



適航指令發布單

Airworthiness Directive Issuance Form

| | | | |
|--|--|---------------------|-----------|
| 民航局 AD 編號 AD number | CAA-2021-07-018B | 發布日期 Date issued | 2022/8/31 |
| 適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable) | Airbus A300, A300-600 and A310 aeroplanes, all certified models, all manufacturer serial numbers (MSN); Airbus A300F4-608ST aeroplanes, all MSN; Airbus A318, A319, A320 and A321 aeroplanes, all certified models, all MSN; Airbus A330 aeroplanes, all certified models except A330-223F and A330-243F, all MSN, and Airbus A340 aeroplanes, all certified models, all MSN. | | |
| 主旨摘要 Subject | Oxygen - Crew and Passenger Oxygen Cylinders - Inspection / Replacement | | |
| 民航局 CAA <input type="checkbox"/> 本國產品 Native product <input type="checkbox"/> 其他個案 Other | 設計國民航主管機構 Original Authority <input type="checkbox"/> FAA <input type="checkbox"/> Germany LBA <input checked="" type="checkbox"/> EASA <input type="checkbox"/> CAA-NL <input type="checkbox"/> Brazil <input type="checkbox"/> UK CAA <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> Japan CAB <input type="checkbox"/> DGAC <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____ | | |
| | 設計國 AD 編號 Original AD number | 2021-0180R2 | |
| | 1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) _ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No) | | |
| 備註 Note | This AD revises EASA AD 2021-0180R1(CAA-2021-07-018A) dated 23 August 2021. The original issue of this AD superseded EASA AD 2019-0085(CAA-2019-04-005) dated 18 April 2019. | | |
| 註： 1. AD 內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6330 / 6332, Fax：(02)2545-8464, e-mail： adcaa@mail.caa.gov.tw Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6330 / 6332, Fax： (02)2545-8464, e-mail： adcaa@mail.caa.gov.tw | | | |



Airworthiness Directive

AD No.: 2021-0180R2

Issued: 29 August 2022

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I Part M.A.301, or Annex Vb Part ML.A.301, as applicable, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I Part M.A.303, or Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

AIRBUS S.A.S.

Type/Model designation(s):

Airbus aeroplanes (see Applicability)

Effective Date: Revision 2: 05 September 2022
Revision 1: 30 August 2021
Original issue: 12 August 2021

TCDS Number(s): EASA.A.004, EASA.A.014, EASA.A.015, EASA.A.064 and EASA.A.172

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2021-0180R1 dated 23 August 2021. The original issue of this AD superseded EASA AD 2019-0085 dated 18 April 2019.

ATA 35 – Oxygen – Crew and Passenger Oxygen Cylinders – Inspection / Replacement

Manufacturer(s):

Airbus, formerly Airbus Industrie

Applicability:

Airbus A300, A300-600 and A310 aeroplanes, all certified models, all manufacturer serial numbers (MSN);

Airbus A300F4-608ST aeroplanes, all MSN;

Airbus A318, A319, A320 and A321 aeroplanes, all certified models, all MSN;

Airbus A330 aeroplanes, all certified models except A330-223F and A330-243F, all MSN, and

Airbus A340 aeroplanes, all certified models, all MSN.

Definitions:

For the purpose of this AD, the following definitions apply:

All certified models: This includes all models (of a type design) that were certified before 29 July 2021 [the publication date of the original issue of this AD].



Affected part: Oxygen cylinders, having Part Number (P/N) 89794077, P/N 89794015 or P/N 891511-14, identified as Batch 1 and Batch 2 in this AD, except those that have passed an inspection (marked with blue dot) in accordance with the instructions of the AOT or the SB.

Batch 1: Affected parts having a serial number (s/n) as listed in the Appendix 1 of the SB at original issue.

Batch 2: Affected parts having an s/n as listed in the Appendix 2 of the SB at Revision 03.

Serviceable part: Oxygen cylinders which are not an affected part.

The SB: SAFRAN (AVOX Systems Inc.) Service Bulletin (SB) 10015804-35-01.

The AOT: Airbus Alert Operators Transmission (AOT) A35W014-19 (A300/A310), AOT A35L013-19 (A330/A340) and AOT A35N012-19 (A318 through A321), as applicable, which refer for accomplishment instructions to the SB.

Groups: Group 1 aeroplanes are those that have an affected part installed.
Group 2 aeroplanes are those that do not have an affected part installed.

Reason:

Several occurrences were reported of a cylinder and hand valve with oxygen leakage from the valve assembly vent hole. The technical investigation identified that an internal part (guide) was not assembled onto the stem. It was determined that a batch of oxygen cylinders produced in 2018 is potentially affected by this manufacturing discrepancy.

This condition, if not detected and corrected, could lead to a reduction of the available oxygen capacity of the aeroplane, possibly resulting in injury to aeroplane occupants following a depressurization event. In addition, there is a possibility of ignition/fire in flight in case of an open hand valve assembly failure, depending on installation zone, or ignition/fire during system ground testing following (re)installation on an aeroplane, possibly resulting in injury to aeroplane occupants or maintenance staff, respectively.

