



適航指令發布單

Airworthiness Directive Issuance Form

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| 民航局 AD 編號 AD number | CAA-2022-02-005A | 發布日期 Date issued | 2022/3/4 |
| 適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable) | 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. | | |
| 主旨摘要 Subject | Landing Gear - Main and Centre Landing Gear Bogie Pivot Pins - 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 <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> FAA <input checked="" type="checkbox"/> EASA <input type="checkbox"/> Brazil <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> DGAC </div> <div style="width: 48%;"> <input type="checkbox"/> Germany LBA <input type="checkbox"/> CAA-NL <input type="checkbox"/> UK CAA <input type="checkbox"/> Japan CAB <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____ </div> </div> | | |
| | 設計國 AD 編號 Original AD number | 2022-0025R1 | |
| | 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| 備註 Note | This AD revises AD 2022-0025(CAA-2022-02-005) dated 15 February 2022, which superseded EASA AD 2012-0053R1 dated 27 November 2018. | | |
| 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.: 2022-0025R1

Issued: 25 February 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, 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 agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

AIRBUS

Type/Model designation(s):

A330 and A340 aeroplanes

Effective Date: Original issue and Revision 1: 01 March 2022

TCDS Numbers: EASA.A.004, EASA.A.015

Foreign AD: Not applicable

Revision: This AD revises AD 2022-0025 dated 15 February 2022, which superseded 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 that accumulated 0 flight hours since last overhaul; or an affected part that, before (re)installation, has passed an inspection (no defects found) in accordance



with the instructions of the inspection SB or of the vendor inspection SB; or an affected part that has not passed an inspection in accordance with the instructions of the inspection SB or of the vendor inspection SB, but thereafter has been repaired in accordance with instructions approved by Airbus or by Safran Landing System.

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.

The vendor inspection SB: Safran Landing System SB A33/34-32-285, SB A34/56C-32-117 or SB A34/56M-32-46 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 reporting of the 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 embodiment 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.

After 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 2012-0053R1 (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.

Consequently, EASA issued AD 2022-0025, which partially retained the requirements of EASA AD 2012-0053R1, which was superseded, but expanded the Applicability to all aeroplanes for which the affected part is eligible for installation and amended the compliance time for the DET (now at affected part level) and provided part installation requirements. That AD also provided credit for corrective action(s) accomplished during MLG/CLG overhaul.

Since that AD was issued, it has been determined that the compliance time for the initial inspection still has to include reference to the already expired “grace period”, as provided by EASA AD 2021-0053R1, to avoid unnecessary grounding of certain aeroplanes. This AD is revised accordingly.

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 13 April 2012 [the effective date of EASA AD 2012-0053 original issue] or since its first flight on an aeroplane, whichever occurs later, 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 01 March 2022 [the effective date of the original issue 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 a MLG or CLG with a 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 a 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 01 March 2022 [the effective date of the original issue 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 01 March 2022 [the effective date of the original issue of this AD], it is allowed to install on any aeroplane an affected part, or a 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 01 March 2022 [the effective date of the original issue 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.

Safran Landing System SB A33/34-32-285 original issue dated 09 July 2010, or Revision 01 dated 04 October 2011, or Revision 02 dated 04 October 2012, or Revision 03 dated 11 September 2013, or Revision 04 dated 23 January 2014, or Revision 05 dated 14 August 2014, or Revision 06 dated 06 August 2015, or Revision 07 dated 24 November 2016.

Safran Landing System SB A34/56C-32-117 original issue dated 09 July 2010, or Revision 01 dated 04 October 2011, or Revision 02 dated 11 September 2013, or Revision 03 dated 31 March 2014.

Safran Landing System SB A34/56M-32-46 original issue dated 09 July 2010, or Revision 01 dated 04 October 2011, or Revision 02 dated 11 September 2013, or Revision 03 dated 31 March 2014.

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. The original issue of this AD was posted on 12 November 2021 as PAD 21-169 for consultation until 10 December 2021. The Comment Response Documents 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 – 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 and P/N 55-1105109-00

