

SERVICE BULLETIN SUMMARY

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

ATA SYSTEM: 21

TITLE: AIR CONDITIONING - GENERAL - PRESSURIZATION CONTROL - INTRODUCE A

MODIFIED OUTFLOW VALVE P/N 20790-02AB

MODIFICATION No.: 31333K7284

REASON/DESCRIPTION/OPERATIONAL CONSEQUENCES

After introduction of an improved Cabin Pressure Controller (CPC), operators reported that the number of replacements of the OutFlow Valve (OFV) had increased. Most of the replacements were because of the Fault Code (FC) 81 (actuator loop closure failure).

The improved CPCs incorporated a very sharp and efficient FC 81 Built In Test Monitor to minimize the possibility of loss of cabin pressure.

One of the main causes of FC 81 is the mechanical backlash between the coupling of the OFV gearbox of the feedback potentiometer. Other factors that can lead to FC 81 are the design/manufacture quality of the feedback potentiometer and the tracking logic of the position control concept in the software of the actuator electronics.

This Service Bulletin advises operators of the release of the Nord-Micro Service Bulletin 20790-21-001.

This Vendor Service Bulletin introduces:

- A backlash free connection between the coupling of the OFV gearbox and the feedback potentiometer
- A redesigned feedback potentiometer with improved terminals and additional internal parts to improve the build quality of the potentiometer
- Software and hardware improvements to the Actuator Electronic Box. Accomplished of this Vendor Service Bulletin will decrease the number of FC 81 occurrences and thus decrease the number of OFV replacements.

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EVALUATION TABLE					
COMPLIANCE	DESIRABLE	CANCELS INSPECTION SB	NO		
POTENTIAL AD	NO	A/C OPERATION AFFECTED	NO		
RELIABILITY AFFECTED	YES	PAX COMFORT AFFECTED	NO		
COST SAVING	YES	ETOPS AFFECTED	NO		
STRUCTURAL LIFE EXTN	NO	VENDOR SB INVOLVED	YES		
KIT PRICE (USD)	SEE SB				

EFFECTIVITY

This Service Bulletin is applicable to these operator(s): AWE UAL

CONCURRENT REQUIREMENTS

None

REFERENCES/REPERCUSSIONS

TFU : 21.31.51.015

OEB : None
AOT : None
SIL : None
LIFE LIMIT : None

LINE MAINTENANCE AFFECTED : No

OTHER : None

NATURE OF THE WORK

AIRCRAFT : YES

EQUIPMENT : YES

HARD : NO

SOFT : NO

MANPOWER

TOTAL MANHOURS 7.50

ELAPSED TIME (HOURS) 7.50

MATERIAL INFORMATION

AIRCRAFT DATA

None

APPENDICES

None

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1. PLANNING INFORMATION

A. <u>EFFECTIVITY</u>

(1) Models

319-131 319-132 320-231 320-232

- (2) Aircraft
 - (a) Effectivity by MSN

This Service Bulletin is applicable to aircraft MSN:

0064-0067 0076-0077 0081-0082 0091-0092 0098-0099 0238 0271 0304 0315 0317 0435 0439 0442 0448 0450 0452 0454-0457 0455 0462-0465 0470-0472 0475 0479 0483 0485 0487 0489 0500 0503 0504 0506 0508 0510 0512 0523 0527 0539 0543 0568 0571 0584 0587 0589 0592 0613 0636 0655 0678 0683 0686 0690 0702 0748 0751 0759 0762 0770 0780 0783 0788 0798 0803 0804 0820 0824-0826 0834 0836 0842 0843 0847 0850 0851 0856 0857 0858 0862 0865-0867 0871 0873 0882 0889 0893 0898 0924 0931 0944 0948 0952 0953 0955 0965 0980 0989 1001 1003 1022 1031 1043 1049-1050 1056 1064 1075 1079 1083 1088 1104 1105 1110-1111 1116 1128 1146 1163 1166 1178 1192 1196 1211 1223 1234 1243 1248 1266 1272 1274 1281 1282 1284 1290 1291 1321 1323 1341 1343 1350 1359 1363 1373 1375 1395 1397 1401 1406 1409 1410 1419 1420 1426 1427 1432 1435 1460 1463 1469 1474 1475 1477 1490 1495 1507 1508 1514 1522 1527 1533 1534 1538 1545 1547 1552 1555 1559 1563 1565 1569 1573 1581

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1584-1586 1600

NOTE: This Service Bulletin is only applicable to aircraft which have an OFV, P/N 20790-01AA installed. The modified OFV P/N 20790-02AB can be installed into each single aisle aircraft for the operators AWE and UAL.

