



# Notification of a Proposal to issue an Airworthiness Directive

**PAD No.: 18-044**

**Issued: 27 March 2018**

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 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 2017-0245 dated issued on 11 December 2017.

## ATA 32 – Landing Gear – Repaired Main Landing Gear Wheel Axles – Reduced Life Limit

### Manufacturer(s):

Airbus (formerly Airbus Industrie)

### Applicability:

Airbus A330-201, A330-202, A330-203, A330-223, A330-243, 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), except MSN 0896, 0905 and 0913 (see below) and except those on which Airbus modification (mod) 54500 has been embodied in production.

Airbus A330-343 aeroplanes, MSN 0896, 0905 and 0913, except those on which Airbus Service Bulletin (SB) A330-32-3273 has been embodied in service.

Airbus A340-211, A340-212, A340-213, A340-311, A340-312 and A340-313 aeroplanes, all MSN except those on which Airbus mod 54500 has been embodied in production.

### Definitions:

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



**The applicable SB:** Airbus SB A330-32-3282 or SB A340-32-4311, both at Revision 03, as applicable.

**Affected MLG wheel axles:** Main Landing Gear (MLG) wheel axles listed by Part Number (P/N) and serial number (s/n) in Appendix 01 (MRO 1), Appendix 02 (MRO 2) and Appendix 03 (MRO 3) of the applicable SB.

**Serviceable MLG wheel axle:** An affected MLG wheel axle that has not exceeded the applicable life limit values as specified in Appendix 1 of this AD, or a part with a P/N and s/n not listed in Appendix 01, Appendix 02 or Appendix 03 of the applicable SB.

**Post-repair Life Limits:** The time in service, in flight cycles (FC) or flight hours (FH), accumulated since repair by the affected Maintenance Repair Organisation (MRO), see Appendix 1 of this AD.

#### Reason:

In the past, EASA received a report, via Airbus and Messier-Bugatti-Dowty Ltd, from a MRO, concerning a specific repair accomplished on certain MLG wheel axles. Investigations revealed that the axles were machined with a radius as small as 0.4 mm.

This condition, if not corrected, has a detrimental effect on the fatigue lives of these parts, possibly affecting the structural integrity of the aeroplane. Fatigue analyses were performed and the results indicated that the life limit of the affected MLG wheel axles must be reduced to below the one stated in the A330 and A340 Airbus Airworthiness Limitation Section (ALS) Part 1.

To address this potential unsafe condition, EASA issued AD 2011-0170, which required the replacement of the MLG wheel axles before exceeding the new reduced demonstrated life limit. After that AD was issued, it was discovered that additional MLG wheel axles were subject to repairs by the same MRO. Consequently, EASA issued AD 2013-0067, retaining the requirements of EASA AD 2011-0170, which was superseded, and required the replacement of this additional batch of affected MLG wheel axles.

Since EASA AD 2013-0067 was issued, it was reported that two additional MROs have accomplished similar incorrect repairs on additional MLG wheel axles, necessitating implementation of a reduced life limit. The affected MLG wheel axles, as well as the related life limits, have been published in Airbus SB A330-32-3282 and SB A340-32-4311, as applicable to aeroplane type.

Consequently, EASA issued AD 2017-0245, retaining the requirements of EASA AD 2013-0067, which was superseded, to require identification and replacement of the affected MLG wheel axles.

Since EASA AD 2017-0245, it was determined that some aeroplane models were missing from the Tables in Appendix 1. It was also determined that the compliance times needed to be clarified.

For the reasons described above, this AD fully retains the requirements of EASA AD 2017-0245, which is superseded, and introduces the necessary clarifications. This AD also contains some editorial changes to meet the current AD writing standards, without affecting the technical content or requirements.



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

Required as indicated, unless accomplished previously:

**Identification:**

- (1) Within 90 days after 25 December 2017 [the effective date of EASA AD 2017-0245], identify the P/N and s/n of each Left Hand (LH) and Right Hand (RH) MLG wheel axle and determine whether the MLG wheel axle is an affected part.

A review of aeroplane delivery and/or maintenance records is acceptable to make this determination, in lieu of inspecting a MLG wheel axle, provided those records can be relied upon for that purpose and the P/N and s/n of the affected part can be positively identified from that review.

**Replacement:**

- (2) Based on the identification as required by paragraph (1) of this AD, within the compliance times specified in Appendix 1 of this AD, as applicable to MRO, aeroplane type, model and Weight Variant (WV) series, replace each repaired MLG wheel axle with a serviceable part in accordance with the instructions of the applicable SB.

