



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 21-182

Issued: 20 December 2021

Note: This Proposed Airworthiness Directive (PAD) 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.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

AIRBUS

Type/Model designation(s):

A330 and A340 aeroplanes

Effective Date: [TBD – standard: 14 days after AD issue date]

TCDS Number(s): EASA.A.004 and EASA.A.015

Foreign AD: Not applicable

Supersedure: None

ATA 56 – Windows – Windshields – Inspection

Manufacturer(s):

Airbus, formerly Airbus Industrie

Applicability:

A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, A330-343, A330-743L, A330-841, A330-941 aeroplanes, all manufacturer serial numbers (MSN); and

A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, A340-542, A340-642 and A340-643 aeroplanes, all MSN.

Definitions:

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

Affected part: Windshields having a Part Number (P/N) as defined in Table 1 of this AD. Depending on its P/N, an affected part is Group 1, Group 2 or Group 3.

New/repaired part: Any affected part which is new; or which has accumulated 0 flight hours (FH) since a repair accomplished by SAINT-GOBAIN SULLY (SGS), including "Outer ply replacement".



Serviceable part: Any windshield, eligible for installation, which is not an affected part; or an affected part which is a new/repaired part, as defined in this AD; or an affected part which is not a new/repaired part that, before next installation, or before next flight after installation, passes (no defects found) a detailed inspection (DET) and passes (results included in the “green area” or “amber area”, as identified in the SB) an electrical test measurement (ETM), as applicable, in accordance with the instructions of the SB.

Aeroplane date of manufacture: The date of transfer of title (ownership) which is referenced in Airbus documentation at the time of first delivery to an operator.

Date of first installation: For an affected part, the date of first installation on an aeroplane. If unknown, or for a part not replaced in service, the aeroplane date of manufacture must be used instead.

The SB: Airbus Service Bulletin (SB) A330-56-3010, or Airbus SB A340-56-4009, or Airbus SB A340-56-5003, as applicable, and SGS SB SPS A340-56-001.

Groups: Group A aeroplanes are those that have an affected part installed.
Group B aeroplanes are those that do not have an affected part installed.

Note 1: An aeroplane on which Airbus modification 209046 has been embodied in production (only windshields installed having P/N SPSA340-1-6-3 and P/N SPSA340-2-6-3) is Group B, provided that no affected part has been installed on that aeroplane since its date of manufacture.

Reason:

An occurrence was reported where an A319 aeroplane lost the right windshield in flight, with consequent rapid cockpit depressurization, causing damage to cockpit items/systems and significant increase of flight crew workload. The investigations identified several contributing factors (including manufacturing variability, fretting between windshield components, water ingress, electrical braids corrosion) which led to a thermal shock/overheat, damaging more than one windshield structural plies and impairing the structural integrity of the windshield. Due to the design similarity, this condition can also exist or develop on A330 and A340 aeroplanes.

This condition, if not detected and corrected, could lead to failure of the windshield, possibly resulting in injury to the flight crew, in-flight depressurization of the aeroplane, and would require exceptional piloting skill to maintain control of the aeroplane.

To address this potential unsafe condition, Airbus issued the SB to provide inspection instructions for the affected parts.

For the reasons described above, this AD requires repetitive DET and ETM of the affected parts, and, depending on findings, accomplishment of applicable corrective action(s).



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

Required as indicated, unless accomplished previously:

Table 1 – Affected Parts P/N and Groups

Affected Part Group	SGS Windshield P/N	
	Left-hand side	Right-hand side
1	SPSA340-2-4-1	SPSA340-1-4-1
2	SPSA340-2-5-2	SPSA340-1-5-2
3	SPSA340-2-1-1	SPSA340-1-1-1
	SPSA340-2-2-1	SPSA340-1-2-1
	SPSA340-2-3-1	SPSA340-1-3-1

Inspection(s):

- (1) For Group A aeroplanes: Within the compliance time as specified in Table 2 of this AD, and thereafter, at intervals not exceeding 800 FH or 4 months, whichever occurs first, accomplish a DET followed by an ETM of each Group 1 affected part in accordance with the instructions of the SB.

Table 2 – Group 1 Affected Parts – Initial DET / ETM

Compliance Time (whichever occurs later, A or B)	
A	Within 800 FH or 4 months, whichever occurs first after the effective date of this AD
B	Before exceeding 800 FH or 4 months, whichever occurs first since the date of first installation

- (2) For Group A aeroplanes: Within the compliance time as specified in Table 3 of this AD, as applicable, and, thereafter, at intervals not exceeding 10 000 FH or 24 months, whichever occurs first, accomplish a DET followed by an ETM of each Group 2 affected part in accordance with the instructions of the SB.

