	AIRWORTHINESS DIRECTIVE No F-2004-152 R2	Distribution: B	Issue date: November 24, 2004	Page : 1/3
Direction générale de l'aviation civile France GSAC publication	This Airworthiness Directive is published by the DGAC on behalf of EASA, Airworthiness Authority of the State of Design for the affected product, part or appliance.		*Translation of « Consigne de Navigabilité » of same number.* *In case of difficulty, reference should be made to the French issue.*	
	No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive, unless otherwise agreed with the Authority of the State of Registry.			

Corresponding foreign Airworthiness Directive(s): **Not applicable**	Airworthiness Directive(s) replaced: **F-2004-152 R1**
Person in charge of airworthiness: **AIRBUS SAS**	Type(s): **A330 aircraft**
Type certificate(s) No. **A.004** TCDS No **A.004**	

ATA chapter:	Subject:
35	**Oxygen - Passengers gaseous oxygen container diaphragm**

1. <u>EFFECTIVITY</u>:

AIRBUS A330 aircraft all certified models, all serial numbers, on which AIRBUS modification 40257 has been embodied in production (installation of Passengers Gaseous Oxygen System) and having not received AIRBUS modification 53578 in production.

Aircraft delivered after the effective date of this Airworthiness Directive (AD) at original issue are not affected by the requirements of this AD.

<u>Reminder</u>: It is the responsibility of the operator to ensure that any Passengers Gaseous Oxygen container assembly or manifold assembly being replaced on aircraft since new still complies with the requirements of this AD.

<u>Note 1</u>: Revision 2 of this Airworthiness Directive (AD) does not require any additional work.

2. <u>REASONS</u>:

Qualification test and subsequent flow test, performed by the oxygen system supplier DRAEGER AEROSPACE, revealed that the oxygen flow of the passengers 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.

This AD requires:

- 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,
- after replacement of the diaphragm on aircraft, a leak check of the cabin emergency oxygen system.

The aim of the Revision 1 was:

- to precise when the cabin emergency oxygen system leak check is requested after replacement of the diaphragm on aircraft (only if gaseous oxygen containers have been removed from the aircraft, or if connections of any one container to the aircraft have been disconnected).

- to refer to Rev. 2 of DRÄGER AEROSPACE Vendor Service Bulletin (VSB) XXG00-35-004 which clarifies procedures and extends the effectivity to a manifold assembly part number (PN) E69019-SERIES.

The aim of this Revision 2 is to reduce the effectivity field defined in paragraph 1 with reference to the Mod 53578.

3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

3.1. MMEL Impact:

From the effective date of this AD at original issue and until actions defined in paragraph 3.2. are completed:

- When dispatch is made with either one 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.

Note 2: The incorporation of the MMEL TR N° 01-21/01Z ISSUE 01 and MMEL TR N° 01-36/01Z ISSUE 01 or a copy of this AD in the aircraft operations manual and strict adherence to it by the flight crew allows complying with paragraph 3.1 of this AD.

3.2. At the latest on October 31, 2004:

3.2.1. Identify the PNs of the Passengers Gaseous Oxygen Container assemblies installed either on aircraft or held as spares.

3.2.2. For Container assembly PN(s) not listed in AIRBUS AOT 35A3013 Rev 01, no further action is required by this AD.

3.2.3. For Container assembly PN(s) listed in AIRBUS AOT 35A3013 Rev 01, identify the Manifold assembly PN and Serial Number (SN) in accordance with DRÄGER AEROSPACE VSB XXG00-35-004 Rev 02.

3.2.4. If both PN and SN of the manifold assembly are listed in DRÄGER AEROSPACE VSB XXG00-35-004 Rev 02, apply the following corrective actions:

- replace the diaphragm installed in the manifold assembly in accordance with instructions given in DRÄGER AEROSPACE VSB XXG00-35-004 Rev 02 and

- perform a leak check of the cabin emergency oxygen system in accordance with AMM 35-23-00-790-801 only when gaseous oxygen containers have been removed from the aircraft, or when connections of one container to the aircraft have been disconnected.

- In addition to the in DRÄGER AEROSPACE VSB XXG00-35-004 Rev 02, perform a system door release test as per AMM 35-23-00-710-805.

3.2.5. Identify the PN and SN of spare manifold assemblies in accordance with DRÄGER AEROSPACE VSB XXG00-35-004 Rev 02. For each spare manifold assembly, if both PN and SN are listed in the VSB, replace the diaphragm installed in the manifold assembly in accordance with DRÄGER AEROSPACE VSB XXG00-35-004 Rev 02, before installation on aircraft and in any case not later than October 31, 2004.

3.2.6. If either the PN or the SN of the manifold assemblies is not listed in DRÄGER AEROSPACE VSB XXG00-35-004 Rev 02, no further action is required by this AD.

4. REFERENCE PUBLICATIONS:

AIRBUS AOT 35A3013 Rev 01 dated August 26, 2004
A330 MMEL TR N° 01-21/01Z ISSUE 01
A330 MMEL TR N° 01-36/01Z ISSUE 01
(Any later approved revision of these documents is acceptable).
DRÄGER AEROSPACE Vendor Service Bulletin XXG00-35-004 Rev 02.

5. EFFECTIVE DATES:

Original issue : September 11, 2004
Revision 1 : September 25, 2004
Revision 2 : December 04, 2004

6. REMARK:

For questions concerning the technical contents of this AD's requirements, contact:

AIRBUS SAS - EAL - Fax : 33 5 61 93 45 80.

7. APPROVAL:

This AD Revision is approved under EASA reference No 2004-11119 dated November 17, 2004.