**Part installation:**

- (3) From 21 September 2011 [the effective date of EASA AD 2011-0170], an affected MLG wheel axle repaired by MRO 1 can be installed on an aeroplane, provided the part is a serviceable MLG wheel axle.
- (4) From 25 December 2017 [the effective date of EASA AD 2017-0245], an affected MLG wheel axle repaired by MRO 2 or by MRO 3 can be installed on an aeroplane, provided the part is a serviceable MLG wheel axle.

**Ref. Publications:**

Airbus SB A330-32-3282 Revision 03 dated 24 October 2017.

Airbus SB A340-32-4311 Revision 03 dated 24 October 2017.

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 24 April 2018.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
3. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – EIAL (Airworthiness Office), E-mail: [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com).



### Appendix 1 – Compliance Time(s)

Regardless of the applicable post-repair life limits as specified in Tables 1, 2 and 3 of this AD, the life limits as specified in Airbus ALS Part 1 cannot be exceeded.

Table 1 – MRO 1 Post-Repair Life Limits (see Section Definitions of this AD)

<b>Affected Aeroplane(s)</b>	<b>WV (series)</b>	<b>Compliance Time</b> (FC or FH, whichever occurs first)
A340-211, A340-212 and A340-213	WV00x	4 600 FC or 29 000 FH
A340-311, A340-312 and A340-313	WV00x	4 700 FC or 22 250 FH
A340-313	WV02x and WV05x	3 950 FC or 16 900 FH
A330-301, A330-321, A330-322, A330-341 and A330-342	WV00x and WV01x	5 050 FC or 15 200 FH
A330-201, A330-202, A330-203, A330-223 and A330-243	WV02x, WV05x and WV06x	4 450 FC or 17 900 FH
A330-301, A330-302, A330-303, A330-323, A330-342 and A330-343	WV02x and WV05x	5 150 FC or 13 450 FH



Table 2 – MRO 2 Post-Repair Life Limits (see Section Definitions of this AD)

<b>Affected Aeroplane(s)</b>	<b>WV (series)</b>	<b>Compliance Time</b> (FC or FH, whichever occurs first) <b>A</b> or <b>B</b> , whichever occurs later
A340-211, A340-212, A340-213, A340-311, A340-312 and A340-313	WV00x	<b>A:</b> 25 000 FC, or 100 000 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245]
A340-311, A340-312 and A340-313	WV02x and WV05x	<b>A:</b> 25 000 FC, or 83 100 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245], but not exceeding 25 000 FC or 100 000 FH
A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342 and A330-343	WV00x, WV01x, WV02x and WV05x	<b>A:</b> 50 000 FC or 75 000 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245]
A330-201, A330-202, A330-203, A330-223 and A330-243	WV02x, WV05x (except WV058) and WV06x	
	WV058	<b>A:</b> 50 000 FC or 70 950 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245], but not exceeding 50 000 FC or 75 000 FH



Table 3 – MRO 3 Post-Repair Life Limits (see Section Definitions of this AD)

Affected Aeroplane(s)	WV (series)	<b>Compliance Time</b> (FC or FH, whichever occurs first) <b>A or B</b> , whichever occurs later
A340-211, A340-212, A340-213, A340-311, A340-312 and A340-313	WV00x	<b>A:</b> 25 000 FC or 100 000 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245]
A340-311, A340-312 and A340-313	WV02x and WV05x	<b>A:</b> 25 000 FC or 68 800 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245], but not exceeding 25 000 FC or 100 000 FH
A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342 and A330-343	WV00x and WV01x	<b>A:</b> 50 000 FC or 73 400 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245], but not exceeding 50 000 FC or 75 000 FH
	WV02x and WV05x	<b>A:</b> 50 000 FC or 64 100 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245], but not exceeding 50 000 FC or 75 000 FH
A330-201, A330-202, A330-203, A330-223 and A330-243	WV02x, WV05x (except WV058) and WV06x	<b>A:</b> 50 000 FC or 62 950 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245], but not exceeding 50 000 FC or 75 000 FH
	WV058	<b>A:</b> 50 000 FC or 59 350 FH <b>B:</b> 12 months after 25 December 2017 [the effective date of EASA AD 2017-0245], but not exceeding 50 000 FC or 75 000 FH

