04, item 32 and lock washer NSA5355-4CA, item 33 temporarily on the shaft, item 56.

NOTE: The levers D2157104600400, item 35 and fastening parts, items 32, 33, 34 are supplied with Service Bulletin A320-21-1098.

Do not lock the lock washer, item 33 at this stage.

(f) Connect the lever, item (35) with the retained fastening parts and bushes, items 36 thru 38, at the electrical actuator.

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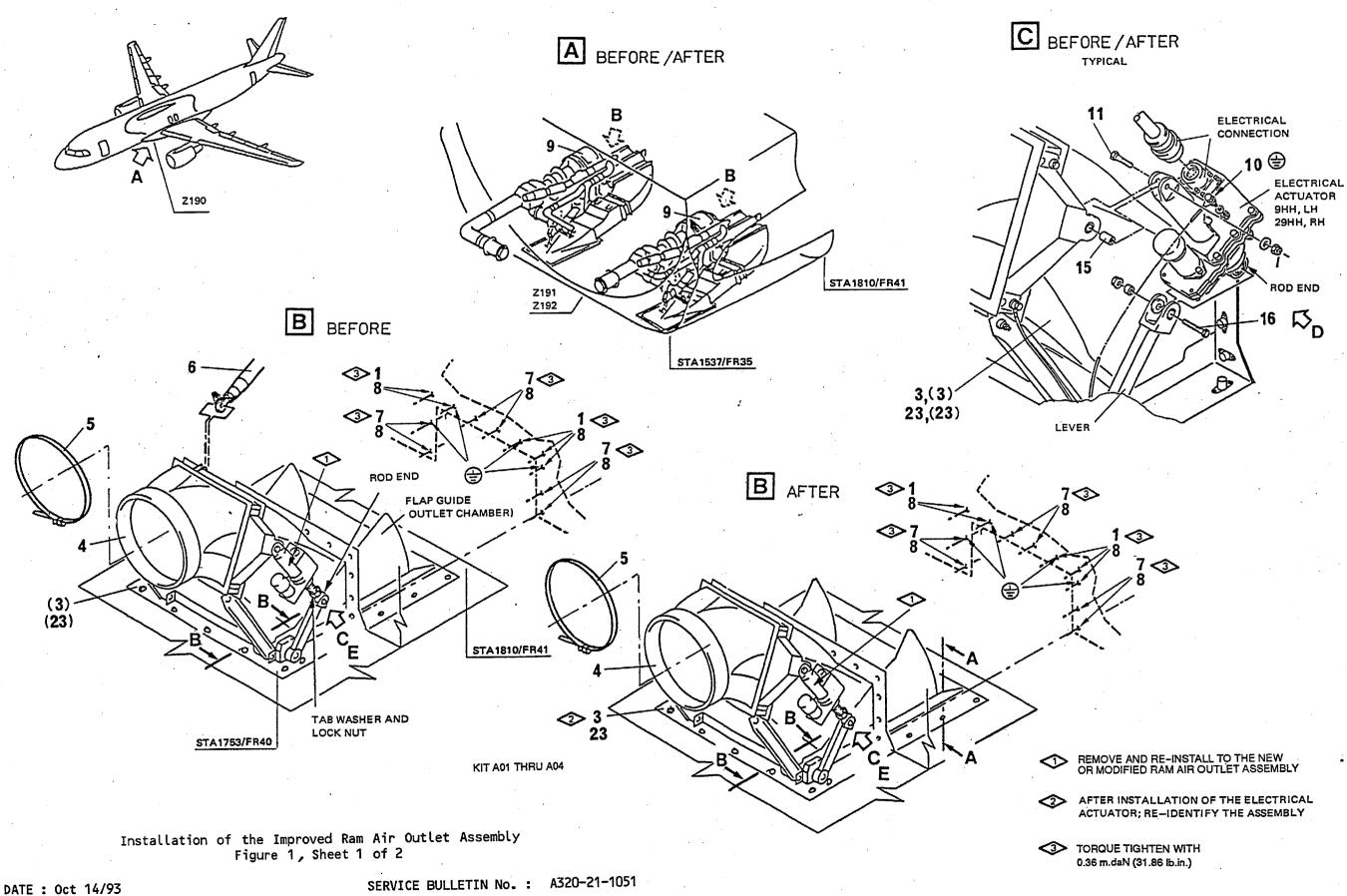
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#### Kit A01 thru A04

- (8) Check/adjustment of the ram air outlet flap
  - (a) Do the adjustment of the ram air outlet flap in accordance with the AMM 21-61-52, P. Block 501.
- (9) Close-up
  - (a) Torque-tighten all fastening parts.
  - (b) Identify the equipped ram air outlet assemblies as D2157100001600 (LH) and D2157108002000 (RH) (Ref. Para. 3.D.).