(b) Effectivity by Operator

The Operator/MSN relationship is provided for information only and is correct at the time of issue in accordance with the information available to Airbus Industrie. Any future changes resulting from transfer of an aircraft from one operator to another will not be reflected in this list unless the Service Bulletin is revised for another reason.

OPERATOR	MSN									
AWE	0052	0053	0054	0055	0064	0065	0066	0067	0076	0077
	0081	0082	0091	0092	0098	0099	0238	0271	0304	0315
	0317	0448	0455	0471	0527	0543	0584	0762	0770	0803
	0856	0866	0889	0924	0931	0953	1003	1043	1049	1050
	1056	1064	1075	1079	1083	1088	1110	1111	1116	1166
	1178	1196	1223	1234	1274	1281	1284	1323	1350	1373
	1375	1395	1397	1406	1410	1419	1463	1490	1527	1534
	1547	1552	1563	1565						
UAL	0435	0439	0442	0450	0452	0454	0456	0457	0462	0463
	0464	0465	0470	0472	0475	0479	0483	0485	0487	0489
	0500	0503	0504	0506	0508	0510	0512	0523	0539	0568
	0571	0587	0589	0592	0613	0638	0655	0678	0683	0686
	0690	0702	0748	0751	0759	0780	0783	0788	0798	0804
	0820	0824	0825	0826	0834	0836	0842	0843	0847	0850
	0851	0857	0858	0862	0865	0867	0871	0873	0882	0893
	0898	0944	0948	0952	0955	0965	0980	0989	1001	1022
	1031	1104	1105	1128	1146	1163	1192	1211	1243	1248
	1266	1272	1282	1290	1291	1321	1341	1343	1359	1363
	1401	1409	1420	1426	1427	1432	1435	1460	1469	1474
	1475	1477	1495	1507	1508	1514	1522	1533	1538	1545
	1555	1559	1569	1573	1581	1584	1585	1586	1600	

(c) Effectivity by MSN and Kit/Configuration

None

(3) Spares

None

B. CONCURRENT REQUIREMENTS

None

- C. REASON
 - (1) History

After introduction of an improved Cabin Pressure Controller (CPC), operators reported that the number of replacements of the OutFlow Valve (OFV) had increased. Most of the replacements were because of

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the Fault Code (FC) 81 (actuator loop closure failure). The improved CPCs incorporated a very sharp and efficient FC 81 Built In Test Monitor to minimize the possibility of loss of cabin pressure.

One of the main causes of FC 81 is the mechanical backlash between the coupling of the OFV gearbox of the feedback potentiometer. Other factors that can lead to FC 81 are the design/manufacture quality of the feedback potentiometer and the tracking logic of the position control concept in the software of the actuator electronics.

(2) Objective/Action

This Service Bulletin advises operators of the release of the Nord-Micro Service Bulletin 20790-21-001. This Vendor Service Bulletin introduces:

- A backlash free connection between the coupling of the OFV gearbox and the feedback potentiometer
- A redesigned feedback potentiometer with improved terminals and additional internal parts to improve the build quality of the potentiometer
- Software and hardware improvements to the Actuator Electronic Box.

(3) Advantages

Accomplishment of this Vendor Service Bulletin will decrease the number of FC 81 occurrences and thus decrease the number of OFV replacements.

(4) Operational/Maintenance Consequences

None

D. DESCRIPTION

To accomplish this Service Bulletin it is necessary to :

- (1) Remove the outflow valve 10HL, P/N 20790-01AA.
- (2) Do the modification to the outflow valve 10HL, in accordance with the Nord-Micro Service Bulletin 20790-21-001.
- (3) Reidentify the valve.
- (4) Install the modified outflow valve 10HL, P/N 20790-02AB.

E. COMPLIANCE

(1) Classification

Desirable.

(2) Accomplishment Timescale

In accordance with operators' maintenance schedule.

F. APPROVAL

The technical content of this Service Bulletin has been approved under

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the authority of the DGAC Design Organisation Approval No. F.JA.02.

If an aircraft listed in the effectivity has a modification or repair embodied that is not of AIRBUS origin, and which affects the content of this Service Bulletin, the operator is responsible for obtaining approval by its airworthiness authority for any adaptation necessary before incorporation of the Service Bulletin.

