

EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2014-0010R1 Date: 05 May 2014 Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.
This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 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 [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].	
Design Approval Holder's Name: AIRBUS	Type/Model designation(s): A330 and A340-200/-300 aeroplanes
TCDS Number:	EASA.A.004, EASA.A.015
Foreign AD:	Not applicable
Revision:	This AD revises EASA AD 2014-0010 dated 08 January 2014, which superseded EASA AD 2010-0024 dated 12 February 2010.
ATA 57	Wings – Centre Wing Box Keel Beam Fastener Holes at Frame 40 – Inspection
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 those on which Airbus modification (Mod) 55306 or 55792 has been embodied in production. Airbus A340-211, A340-212, A340-213, A340-311, A340-312 and A340-313 aeroplanes, all MSN, except those on which Airbus Mod 55306 or 55792 has been embodied in production and except those on which Airbus Repair Drawing R57115053 or R57115051 or R57115047 has been embodied in service on both right-hand (RH) and left-hand (LH) sides.
Reason:	During A330 and A340 aeroplanes fatigue tests, cracks were detected on the RH and LH sides between the crossing area of the keel beam fitting and the front spar of the Centre Wing Box (CWB). This condition, if not detected and corrected, could lead to keel beam rupture which would affect the structural integrity of the area. Prompted by this potential unsafe condition, EASA issued AD 2006-0315 (later revised to R1) to require repetitive special detailed inspections (SDI) on the horizontal flange of the keel beam in the area of first fastener hole aft of Frame (FR) 40 in order to maintain the structural integrity of the aeroplane. After that AD was issued, EASA issued AD 2010-0024, retaining the inspection requirements of EASA AD 2006-0315R1, which was superseded, extending the applicability to aeroplanes with Airbus Mod 49202 embodied,

	and reducing the inspection thresholds and intervals. Since that AD was issued, a new fatigue and damage tolerance evaluation has been conducted by Airbus, which concluded that due to the aeroplane utilisation, the current inspection threshold and intervals have to be modified. In addition, it was determined that the rototest inspection of fastener hole Nr 6, necessary to ensure that no crack was left unrepaired at the time of fastener hole cold working, was inadvertently not included in Revisions 01 and 02 of both Airbus Service Bulletin (SB) A330-57-3098 and SB A340-57-4106. Prompted by these findings, EASA issued AD 2014-0010, retaining the requirements of EASA AD 2010-0024, which was superseded, and redefined the inspection thresholds and intervals, and added a one-time ultrasonic inspection of fastener hole Nr 6 in the junction keel beam fitting at FR40 on both LH and RH side. Following issuance of EASA AD 2014-0010, it was identified that there was a need for clarifications, by amending paragraph (1), with the introduction of a statement and adding paragraphs (10) and (11).
Effective Date:	Revision 1: 12 May 2014 Original issue: 22 January 2014
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: Re-statement of EASA AD 2010-0024 requirements: (1) For aeroplanes already modified before 26 February 2010 [the effective date of EASA AD 2010-0024] in accordance with the instructions of Airbus SB A330-57-3098 at original issue or Airbus SB A340-57-4106 at original issue, as applicable to aeroplane type, and on which a crack was detected at hole Nr 5 before oversizing of the keel beam (in accordance with instructions in paragraph 3.B (1)(b) step 3 of Airbus SB A330-57-3098 at original issue or Airbus SB A340-57-4106 at original issue), within 30 days after 26 February 2010 [the effective date of EASA AD 2010-0024], contact Airbus for further instructions (additional work) and apply the associated instructions within the compliance time defined in these instructions. The new requirements of this AD do not apply to aeroplanes affected by this paragraph and do not apply also to aeroplanes that were already modified before 26 February 2010 [the effective date of EASA AD 2010-0024] in accordance with the instructions of Airbus SB A330-57-3098 at original issue or Airbus SB A340-57-4106 at original issue, as applicable to aeroplane type, and on which no crack was detected at hole Nr 5 before oversizing of the keel beam (in accordance with the instructions in paragraph 3.B (1)(b) step 3 of Airbus SB A330-57-3098 at original issue or Airbus SB A340-57-4106 at original issue). New requirements of this AD: (2) For aeroplanes that have never been inspected in accordance with the instructions of Airbus SB A330-57-3081 or SB A340-57-4089, as applicable to aeroplane type: Within the compliance time defined in Table 1 of this AD, as applicable, and, thereafter, at intervals not to exceed the values defined in Airbus SB A330-57-3081 Revision 05 or SB A340-57-4089 Revision 05, as applicable to aeroplane type, depending on aeroplane configuration and utilisation, accomplish a SDI of the fastener hole(s) of the horizontal flange of the keel beam located on FR40 datum on RH and/or LH side of the fuselage, in accordance with the instructions of Airbus SB A330-57-3081 Revision 05 or SB A340-57-4089 Revision 05, as applicable to aeroplane type.

