



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 21-169

Issued: 12 November 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 Numbers: EASA.A.004, EASA.A.015

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2012-0053R1 dated 27 November 2018.

ATA 32 – Landing Gear – Main and Centre Landing Gear Bogie Pivot Pins – Inspection / Replacement

Manufacturer(s):

Airbus, formerly Airbus Industrie

Applicability:

Airbus 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 and A330-343 aeroplanes, all manufacturer serial numbers (MSN),

Airbus 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: Main landing gear (MLG) and Centre Landing Gear (CLG) (for certain A340 aeroplanes only) bogie pivot pins, having a Part Number (P/N) as listed in Appendix 1 of this AD.



Serviceable part: Any MLG or CLG bogie pivot pin that is not an affected part; or an affected part that is new (not previously installed); or an affected part that, before (re)installation, has passed an inspection (no defects found) in accordance with the instructions of the inspection SB.

The inspection SB: Airbus Service Bulletin (SB) A330-32-3240 Revision 02, or SB A340-32-4281 Revision 01, or SB A340-32-5096 Revision 01, as applicable.

The modification SB: Airbus SB A330-32-3290, or SB A330-32-3291, or SB A340-32-4315, or SB A340-32-4316, as applicable.

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. An aeroplane on which Airbus modification (mod) 207165 or mod 207649 has been embodied in production, or on which the modification SB, as defined in this AD, has been embodied in-service, is a Group 2 aeroplane, provided the aeroplane remains in that configuration.

Reason:

Occurrences were reported where, during removal of A330/A340 MLG bogie beams and A340-500/600 CLG bogie beams, cracks were found in the affected parts. Investigations indicated that these findings were the result of material heating, caused by friction between bogie pivot pin and bush, leading to chrome detachment and stress corrosion cracking.

This condition, if not detected and corrected, could lead to collapse of the MLG or CLG, possibly resulting in damage to the aeroplane and/or injury to occupants.

As a precautionary measure, EASA published AD 2011-0040 to require a one-time inspection of the MLG (all A330 and A340 models) and CLG (A340-500/600 aeroplanes only) to detect degradation or cracking of the bogie pivot pin, accomplishment of applicable corrective action(s) and the reporting of inspection results.

After that AD was issued, several operators reported finding chrome detachment or chrome dragging on bogie pivot pins. New cases of cracks were also reported.

Prompted by these findings, Airbus developed an inspection programme and published the inspection SB. Consequently, EASA issued AD 2012-0053 (later revised), retaining the requirements of EASA AD 2011-0040, which was superseded, to require repetitive detailed visual inspections (DET) of the MLG and CLG bogie pivot pins and bushes, and, depending on findings, accomplishment of applicable corrective action(s).

After that AD was issued, Airbus developed mod 207165 and mod 207649, introducing a new bogie pivot pin for certain MLG. Aeroplanes equipped with this new bogie pivot pin (Group 2) are not subject to the repetitive inspections of this AD. Airbus published the modification SB, providing instructions for in-service introduction of these mods. Consequently, EASA issued AD 2012-0053R1, reducing the Applicability and introducing reference to the modification SB as optional terminating action. In addition, that AD deleted the reporting requirements and contained some editorial changes to meet the current AD writing standards, without affecting the technical content or requirements.



Since that AD was issued, it was determined that there is a risk that accomplishment of an inspection is missed, due to the fact that the actions in EASA AD 2012-0053 (similar to the preceding ADs) were written at aeroplane level, whereas these should have been at affected part level. In addition, it was identified that MLG/CLG overhaul contains actions that are equivalent to those required by that AD.

For the reasons described above, this AD partially retains the requirements of EASA AD 2012-0053R1, which is superseded, but expands the Applicability to all aeroplanes for which the affected part is eligible for installation and amends the compliance time for the DET (now at affected part level) and provides part installation requirements. This AD also provides credit for corrective action(s) accomplished during MLG/CLG overhaul.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) For Group 1 aeroplanes: Before an affected part exceeds 26 months since its first flight on an aeroplane, but not before accumulating 12 months since its first flight on an aeroplane (see Note 1 of this AD), and, thereafter, at intervals not to exceed 26 months, accomplish a DET of each affected part and its bushes in accordance with the instructions of the inspection SB.