G. MANPOWER

The manpower estimates given in this Service Bulletin are based on the direct labor cost to do the work. These estimates assume that the work will be done by experienced personnel, and may need to be revised upwards to suit operators' circumstances. The estimates do not include the time to prepare, plan or inspect the work. Manufacture and procurement of parts and tools, drying time for paints, sealants, etc. and general administration work are also not included.

Get Access	1.50
Modification	4.00
Test	1.00
Close-up	1.00
TOTAL MANHOURS	7.50
ELAPSED TIME (HOURS)	7.50

NOTE: Refer also to the Nord-Micro Service Bulletin 20790-21-001.

H. WEIGHT AND BALANCE

Not changed

I. ELECTRICAL LOAD DATA

Not changed

J. REFERENCES

Aircraft Maintenance Manual (AMM) : 12-34-24 21-31-00 21-31-51

Nord-Micro Service Bulletin (SB) : 20790-21-001

Consumable Materials List (CML) :

K. PUBLICATIONS AFFECTED

Illustrated Parts Catalog (IPC) : 21-31-04 21-31-51

L. INTERCHANGEABILITY/MIXABILITY

DESCRIPTION	OLD PART No.	NEW PART No.	INT	MIXABILITY
VALVE	20790-01AA	20790-02AB	02	Not applicable

NOTE: For the definitions of interchangeability codes in the column INT. refer to ATA 200 Chapter 1A-2.

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2. MATERIAL INFORMATION

A. MATERIAL - PRICE AND AVAILABILITY

(1) Material

Modification of removed equipment should be negotiated directly with:

NORD-MICRO AG & CO. OHG REPAIR STATION VICTOR-SLOTOSCH-STRASSE 20 D 60388 FRANKFURT GERMANY

TEL: (+49) 6109 303 435 FAX: (+49) 6109 303 641

as per instructions given in the Nord-Micro Service Bulletin 20790-21-001.

(2) Price and Availability

Refer to the Nord-Micro Service Bulletin 20790-21-001 for the equipment modification sales terms.

B. INDUSTRY SUPPORT INFORMATION

None

C. LIST OF COMPONENTS

None

D. LIST OF MATERIALS - OPERATOR SUPPLIED

DESCRIPTION	REFERENCE TO CML MAT. No.	QTY PER A/C INST DISP
Solvent	11-026	As required
Cloth	19-003	As required

E. PARTS TO BE RE IDENTIFIED BY THE OPERATOR

ITEM	NEW PART No	KEYWORD ITEM	OLD PART No.	INT	
	20790-02AB	VALVE	20790-01AA	02	See Note 1

NOTE (1) The Valve is modified by the Nord-Micro Service Bulletin 20790-21-001.

NOTE: For the definitions of interchangeability codes in the column INT. refer to ATA 200 Chapter 1A-2.

F. TOOLING - PRICE AND AVAILABILITY

None

G. SPECIAL TOOLS

None

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3. ACCOMPLISHMENT INSTRUCTIONS

A. GENERAL

<u>WARNING</u>: MAKE SURE THAT YOU OBEY ALL THE WARNINGS AND CAUTIONS INCLUDED IN THE REFERENCED PROCEDURES.

(1) Preparation

- (a) Make sure that the aircraft is electrically grounded, refer to AMM 12-34-24 Page block 201.
- (b) Open, safety and tag the circuit breaker(s) listed in the AMM 21-31-51 Page block 401.
- (c) Do the preparation for the removal of the outflow valve 10HL, refer to AMM 21-31-51 Page block 401.

(2) Standard Practices

- (a) Refer to the Consumable Materials List (CML) for the specification of the materials (Mat. No.) which you must use in this Service Bulletin.
- (b) If necessary, clean the work area with the solvent $\underline{\mbox{(Mat. No. }}\mbox{11-026)}$ and a cloth (Mat. No. 19-003) .
- (c) Tag the parts which you must remove and retain, to make the subsequent installation easier.

B. MODIFICATION

- (1) Remove the outflow valve 10HL, P/N 20790-01AA, refer to AMM 21-31-51 Page block 401.
- (2) Do the modification to the outflow valve 10HL, refer to Nord-Micro Service Bulletin 20790-21-001.
- (3) Reidentify the valve, refer to Para. 2E.
- (4) Install the modified outflow valve 10HL, P/N 20790-02AB, refer to AMM 21-31-51 Page block 401.
 - NOTE: During the three month in-service test period, do a print every two weeks of the last leg report, the previous legs report, and the post flight report. In case of an ATA 21 failure occurrence, do a print of the last leg report, the previous legs report, the post flight report, and read out of the Non Volatile Memory information of both cabin pressure controllers. For both cases send the reports to:

GILLES JUAN
AI/SE-22
AIRBUS INDUSTRIE
1, ROND POINT MAURICE BELLONTE
31707 BLAGNAC CEDEX
FRANCE

for further investigation.

