Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 21-033

Issued: 02 March 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):
A318, A319, A320 and A321 aeroplanes

Effective Date: [TBD - standard: 14 days after AD issue date]
TCDS Number(s): EASA.A.064
Foreign AD: Not applicable
Supersedure: None

ATA 56 – Windows – Windshields – Inspection

Manufacturer(s):
Airbus, formerly Airbus Industrie

Applicability:
A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A319-151N, A319-153N, A319-171N, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A320-251N, A320-252N, A320-253N, A320-271N, A320-272N, A320-273N, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231, A321-232, A321-251N, A321-252N, A321-253N, A321-251NX, A321-252NX, A321-253NX, A321-271N, A321-272N, A321-271NX and A321-272NX aeroplanes, all manufacturer serial numbers.

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

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

Serviceable part: Any windshield, eligible for installation, which is not an affected part; or an affected part which is new; or an affected part (not new) that before next 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.

Airbus 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.

The SB: Airbus Service Bulletin (SB) A320-56-1022 or Airbus SB A320-56-1023, as applicable, and Saint-Gobain Sully SB STA320-56-001.

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 167352 has been embodied in production (Windshield having P/N STA320-1-9-3 or STA320-2-9-3) 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 in flight the right windshield, 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.

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 the aeroplane.

To address this potential unsafe condition, Airbus issued the SB to provide instructions for repetitive inspections of 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**
Group 1	STA320-1-7-1	STA320-2-7-1
Group 2	STA320-1-8-2	STA320-2-8-2
Group 3	STA320-1-3-1	STA320-2-3-1
	STA320-1-4-1	STA320-2-4-1
	STA320-1-5-1	STA320-2-5-1
	STA320-1-6-1	STA320-2-6-1

Inspection(s):

(1) For Group A aeroplanes: Within the compliance times as specified in Table 2 of this AD, and thereafter, at intervals not exceeding 750 flight hours (FH), 750 flight cycles (FC) or 4 months, whichever occurs first, accomplish a DET followed by an ETM of each Group 1 affected part, as applicable, in accordance with the instructions of the SB.

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

Compliance Time(s) (whichever occurs later, **A** or **B**)	
A	Within 750 FH, 750 FC, or 4 months, whichever occurs first after the effective date of this AD
B	Before exceeding 750 FH, 750 FC, or 4 months, whichever occurs first since Airbus date of manufacture

(2) For Group A aeroplanes: Within the threshold as identified in Table 3 of this AD, as applicable, and, thereafter, at intervals not exceeding 7 500 FH, 7 500 FC or 24 months, whichever occurs first, accomplish a DET followed by an ETM of each Group 2 affected part, as applicable, in accordance with the instructions of the SB.

Table 3 – Group 2 Affected Parts – DET and ETM thresholds

Condition on windshield maintenance history	**Condition on windshield age / utilization** (see Note 2 of this AD)	**Threshold** (after the effective date of this AD, or since Airbus date of manufacture, whichever occurs later)
Fault message "561000L(R) WINDSHIELD SENSOR" recorded since windshield installation on an aeroplane OR unknown maintenance history	n/a	Within 750 FH, 750 FC or 4 months whichever occurs first
Fault message "561000L(R) WINDSHIELD SENSOR" NOT recorded since windshield installation on an aeroplane	Windshield age / utilization being more than 48 months, or 10 000 FC or 15 000 FH since first installation on an aeroplane	Within 3 750 FH, 3 750 FC or 12 months, whichever occurs first
	Windshield age / utilization being less or equal to 48 months, and 10 000 FC and 15 000 FH since first installation on an aeroplane	Within 7 500 FH, 7 500 FC or 24 months, whichever occurs first

Note 2: If no data, or only partial data, is available, operators may refer to the guidance specified in Airworthiness Limitations Section (ALS) Part 1 Section 1 chapter 5.2 (traceability) to determine the age/utilisation of the windshield.

(3) 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 750 FH, 750 FC or 4 months, whichever occurs first.

(4) For Group A aeroplanes: Within 750 FH, 750 FC, or 4 months, whichever occurs first after the effective date of this AD or since aeroplane date of manufacture, whichever occurs later, and, thereafter, at intervals not exceeding 750 FH, 750 FC or 4 months, whichever occurs first, accomplish a DET of each Group 3 affected part, as applicable, in accordance with the instructions of the SB.

Corrective Action(s):

(5) If, during any DET as required by paragraph (1), (2), (3) or (4) 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.

(6) If, during any ETM as required by paragraph (1), (2) or (3) 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.

(7) Replacement of an affected part with a serviceable part on an aeroplane, as required by paragraph (5) or (6) 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 or 30-42-03B.

Terminating Action:

(8) For Group A aeroplanes: Replacement on an aeroplane of each affected part with a not affected part constitutes terminating action for the repetitive inspections as required by paragraphs (1) to (4) of this AD, as applicable for that aeroplane, provided that, following that replacement, no affected part is installed on that aeroplane.

Parts Installation:

(9) 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.

Reporting:

(10) Within 30 days after accomplishment of each DET and ETM as required by paragraph (1) to (4) of this AD, or after the effective date of this AD, whichever occurs later, report the inspection results (including no findings for the initial inspection only) to Airbus. Using the inspection report attached to the SB is an acceptable method to comply with this requirement.

Ref. Publications:

Airbus SB A320-56-1022 original issue, dated 28 January 2021.

Airbus SB A320-56-1023 original issue, dated 28 January 2021.

SGS SB STA320-56-001 original issue, dated 25 January 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 30 March 2021.

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 – Airworthiness Office – IIASA; E-mail: account.airworth-eas@airbus.com.