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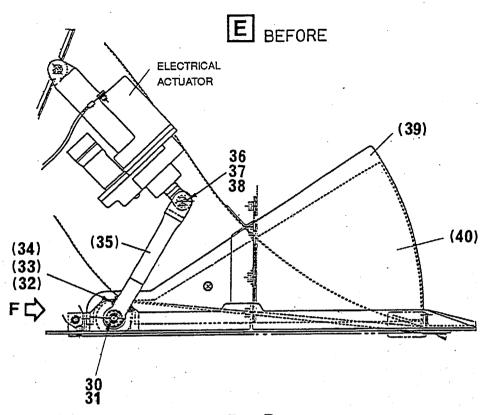
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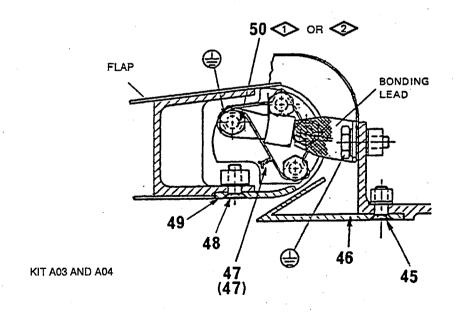
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B-B BEFORE/AFTER



Removal/Installation of the Flap and Lever Figure 1, Sheet 2 of 2

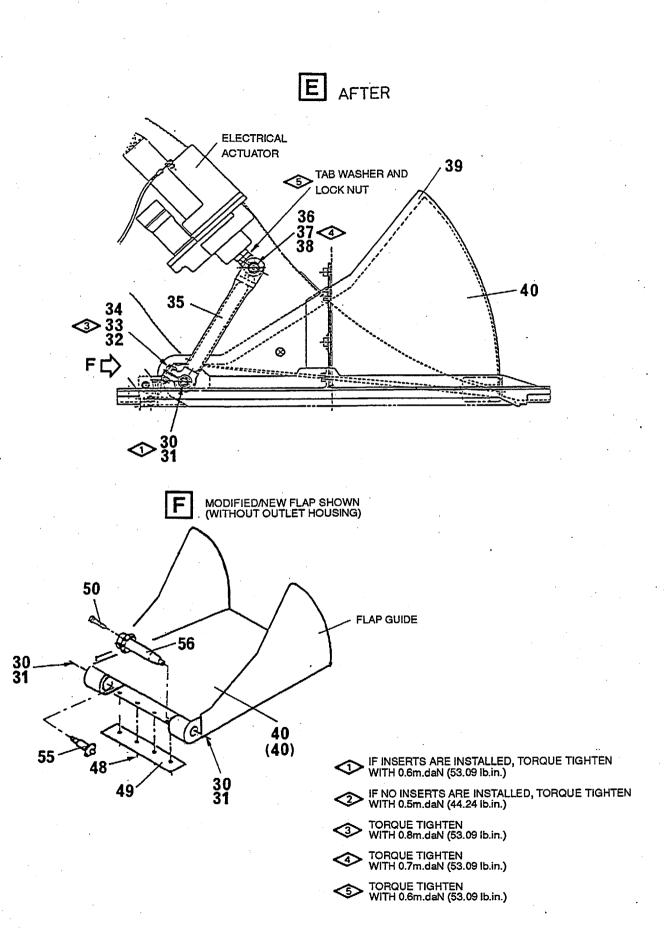
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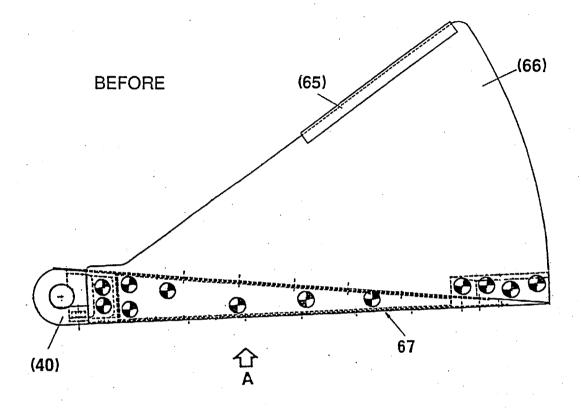
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RIVET, DO NOT REMOVE THIS ITEM **70**RIVET DIN65399–4014DF, ITEM **(71)**RIVET NAS1921C04S02, ITEM **(72)**RIVET NAS1921B05S02, ITEM **(73)**RIVET DIN653999–3214CF, ITEM **(74)**RIVET EN2550–024012, ITEM **(75)** 

