



Airworthiness Directive

PAD No.: 16-025R1

Issued: 27 April 2016

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 2014-0120R1 dated 31 August 2015.

ATA 32 – Landing Gear – Main Landing Gear Bogie Beam – Inspection / Repair / Modification

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), and

Airbus A340-211, A340-212, A340-213, A340-311, A340-312 and A340-313 aeroplanes, all MSN,

except those that have embodied Airbus modification (mod) 204421 or mod 205289 in production.

Reason:

During a scheduled maintenance inspection on the main landing gear (MLG), the bogie stop pad was found deformed and cracked. Upon removal of the bogie stop pad for replacement, the bogie beam was also found cracked. The results of a laboratory investigation indicated that an overload event had occurred and no fatigue propagation of the crack was evident. A second bogie beam crack was subsequently found on another aeroplane, located under a bogie stop pad which only had superficial paint damage.



This condition, if not detected and corrected, could lead to landing gear bogie detachment from the aeroplane, or landing gear collapse, or a runway excursion, possibly resulting in damage to the aeroplane and injury to the occupants and/or people on the ground.

To address this potential unsafe condition, EASA issued AD 2008-0223 to require accomplishment of a one-time detailed inspection under the bogie stop pad of both MLG bogie beams. As a result of the one-time inspection required by that AD, numerous bogie stop pad were found corroded and a few cracked. The one-time inspection was retained in EASA AD 2011-0211, which superseded EASA AD 2008-0223, which also introduced repetitive inspections, except for A340-500/-600 aeroplanes.

After EASA AD 2011-0211 was issued, further investigation led to the conclusion that the one-time inspection was no longer necessary and only the repetitive inspections should remain. In addition, it was determined that repetitive inspections were also necessary for MLG on A340-500/-600 aeroplanes.

Prompted by these conclusions, EASA issued AD 2014-0120, partially retaining the requirements of EASA AD 2011-0211, which was superseded, and introducing repetitive detailed inspections of the MLG on A340-500 and A340-600 aeroplanes. Subsequently, further analysis indicated that repetitive inspections of the MLG on A340-500/-600 aeroplanes were not necessary after all. In addition, the threshold for the inspection of MLG P/N 10-210 series was raised from 24 to 126 months, and Airbus developed a modification of the MLG P/N 10-210 series which provides an (optional) terminating action for the repetitive inspections.

Consequently, EASA AD 2014-0120 was revised to delete the requirements for A340-500/-600 aeroplanes, to amend the inspection threshold for MLG P/N 10-210 series, and to introduce an optional terminating action for aeroplanes with MLG P/N 10-210 series.

Since EASA AD 2014-0120R1 was issued, Airbus developed a modification (mod 205289) of the MLG P/N 201252 series and P/N 201490 series that must be embodied in service with Airbus SB A330-32-3275 or SB A340-32-4305. It was also identified that A340-500/-600 aeroplanes could be removed from the applicability of this AD as no more actions were required on these aeroplanes.

For the reason described above, this AD retains the requirements of EASA AD 2014-0120R1, which is superseded, removes the A340-500/-600 aeroplanes from the Applicability and requires the modification of the MLG P/N 201252 series and P/N 201490 series, which constitutes terminating action for the repetitive inspections required by this AD.

Since EASA PAD 16-025 was issued, comments were received that made EASA aware that some paragraphs needed clarifications. EASA PAD 16-025R1 is issued to clarify paragraph (8) on the modification of an aeroplane equipped with MLG P/N 201252 series or MLG P/N 201490 series. This PAD revision also clarifies the conditions for installation of an MLG on an aeroplane.

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

Required as indicated, unless accomplished previously:

- (1) For the purpose of this AD, accomplishment of a MLG overhaul is acceptable in lieu of an inspection of that MLG as required by this AD.



