



Airworthiness Directive

AD No.: 2024-0186

Issued: 24 September 2024

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):

A350 aeroplanes

Effective Date: 08 October 2024

TCDS Number(s): EASA.A.151

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2019-0168 dated 16 July 2019.

ATA 35 – Oxygen – Crew Oxygen Cylinder Assembly – Inspection / Replacement

Manufacturer(s):

Airbus

Applicability:

Airbus A350-941 and A350-1041 aeroplanes, all manufacturer serial numbers.

Definitions:

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

The AOT: Airbus Alert Operator Transmission (AOT) A35P010-17.

The SB: Airbus Service Bulletin (SB) A350-35-P019.

Affected part: Oxygen cylinder assemblies, having Part Number (P/N) 4441227-058-000 or P/N 4441227-058-001.

Redesigned part: Oxygen cylinder assemblies, having P/N 4441227-058-002, or later approved P/N.

Serviceable part: Oxygen cylinder assembly that is a redesigned part, or an affected part that, prior to installation, has passed (no defects detected) an inspection in accordance with the instructions of the AOT.



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 loss of retention of the regulator inlet filter retainer on certain oxygen cylinder assemblies. The filter retainer detached from the regulator and dropped within the cylinder internal volume. The technical investigation identified a design defect which was the cause of these events.

This condition, if not detected and corrected, could lead to particle ingestion into the regulator during ground handling, possibly resulting in ignition/fire during system ground operational testing following cylinder (re)installation on an aeroplane.

To address this potential unsafe condition, Airbus issued AOT A35P010-17, referring to B/E Aerospace SB 4441227-35-003 for inspection of P/N 4441227-058-000. Consequently, EASA issued AD 2018-0245 (later revised) to require a one-time inspection of affected oxygen cylinder assemblies having P/N 4441227-058-000 and, depending on findings, replacement. That AD also required replacement of all affected parts with improved serviceable parts having P/N 4441227-058-001.

After EASA AD 2018-0245R1 was issued, the supplier has noted findings of loose filter retainers on improved oxygen cylinders P/N 4441227-058-001. These findings were determined to be due to a higher than specified torque application during the production installation of the regulator onto the cylinder. While the condition does not present structural risk to the cylinder, it may lead to retainer detachment from the regulator, as previously seen with oxygen cylinder P/N 4441227-058-000. Airbus revised the AOT accordingly, including reference to B/E Aerospace SB 4441227-35-004 for inspection of oxygen cylinder assembly P/N 4441227-058-001. Consequently, EASA issued AD 2019-0168 retaining the requirements of EASA AD 2018-0245R1, which was superseded, to remove the requirement to replace any defective cylinder with a 'serviceable assembly' having P/N 4441227-058-001, and to expand the affected parts to include oxygen cylinders having P/N 4441227-058-001.

Since EASA AD 2019-0168 was issued, the supplier introduced an improved oxygen cylinder assembly having P/N 4441227-058-002, securing the correct function of the system. Airbus published the SB, as defined in this AD, including reference to Collins Aerospace SB 4441227-35-005 for modification of oxygen cylinder assembly P/N 4441227-058-000/-001.

For the reason described above, this AD retains the requirements of EASA AD 2019-0168, which is superseded, and requires replacement of all affected parts with redesigned parts.

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

Required as indicated by this AD, unless the action(s) required by this AD have been already accomplished:

Inspection(s):

- (1) For Group 1 aeroplanes: Within 6 months after 30 July 2019 [the effective date of EASA AD 2019-0168], inspect each affected part in accordance with the instructions of the AOT.



Corrective Action(s):

- (2) If, during the inspection as required by paragraph (1) of this AD, any discrepancy is detected, as defined in the AOT, on an affected part, before next flight, replace that affected part with a serviceable part in accordance with the instructions of the AOT.

Part(s) Replacement:

- (3) For Group 1 aeroplanes: Within 66 months after the effective date of this AD, replace each affected part with a redesigned part (see Note 1 of this AD).

Note 1: The Airbus SB provides reference to Collins Aerospace SB 4441227-35-005 containing instructions to modify an affected part into a redesigned part.

Part(s) Installation:

- (4) From 30 July 2019 [the effective date of EASA AD 2019-0168], until aeroplane modification as required by paragraph (3) of this AD, installation of an affected part on a Group 1 aeroplane is allowed, provided it is a serviceable part, as defined in this AD.

- (5) Do not install an affected part on any aeroplane, as required by paragraph (5.1) or (5.2) of this AD, as applicable.

(5.1) For Group 1 aeroplanes: After modification of the aeroplane as required by paragraph (3) of this AD.

(5.2) For Group 2 aeroplanes: From the effective date of this AD.

Ref. Publications:

Airbus AOT A35P010-17 original issue dated 20 December 2018, Revision 01 dated 11 April 2019, or Revision 02 dated 28 October 2021.

Airbus SB A350-35-P019 original issue dated 08 February 2024, or Revision 01 dated 12 June 2024.

B/E Aerospace SB 4441227-35-003 dated 19 December 2017.

B/E Aerospace SB 4441227-35-004 dated 08 April 2019.

Collins Aerospace SB 4441227-35-005 dated 23 November 2023.

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. This AD was posted on 22 August 2024 as PAD 24-106 for consultation until 19 September 2024. No comments were received during the consultation period.



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 A350 XWB, E-mail: continued-airworthiness.a350@airbus.com.

