
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/A330/41 and issues the following AD under subregulation 39.1 (1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Airbus Industrie A330 Series Aeroplanes**AD/A330/41
Amdt 1****Passenger Gaseous Oxygen
Containers Diaphragm****2/2005**

Applicability: Model A330 aeroplanes, all serial numbers, on which Airbus modification 40257 has been embodied during production (installation of Passenger Gaseous Oxygen System) but on which Airbus modification 53578 was not embodied.

Note 1: Aircraft delivered after 11 September 2004, the effective date of DGAC Airworthiness Directive (AD) F-2004-152, are not affected by the requirements of this Directive.

- Requirement:**
1. The following dispatch limitations are mandatory for all flights:
 - When dispatch is made with either one Cabin Pressure Controller (CPC) inoperative (MMEL item 21-31-01) or one air conditioning pack inoperative (MMEL 21-52-01), operators **MUST** ensure that from any point of the route, obstacle clearance is ensured to allow a rapid descent to FL 100.

In that respect, following MMEL procedure must be added in the dispatch conditions for one CPC or one air conditioning pack inoperative:

“... provided from any point of the route, obstacle clearance is ensured to allow a rapid descent to FL 100.”

 - When dispatch is made with one bleed air supply system inoperative (MMEL item 36-11-01), operators **MUST** ensure that from any point of the route, obstacle clearance is ensured to allow a rapid descent to FL 220 in case of remaining bleed failure. At FL 220, APU bleed air supply system is used for cabin pressurization.

In that respect, following MMEL procedure must be added in the dispatch conditions for one bleed air supply inoperative:

“... provided from any point of the route, obstacle clearance is ensured to allow a rapid descent to FL 220.”

Airbus Industrie A330 Series Aeroplanes

AD/A330/41 Amdt 1 (continued)

Incorporation of MMEL TR N° 01-21/01Z ISSUE 01 and MMEL TR N° 01-36/01Z ISSUE 01 or a copy of this Directive in the aircraft operations manual is a satisfactory method of complying with this Requirement.

2. Identify the part number(s) (P/N) of the passenger gaseous oxygen container assemblies either installed on the aircraft or held as spares. For container assembly P/N(s) not listed in Airbus All Operator Telex (AOT) 35A3013 Revision 01, no further action is required by this Directive.
3. For container assemblies with P/N(s) listed in AOT 35A3013 Revision 01, identify the manifold assembly P/N and serial number (S/N) in accordance with Dräger Aerospace Vendor Service Bulletin (VSB) XXG00-35-004 Revision 02. If both P/N and S/N of the manifold assembly are listed in VSB XXG00-35-004 Revision 02, apply the following corrective actions:
 - a. Replace the diaphragm installed in the manifold assembly in accordance with instructions given in VSB XXG00-35-004 Revision 02, and
 - b. If the container is installed on an aeroplane:
 - (i) Perform a leak check of the cabin emergency oxygen system in accordance with Aircraft Maintenance Manual (AMM) 35-23-00-790-801, and
 - (ii) Perform a system door release test in accordance with AMM 35-23-00-710-805.
4. Identify the PN and SN of spare manifold assemblies in accordance with VSB XXG00-35-004 Revision 02. For each spare manifold assembly, if both P/N and S/N are listed in the VSB, replace the diaphragm installed in the manifold assembly in accordance with VSB XXG00-35-004 Revision 02.

If either the P/N or the S/N of the manifold assemblies is not listed in VSB XXG00-35-004 Revision 02, this Directive requires no further action.

Later versions of the following documents which are approved by the Direction Générale de l'Aviation Civile of France are acceptable for accomplishing the requirements of this Directive:

Airbus AOT35A3013 Revision 01 dated 26 August 2004
MMEL TR N° 01-21/01Z ISSUE 01
MMEL TR N° 01-36/01Z ISSUE 01

Note 2: DGAC AD F-2004-152 R2 (EASA Approval 2004-11119) refers.

Airbus Industrie A330 Series Aeroplanes

AD/A330/41 Amdt 1 (continued)

Compliance: For Requirement 1 - Remains unchanged as "As of the effective date of the original issue of this Directive".

For Requirements 2 and 3 - Remains unchanged as "Before 31 October 2004".

For Requirement 4 - Remains unchanged as "Before installation on an aircraft but no later than 31 October 2004".

This Amendment becomes effective on 17 February 2005.

Background: Qualification test and subsequent flow test, performed by the oxygen system supplier Dräger Aerospace, revealed that the oxygen flow of the passenger gaseous oxygen container assemblies may be degraded or blocked by sticking manifold diaphragm when used during a cabin decompression.

During a slow depressurisation (loss of air conditioning packs or loss of the cabin pressure control system) and if the oxygen masks are triggered between flight level 150 and 250, the oxygen supply pressure will not be sufficient to free the diaphragm and oxygen will not flow to the passenger masks while deployed.

The original issue of this Directive required:

- limitation of dispatch conditions by modifying the MMEL in case of one CPC or one air conditioning or one bleed air supply system inoperative,
- an oxygen diaphragm replacement on the affected manifold assemblies, and
- after replacement of the diaphragm on aircraft, a leak check of the cabin emergency oxygen system.

This Amendment does not require additional work but is issued to reduce the applicability by reference to Airbus modification 53578.

The original issue of this Airworthiness Directive became effective on 22 September 2004.



James Coyne
Delegate of the Civil Aviation Safety Authority

13 December 2004