Repetitive Inspections:

- (2) For aeroplanes equipped, on 28 May 2014 [the effective date AD 2014-0120 at original issue], with a MLG that has been previously inspected in accordance with the instructions of Airbus SB A330-32-3248, or Airbus SB A340-32-4286, or Airbus SB A330-32-3220, or Airbus SB A340-32-4264, as applicable:
- (2.1) For MLG P/N 201252 series and P/N 201490 series, before exceeding 2 500 landings or 24 months, whichever occurs first (see Note 1 of this AD), and, thereafter, at intervals not to exceed 2 500 landings or 24 months, whichever occurs first, inspect the MLG in accordance with the instructions of Airbus SB A330-32-3248 Revision 04 or Airbus SB A340-32-4286 Revision 02, as applicable.
- (2.2) For MLG P/N 10-210 series, before exceeding 126 months since first flight on an aeroplane (see Note 2 of this AD), and, thereafter, at intervals not to exceed 2 500 landings or 24 months, whichever occurs first (see Note 1 of this AD), inspect the MLG in accordance with the instructions of Airbus SB A330-32-3248 Revision 04 or Airbus SB A340-32-4286 Revision 02, as applicable.

Note 1: Unless specified otherwise, the landings and calendar times in this AD are those accumulated since last accomplishment of an inspection of the MLG in accordance with Airbus SB A330-32-3248, or Airbus SB A340-32-4286, or Airbus SB A330-32-3220 or Airbus SB A340-32-4264, as applicable, or since first flight after MLG overhaul, whichever occurs later.

Note 2: For a MLG P/N 10-210 series that has already been inspected as previously required by EASA AD 2014-0120 (original issue or R1), the next inspection as required by paragraph (2) or (3) of this AD, as applicable, can be deferred until 126 months since first flight of that MLG (see Note 1 of this AD).

- (3) For aeroplanes equipped, on 28 May 2014 [the effective date of AD 2014-0120 at original issue], with a MLG that was **not previously inspected** in accordance with the instructions of Airbus SB A330-32-3248, or SB A340 32-4286, or SB A330-32-3220, or SB A340-32-4264, as applicable:
- (3.1) For MLG P/N 201252 series and P/N 201490 series, within the compliance time specified in Table 1 of this AD, as applicable, and, thereafter, at intervals not to exceed 2 500 landings or 24 months, whichever occurs first (see Note 1 of this AD), inspect the MLG in accordance with the instructions of Airbus SB A330-32-3248 Revision 04, or Airbus SB A340-32-4286 Revision 02, as applicable.

Table 1 – Initial Inspection

Compliance Time: (whichever occurs later, A or B)	
A	For the MLG, before exceeding 2 500 landings or 24 months, whichever occurs first since first flight on an aeroplane (see Note 1 of this AD)
B	Within 16 months after 28 May 2014 [the effective date of the original issue of EASA AD 2014-0120]



- (3.2) For MLG P/N 10-210 series, before exceeding 126 months since first flight on an aeroplane (see Notes 1 and 2 of this AD), and, thereafter, at intervals not to exceed 2 500 landings or 24 months, whichever occurs first (see Note 1 of this AD), inspect the MLG in accordance with the instructions of Airbus SB A330-32-3248 Revision 04, or SB A340-32-4286 Revision 02, as applicable.

Corrective Action(s):

- (4) If, during any inspection as required by paragraph (2) or (3) of this AD, any damage is detected on the MLG, before next flight, accomplish the applicable corrective actions in accordance with the instructions of Airbus SB A330-32-3248 Revision 04, or SB A340-32-4286 Revision 02, as applicable.
- (5) [Deleted].
- (6) Accomplishment of corrective actions on an aeroplane as required by paragraph (4) of this AD does not constitute terminating action for the repetitive inspections required by this AD for that aeroplane.

Credit for Previous Action(s):

- (7) Inspections and corrective actions, accomplished before the effective date of this AD in accordance with the instructions of Airbus SB A330-32-3248 at original issue or Revision 01 or Revision 02 or Revision 03, and Airbus SB A340-32-4286 at original issue or Revision 01, are acceptable to comply with the initial inspection(s) as required by paragraph (2) of this AD, as applicable, and related corrective action(s), as required by paragraph (4) of this AD.