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C. TEST

- (1) Remove the safety tags and close the circuit breaker(s) listed in the AMM 21-31-51 Page block 401.
- (2) Do the operational test of the pressure control and monitoring system, refer to AMM 21-31-00 Page block 501.
- (3) Do the operational test of the manual pressure control and monitoring system, refer to AMM 21-31-00 Page block 501.

D. CLOSE UP

- (1) Make sure that the work areas are clean and clear of tools and other items of equipment.
- (2) Do the close up after the installation of the outflow valve 10HL, refer to AMM 21-31-51 Page block 401.

E. DOCUMENTATION

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

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SERVICE BULLETIN REPORTING SHEET

TITLE: AIR CONDITIONING - GENERAL - PRESSURIZATION CONTROL - INTRODUCE A MODIFIED OUTFLOW VALVE P/N 20790-02AB

MODIFICATION No.: 31333K7284

Please complete the appropriate item (A or B):

A - SB WILL BE embodied YE	S/NO	(if	NO pl	ease c	omment)
If YES, aircraft concerned (as per SB effectivity by	defau	ılt)	and p	lanned	dates
(month/year) of embodiment:					
B - SB HAS BEEN embodied on aircraft:					
					
Operator comments:					
From Airline:					
Name/Title:					
Signature: D	ate:				
If operational documentation is affected (see Paragra	ph 1.	.K of	this	SB):	Ιf
information is needed prior to next normal revision o					
please indicate required service(s):					
Either: Advance data			. YE	S/NO	
Or : Intermediate/Temporary revision			. YE	S/NO	
Important Information: This SB will only be incorpora	ted -	in yo	ur ma	intena	nce and
operational documentation if this sheet is returned t		-			
signed by a duly authorised representative. With the					
this will result in					•
-updating of maintenance documentation to show pre	and	post	SB da	ata.	
-updating of maintenance and operational documenta	tion	to s	how po	st SB	data
after embodiment.					
If this SB requires previous or simultaneous accompli	shmer	nt of	othe	SBs,	Airbus

If this SB requires previous or simultaneous accomplishment of other SBs, Airbus Industrie shall automatically include them in the manual revisions. Refer to SIL 00-037 for detailed information.

Please return this completed sheet to:

AIRBUS INDUSTRIE CUSTOMER SERVICES DIRECTORATE 1 Rond Point Maurice Bellonte 31707 BLAGNAC CEDEX FRANCE

Attn: AI/SE-D32 Technical Data and Documentation Services Fax: (+33) 5 61 93 28 06

or via your Resident Customer Support Office.

Alternatively, SB lists via letters or fax are also accepted.

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SERVICE BULLETIN QUALITY PERCEPTION FORM

Use this form to tell us what is your perception of the quality of this Service Bulletin. The reported data that you provide us will be used to analyse areas of difficulties and to take corrective action to further improve the quality of our Service Bulletins.

We thank you for the time you have taken in completing this form.

(Please rate on a scale of 1 to 4, with 4 being the highest score)

- Quality rating of this SB	4	3	2	1
- Quality rating of the Accomplishment Instructions	4	3	2	1
- Quality rating of the Illustrations	4	3	2	1
- Is this SB easy to understand ?	Y	/ N		

If you have had difficulties in the accomplishment of this SB please quote below the area(s) and give a short description of the issue.

Planning	Material	Instructions
X Effectivity	X Kit Content	X Preparation
X Reason	X List of Materials	X Mod/Inspection
X Manpower	Operator Supplied	X Test
X References	X Re-identification	X Close-up
X Publication	X Tooling	X Illustrations

Comments:

Operator: Date:

Name/Title:

Please return this form to:

AIRBUS INDUSTRIE
CUSTOMER SERVICES DIRECTORATE
1 Rond Point Maurice Bellonte
31707 BLAGNAC CEDEX

Attn: AI/SE-T1 Service Bulletins Management

FAX: (33) 5 61 93 42 51

or via your Resident Customer Support Office.

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