To address this potential unsafe condition, Airbus issued the AOT (original issue) to provide inspection instructions and EASA issued AD 2019-0085 to require a one-time inspection of each affected part (Batch 1) and, depending on findings, replacement with a serviceable part. That AD also prohibited (re)installation of an affected part on an aeroplane.

Since that AD was issued, additional parts (Batch 2) have been identified by SAFRAN (AVOX Systems, Inc.) as affected by the same potential unsafe condition. The AOT and the SB have been revised accordingly.

For the reason described above, EASA issued AD 2021-0180 (later revised), retaining the requirements of EASA AD 2019-0085, which was superseded, and expanding the list of affected parts.



Since EASA AD 2021-0180R1 was issued, FAA issued “equipment” AD 2022-04-09, addressing the same unsafe condition as the EASA AD and requiring (in principle) the same inspection and equivalent corrective actions. This FAA AD was adopted by EASA and subsequently, EASA published PAD 22-032-CN, proposing to cancel EASA AD 2021-0180R1.

Upon closer review of FAA AD 2022-04-09 and prompted by comments, it turned out, that the requirements of EASA AD 2021-0180R1 are not fully taken over, as Revision 3 of the affected SAFRAN (AVOX) SBs introduced additional parts that are not subject to the requirements of FAA AD 2022-04-09.

Consequently, this AD is revised to clarify the situation, rather than to cancel AD 2021-0180R1, which was the original intent. It is expected that the FAA will issue a new AD to require the use of Revision 3 of the affected SAFRAN (AVOX) SBs. Once that AD is published, it is expected that EASA will adopt that AD and this AD will then be cancelled.

This revision gives in addition credit for certain requirements of FAA AD 2022-04-09 in case the requirements of this AD have been complied with.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) For Group 1 aeroplanes: Within the compliance time specified in Table 1 of this AD, inspect the hand valve of each affected part in accordance with the instructions of the AOT and the SB.

Table 1 – Affected Part Inspection

| Batch | Compliance Time |
|-------|---|
| 1 | Before any maintenance action on an affected part, or within 60 days, whichever occurs first after 02 May 2019 [the effective date of EASA AD 2019-0085] |
| 2 | Before any maintenance action on an affected part, or within 60 days, whichever occurs first after 12 August 2021 [the effective date of this AD at original issue] |

Corrective Action(s):

- (2) If, during the inspection as required by paragraph (1) of this AD, an affected part does not meet the criteria as defined in the AOT and the SB, before next flight, or before (re)installation, as applicable, empty that cylinder and replace it with a serviceable part, as defined in this AD, in accordance with the instructions of the SB.

Alternative Method:

- (3) Replacement on an aeroplane of all affected parts with serviceable parts, as defined in this AD, is an acceptable alternative method to comply with the requirements of paragraph (1) of this AD for that aeroplane, provided this is accomplished within 60 days after 02 May 2019 [the effective date of EASA AD 2019-0085] for Batch 1 affected parts or within 60 days after 12 August 2021 [the effective date of this AD at original issue] for Batch 2 affected parts, and that, until that replacement, no maintenance action is accomplished on any affected part installed on that aeroplane.



Parts Installation:

(4) For Group 1 and Group 2 aeroplanes: From 12 August 2021 [the effective date of this AD at original issue], do not install an affected part on any aeroplane.

Credit:

(5) Accomplishment on an aeroplane of the action as per paragraph (3) of this AD, or of the inspection(s) and corrective action(s) as required by paragraph (1) and (2) of this AD in accordance with the instructions of the AOT and/or the SB, as applicable, is acceptable to comply with the requirements (h) to (l) of FAA AD 2022-04-09, for that aeroplane.

Ref. Publications:

Airbus AOT A35W014-19 original issue dated 06 March 2019, or Revision 01 dated 22 June 2021.

Airbus AOT A35L013-19 original issue dated 06 March 2019, or Revision 01 dated 22 June 2021.

Airbus AOT A35N012-19 original issue dated 06 March 2019, or Revision 01 dated 22 June 2021.

SAFRAN / AVOX Systems, Inc. SB 10015804-35-01 original issue dated 06 March 2019, or Revision 01 dated 06 July 2019, or Revision 02 dated 16 October 2019, or Revision 03 dated 07 June 2021.

The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. A proposal to cancel this AD was posted on 25 March 2021 as PAD 22-032-CN for consultation until 08 April 2022. The Comment Response Document can be found in the [EASA Safety Publications Tool](#), in the compressed (zipped) file attached to the record for this AD.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
5. For any question concerning the technical content of the requirements in this AD, please contact AIRBUS S.A.S., as applicable, as specified below:
1IALW Airworthiness Office E-mail: continued.airworthiness-wb.external@airbus.com;



1IASA Airworthiness Office E-mail: account.airworth-eas@airbus.com;
1IAL Airworthiness Office E-mail: airworthiness.A330-A340@airbus.com.