Terminating Action:

- (8) For an aeroplane equipped with MLG P/N 201252 series or MLG P/N 201490 series, before a MLG accumulates 126 months since its first flight on an aeroplane, or since its first flight after the last overhaul, as applicable, replace that MLG with a MLG P/N 201252 series or MLG P/N 201490 series that has an improved bogie beam (see Note 3 of this AD), as defined in, and in accordance with the instructions of, Airbus SB A330-32-3275 or SB A340-32-4305, as applicable.

Note 3: For the purpose of this AD, modification of an affected MLG can be accomplished in accordance with the instructions of Messier Bugatti Dowty SB No. A33/34-32-306.

- (9) Modification of an aeroplane, as required by paragraph (8) of this AD, by installation of both left-hand and right-hand post-SB A33/34-32-306 MLG, constitutes terminating action for the repetitive inspections required by this AD for that aeroplane, provided that, following in-service modification, the aeroplane remains in post-SB configuration (see paragraph (11) of this AD).
- (10) For an aeroplane equipped with MLG P/N 10-210 series, modification in accordance with the instructions of Airbus SB A330-32-3268 or A340-32-4300, as applicable, constitutes (optional) terminating action for the repetitive inspections required by this AD for that aeroplane, provided that, following in service modification, the aeroplane remains in post-SB configuration (see paragraph (12) of this AD).



Note 4 : For the purpose of this AD, modification of an affected MLG can be accomplished in accordance with the instructions of Messier Bugatti Dowty SB No. A33/34-32-305.

Conditions for MLG installation on an aeroplane:

- (11) Do not install on any aeroplane a pre-mod MLG P/N 201252 series or pre-mod MLG P/N 201490 series, as required by paragraph (11.1) or (11.2) of this AD, as applicable.
 - (11.1) For an aeroplane that is post-Mod 205289 or post-SB A330-32-3275 or post-SB A340-32-4305: From the effective date of this AD.
 - (11.2) For an aeroplane that is pre-mod 205289 or pre-SB A330-32-3275 or pre-SB A340-32-4305: After modification of that aeroplane as required by paragraph (8) of this AD.
- (12) Do not install on any aeroplane a pre-mod MLG P/N 10-210 series, as required by paragraph (12.1) or (12.2) of this AD, as applicable.
 - (12.1) For an aeroplane that is post-mod 204421 or post-SB A330-32-3268 or post-SB A340-32-4300: From the effective date of this AD.
 - (12.2) For an aeroplane that is pre-mod 24421 or pre-SB A330-32-3268 or pre-SB A340-32-4300: After modification of that aeroplane as specified in paragraph (10) of this AD.

Ref. Publications:

Airbus SB A330-32-3220 original issue dated 10 October 2008, or Revision 01 dated 05 October 2011, or Revision 02 dated 13 December 2012.

Airbus SB A330-32-3248 original issue dated 05 October 2011, or Revision 01 dated 13 December 2012, or Revision 02 dated 16 April 2014, or Revision 03 dated 27 November 2015, or Revision 04 dated 05 January 2016.

Airbus SB A330-32-3268 original issue dated 20 April 2015.

Airbus SB A330-32-3275 original issue dated 23 December 2015.

Airbus SB A340-32-4264 original issue dated 10 October 2008.

Airbus SB A340-32-4286 original issue dated 05 October 2011, or Revision 01 dated 27 November 2015, or Revision 02 dated 05 January 2016.

Airbus SB A340-32-4300 original issue dated 20 April 2015.

Airbus SB A340-32-4305 original issue dated 23 December 2015.

Messier Bugatti Dowty SB No. A33/34-32-306 original issue dated 21 December 2015.

Messier Bugatti Dowty SB No. A33/34-32-305 original issue dated 13 April 2015.



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

Remarks:

1. This Proposed AD will be closed for consultation on 11 May 2016.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – EIAW (Airworthiness Office)
E-mail: airworthiness.A330-A340@airbus.com.