Note 1: For the initial DET, in case the date of first flight on an aeroplane of an affected part is unknown, it is acceptable to apply the date of first flight of the affected MLG or CLG. If the date of first flight of the affected MLG or CLG is unknown, the DET must be accomplished within 30 days after the effective date of this AD.

- (2) If, during any DET as required by paragraph (1) of this AD, degraded chrome plating is found on an affected part, before next flight, accomplish a Non-Destructive Test (NDT) inspection of the affected part in accordance with the instructions of the inspection SB.

Corrective Action(s):

- (3) If, during any DET as required by paragraph (1) of this AD, any bush is found cracked or damaged, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of the inspection SB.
- (4) If, during any NDT inspection as required by paragraph (2) of this AD, the base metal of the affected part is found corroded, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of the inspection SB.

MLG or CLG Replacement:

- (5) As an alternative to any DET as required by paragraph (1) of this AD, it is allowed to replace an MLG or CLG with a new/overhauled MLG or CLG that contains a serviceable part, as defined in this AD.



Terminating Action:

- (6) Accomplishment of corrective action(s) on an aeroplane, as required by paragraph (3) or (4) of this AD, or replacement of an MLG or CLG, as specified in paragraph (5) of this AD, as applicable, does not constitute terminating action for the repetitive inspections required by paragraph (1) of this AD for that aeroplane.
- (7) Modification of an aeroplane in accordance with the instructions of the modification SB constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that aeroplane.

Credit:

- (8) For Group 1 aeroplanes: Inspections and corrective actions on an aeroplane, accomplished before the effective date of this AD in accordance with the instructions of Airbus SB A330-32-3240 at original issue or Revision 01, or SB A340-32-4281 at original issue, or SB A340-32-5096 at original issue, as applicable, are acceptable for compliance with the initial requirements of paragraphs (1), (2), (3) and (4) of this AD, as applicable, for that aeroplane.

Part Installation:

- (9) For Group 1 aeroplanes: From the effective date of this AD, it is allowed to install on any aeroplane an affected part, or an MLG or CLG that has an affected part installed, provided that, following installation, the affected part is inspected as required by this AD.
- (10) Do not install on any aeroplane an affected part, or an MLG or CLG that has an affected part installed, as required by paragraph (10.1) or (10.2) of this AD, as applicable.
 - (10.1) For Group 1 aeroplanes: After modification of the aeroplane as specified in paragraph (7) of this AD.
 - (10.2) For Group 2 aeroplanes: From the effective date of this AD.

Ref. Publications:

Airbus SB A330-32-3240 original issue dated 08 December 2010, or Revision 01 dated 02 May 2011, or Revision 02 dated 02 December 2011, or Revision 03 dated 13 December 2012, or Revision 04 dated 16 April 2014, or Revision 05 dated 03 November 2014, or Revision 06 dated 22 December 2015, or Revision 07 dated 18 April 2016, or Revision 08 dated 04 April 2017, or Revision 09 dated 22 July 2019, or Revision 10 dated 25 March 2021.

Airbus SB A340-32-4281 original issue dated 08 December 2010, or Revision 01 dated 02 December 2011, or Revision 02 dated 03 November 2014.

Airbus SB A340-32-5096 original issue dated 08 December 2010, or Revision 01 dated 02 December 2011, or Revision 02 dated 03 November 2014.

Airbus SB A330-32-3290 original issue dated 26 December 2017.

Airbus SB A330-32-3291 original issue dated 28 September 2018.



Airbus SB A340-32-4315 original issue dated 26 December 2017.

Airbus SB A340-32-4316 original issue dated 28 September 2018.

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 10 December 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 – IIAL (Airworthiness Office), E-mail: airworthiness.A330-A340@airbus.com.



Appendix 1 – Affected Parts

A330/A340-200/-300 MLG: P/N 201254925, P/N 201269612, P/N 201489621, P/N 201489751 and P/N 55-2105029-00

A340-500/-600 MLG: P/N 55-1205135-00

A340-500/-600 CLG: P/N 55-1105252-00, P/N 55-1105318-00, P/N 55-1105437-00, P/N 55-1105442-00, P/N 55-1105446-00, P/N 55-1105109-00