Table 3 – Group 2 Affected Parts – Initial DET / ETM

Compliance Time (whichever occurs later, A or B)	
A	Within 800 FH or 4 months, whichever occurs first after the effective date of this AD
B	Before exceeding 800 FH or 4 months, whichever occurs first since the date of first installation

- (3) For Group A aeroplanes: The initial DET followed by ETM, as required by paragraph (2) of this AD can be postponed to the special compliance times specified in Table 4 of this AD, provided the conditions specified in Table 4 of this AD are met.



Table 4 – Group 2 Affected Parts – Initial DET / ETM

Windshield Maintenance History & Operational Test results as specified in the SB	Windshield Age / Utilization	Special Compliance Time(s) for the DET and ETM (after the effective date of this AD, or since the date of first installation, whichever occurs later)
Fault message 561111 L WSHLD SENSOR(3DG1)/ WHC1 (2DG1)" or "561111 R WSHLD SENSOR(3DG2)/ WHC2 (2DG2)" NOT recorded since windshield installation on an aeroplane AND Fault message 561111 L WSHLD SENSOR(3DG1)/ WHC1 (2DG1)" or "561111 R WSHLD SENSOR(3DG2)/ WHC2 (2DG2)" NOT found	More than 48 months, or more than 10 000 FC, or 15 000 FH	Within 5 000 FH or 12 months, whichever occurs first
	Less than, or equal to 48 months, <u>and</u> less than, or equal to 10 000 FC and 15 000 FH	Within 10 000 FH or 24 months, whichever occurs first

- (4) If, during any ETM as required by paragraph (2) of this AD, the results are found to be in the "amber area", as identified in the SB, accomplish subsequent DET and ETM of that affected part at intervals not exceeding 800 FH or 4 months, whichever occurs first.
- (5) For Group A aeroplanes: Within the compliance time as specified in Table 5 of this AD, as applicable, and, thereafter, at intervals not exceeding 800 FH or 4 months, whichever occurs first, accomplish a DET of each Group 3 affected part in accordance with the instructions of the SB.

Table 5 – Group 3 Affected Parts – Initial DET

Compliance Time (whichever occurs later, A or B)	
A	Within 800 FH or 4 months, whichever occurs first after the effective date of this AD
B	Before exceeding 800 FH or 4 months, whichever occurs first since the date of first installation

Corrective Action(s):

- (6) If, during any DET as required by paragraph (1), (2) or (5) of this AD, as applicable, any defect, as identified in the SB, is found on an affected part, before next flight, replace that affected part with a serviceable part in accordance with the instructions of the SB.



- (7) If, during any ETM as required by paragraph (1) or (2) of this AD, as applicable, the results are found to be in the “red area”, as identified in the SB, before next flight, replace that affected part with a serviceable part in accordance with the instructions of the SB.
- (8) Replacement of an affected part with a serviceable part on an aeroplane, as required by paragraph (6) or (7) of this AD, as applicable, can be deferred in accordance with the applicable instructions and limitations of Master Minimum Equipment List (MMEL) item 30-42-03A.

Terminating Action:

- (9) For Group A aeroplanes: Replacement on an aeroplane of each affected part with a windshield having a P/N not affected by the requirements of this AD constitutes terminating action for the repetitive inspections as required by paragraphs (1), (2) and (5) of this AD, as applicable for that aeroplane, provided that, following that replacement, no affected part is installed on that aeroplane.

Parts Installation:

- (10) For Group A and Group B aeroplanes: From the effective date of this AD, it is allowed to install on any aeroplane a windshield, provided it is a serviceable part, as defined in this AD. Following installation of an affected part on an aeroplane, that aeroplane is effectively a Group A aeroplane, and that affected part must be inspected as required by this AD. For an affected part which is not a new/repaired part, as defined in this AD, the first inspection after that installation can be deferred up to the applicable interval for repetitive inspection, provided that part has accumulated 0 FH since the last inspection and has been stored in accordance with the instructions of the applicable Component Maintenance Manual.

Reporting:

- (11) Within 30 days after accomplishment of the initial DET/ETM as required by paragraph (1), (2) or (5) of this AD, as applicable, or within 30 days after the effective date of this AD, whichever occurs later, report the inspection results (including no findings) to Airbus. Using the inspection report attached to the SB is an acceptable method to comply with this requirement.
- (12) Within 90 days after each subsequent DET/ETM as required by paragraph (1), (2), or (5) of this AD, as applicable, report any inspection finding to Airbus. Using the inspection report attached to the SB is an acceptable method to comply with this requirement.

Ref. Publications:

Airbus SB A330-56-3010 original issue dated 19 November 2021.

Airbus SB A340-56-4009 original issue dated 19 November 2021.

Airbus SB A340-56-5003 original issue dated 19 November 2021.

SGS SB SPS A340-56-001 original issue dated 25 October 2021.



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

Remarks:

1. This Proposed AD will be closed for consultation on 17 January 2022.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, 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 PAD 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.
4. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – IIAL (Airworthiness Office), E-mail: airworthiness.A330-A340@airbus.com.