Modification of the Flap Figure 2, Sheet 1 of 3

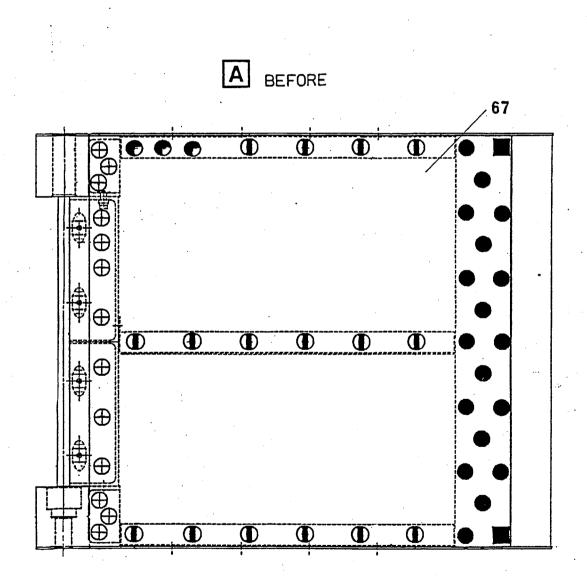
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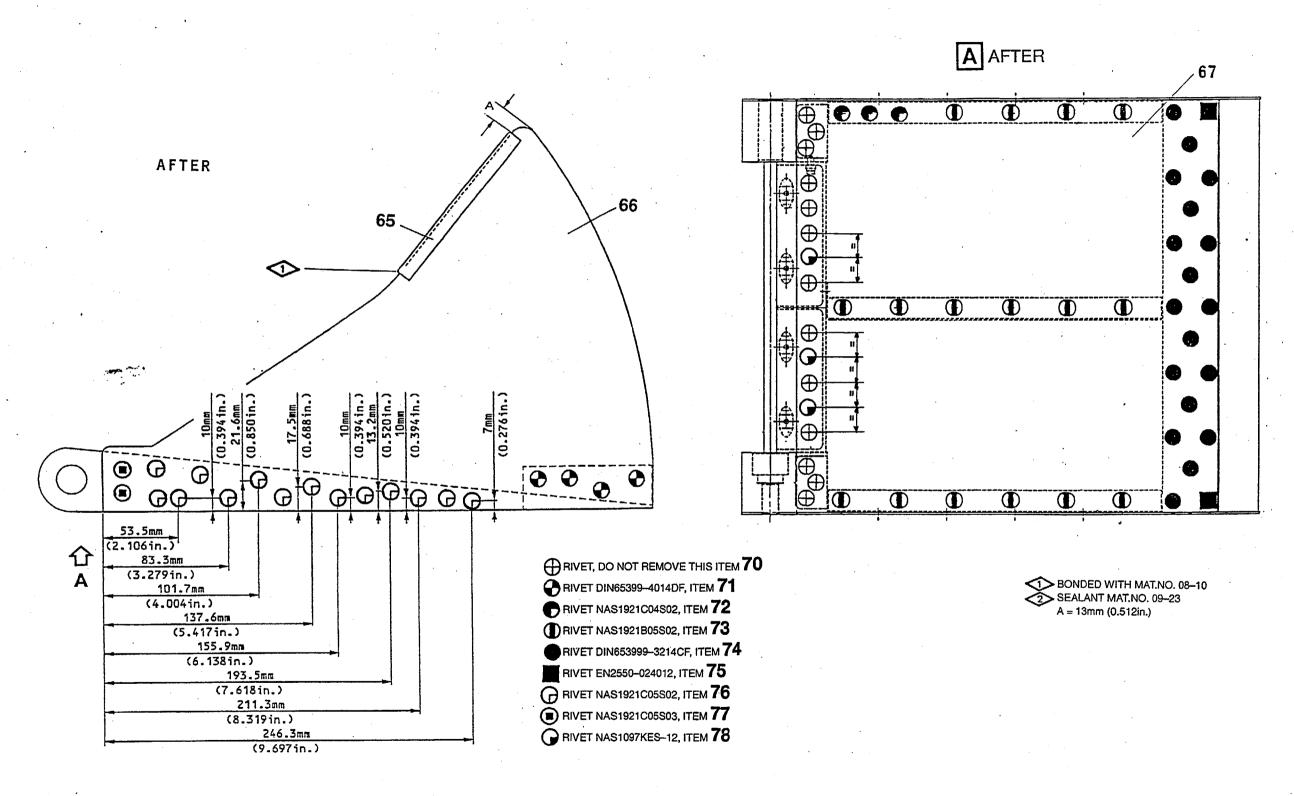
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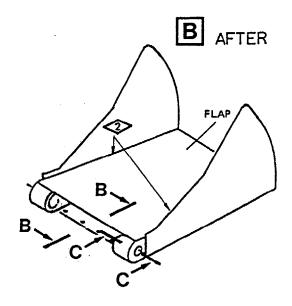


Modification of the Flap Figure 2, Sheet 2 of 3

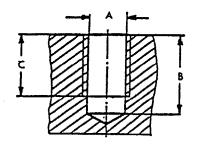
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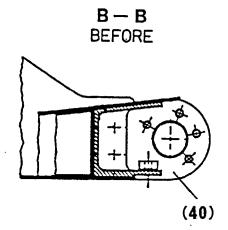
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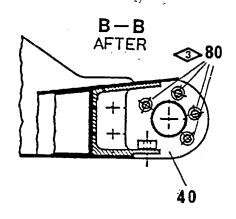


C-C



A = 5mm (0.197in.) B = 14.1mm (0.555in.) C = 10.5mm (0.413in.)





SEALANT MAT. NO. 09-023

SEALANT MAT. NO. 09-013 · · ·

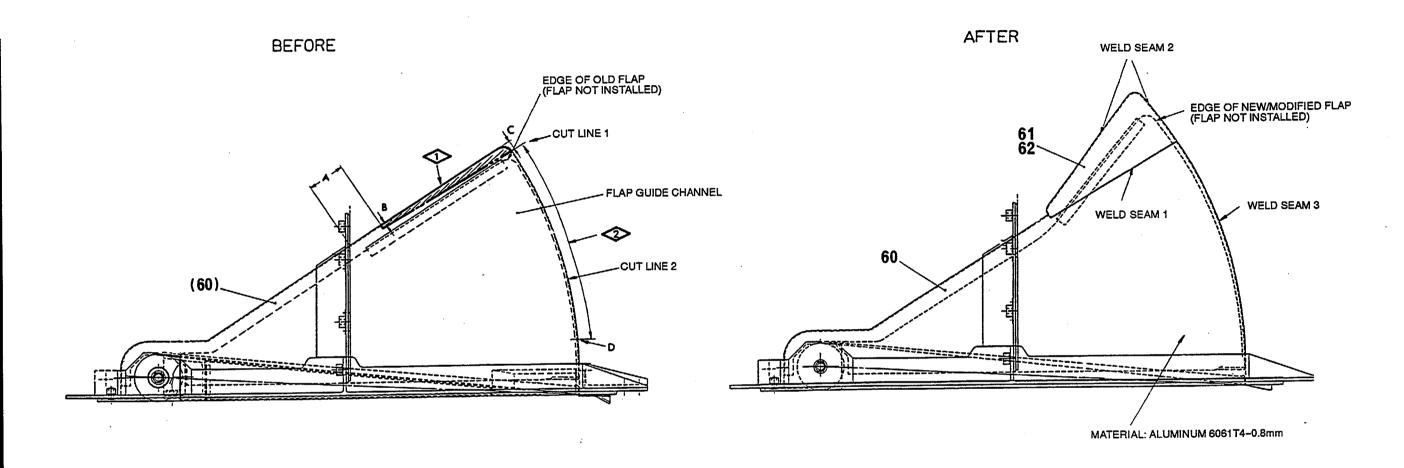
KIT A04

Ram Air Outlet Flap - Install Inserts Figure 2, Sheet 3 of 3

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A = 35mm (1.377in.)
B = 4mm (0.157in.)
C = 6mm (0.236in.)
D = END OF CUT LINE 2
APPROX. HERE

CUTTED FLAP GUIDE CHANNEL

CUT THE FLAP GUIDE CHANNEL FOR LATER REWORKING THE INSIDE OF THE CHANNEL

KIT A03 AND A04

Modification of the Outlet Housing Figure 3, Sheet 1 of 2

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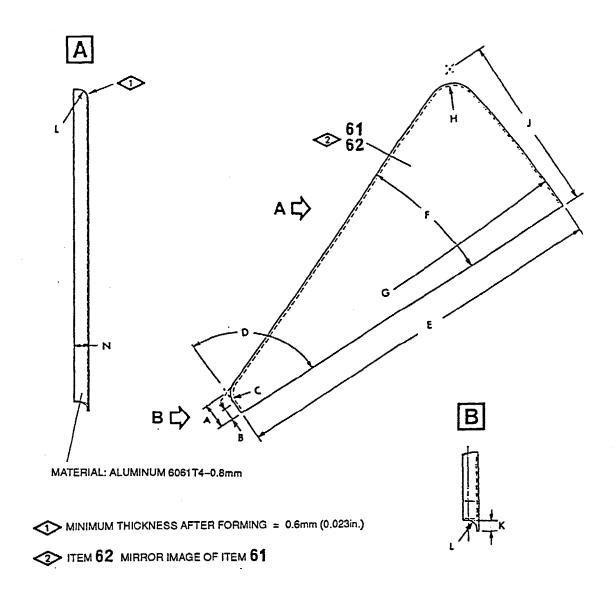
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A = 9.4mm (0.370in.)
B = 4.7mm (0.185in.)
C = R.6mm (R 0.236in.)
D = 92.1°
E = 139.4mm (5.488in.)
F = 23°
G = R.396.3mm (R 15.602in.)
H = R.8mm (R 0.314in.)
J = 65.8mm (2.590in.)
K = 4mm (0.157in.)
L = R.3mm (R 0.118in.)
N = 5.5 + 0.2mm (0.216 + 0.0078in.)

NOTE: TWO EACH PER FLAP GUIDE CHANNEL, I.E. FOUR EACH FOR ONE RAM AIR OUTLET NECCESSARY

KIT A03 AND A04

Manufacture of Modification Parts Figure 3, Sheet 2 of 2

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#### 3. MATERIAL INFORMATION

The following kits are for modification of one air conditioning pack. The modification of one aircraft requires two kits.

#### A. LIST OF COMPONENTS

I T E M	NEW PART NO.	QTY	QTY	Q.	ΓY	DESCRIPTION	I T E M	OLD PART NO.	I N T	INSTRUCTIONS/ DISPOSITION
Kit	No. 211051	<u>A01</u>	A02	A03	A04					
*	D2157109200000		1			Ram Air Outlet, LH	(3) (3) (3) (3)	D2157100100000 or D2157100100200 or D2157100100400 or D2157100100600		
*	D2157109000000	1				Ram Air Outlet, RH	(23) (23) (23) (23)	D2157108100000 or D2157108100200 or D2157108100400 or D2157108100600		
40	D2157103000600			1		Flap	(40)	D2157103000000		
66	D2157103520800				2	Plate	(66)	D2157103520600		
65	D2157103020200				2	Section	(65)	D2157103020000		
71	DIN65399-4014DF				26	Rivet				
<b>7</b> 2	NAS1921C04S02				3	Rivet				
73	NAS1921B05S02				16	Rivet				
74	DIN65399-3214CF				18	Rivet				
_	EN2550-024012				2	Rivet				
76	NAS1921C05S02				14	Rivet				
77	NAS1921C05S03				2	Rivet				

\* This improved assembly is to be ordered per Spares Purchase Order and completed on bench with the electrical actuator of the old assembly and to be re-identified as per Para. 3.D.

3 Rivet





## B. SPECIAL TOOLS

None

## C. LIST OF MATERIALS - OPERATOR SUPPLIED

DESCRIPTION	REFERENCE AMM 20-31-00	QTY PER A/C
Anti-corrosion compound	Mat. No. 05-002	as required
Bonding compound	Mat. No. 08-010	as required
Sealant	Mat. No. 09-013	as required
Sealant	Mat. No. 09-023	as required
Solvent	Mat. No. 11-003	as required
Polyurethane primer	Mat. No. 16-001	as required
Polyurethane top coat	Mat. No. 16-002	as required
Wash primer	Mat. No. 16-005	as required
Lockwire AMS4026 or LN9424-1.4314.9-0.8		as required
Bonding compound	Mat. No. 08-010	as required
Aluminium plate 6061T4-0.8mm		as required

#### D. PARTS TO BE RE-IDENTIFIED BY OPERATOR

ITEM	NEW PN	DESIGNATION	ITEM	OLD PN
3	D2157100001600	Ram Air Outlet Assembly, LH	(3)	D2157100001400 or D2157100001200
23	D2157108002000	Ram Air Outlet Assembly, RH	(23)	D2157108001800 or D2157108002000
40	D2157103000200	Flap	(40)	D2157103000000
60	D2157108100800	Outlet Housing	(60)	D2157108100600 or D2157108100400

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