Table 1 – Inspection threshold for
pre-SB A330-57-3081/SB A340-57-4089 aeroplanes

Compliance time (whichever occurs later, A or B)	
A	Before exceeding the threshold(s) as defined in Airbus SB A330-57-3081 Revision 05 or SB A340-57-4089 Revision 05 since aeroplane first flight, as applicable to aeroplane type, depending on aeroplane configuration and utilisation.
B	Within 12 months after 22 January 2014 [the effective date of this AD at original issue], but without exceeding the previous threshold as defined in Airbus SB A330-57-3081 Revision 04 or SB A340-57-4089 Revision 04, as applicable to aeroplane type.

- (3) Inspections, accomplished before the effective date of this AD in accordance with the instructions of Airbus Technical Disposition Reference F57D03012810 or 582.0651/2002 (either with no findings, or with discrepancies corrected), are acceptable to comply with the initial rotating probe inspection, which is part of the actions as required by paragraph (2) of this AD.
- (4) **For aeroplanes that, before the effective date of this AD, have been inspected in accordance with the instructions of Airbus SB A330-57-3081 or SB A340-57-4089, as applicable to aeroplane type:** Within the compliance time defined in Table 2 of this AD, and, thereafter, at intervals not to exceed the values defined in Airbus SB A330-57-3081 Revision 05 or Airbus SB A340-57-4089 Revision 05, as applicable to aeroplane type, depending on aeroplane configuration and utilisation, accomplish a SDI of the fastener hole(s) of the horizontal flange of the keel beam located on FR40 datum on RH and/or LH side of the fuselage, in accordance with the instructions of Airbus SB A330-57-3081 Revision 05 or Airbus SB A340-57-4089 Revision 05, as applicable to aeroplane type.

Table 2 – Inspection threshold for
post-SB A330-57-3081/SB A340-57-4089 aeroplanes

Compliance time (whichever occurs later, C or D)	
C	Within the new interval(s) as defined in Airbus SB A340-57-4089 Revision 05 or Airbus SB A330-57-3081 Revision 05, since the previous inspection, as applicable to aeroplane type, depending on aeroplane configuration and utilisation.
D	Within 12 months after 22 January 2014 [the effective date of this AD at original issue], but without exceeding the previous value(s) as defined in Airbus SB A340-57-4089 Revision 04 or Airbus SB A330-57-3081 Revision 04, as applicable to aeroplane type.

- (5) If, during any SDI as required by paragraph (2) or (4) of this AD, as applicable, no crack is detected, within the compliance time defined in Airbus SB A330-57-3081 Revision 05 or Airbus SB A340-57-4089 Revision 05, as applicable to aeroplane type, accomplish the corrective actions as indicated (or incorporated by reference) in the applicable SB.
- (6) For aeroplanes in configuration 2 as defined in Airbus SB A330-57-3098 Revision 01 or Revision 02, or Airbus SB A340-57-4106 Revision 01 or Revision 02, as applicable to aeroplane type, that have already been modified, before the effective date of this AD, in accordance with the instructions of Airbus SB A330-57-3098 Revision 01 or Revision 02, or Airbus SB A340-57-4106 Revision 01 or Revision 02, as applicable to aeroplane type, and on which the hole Nr 5 has already been bushed before embodiment of Airbus SB A330-57-3098 or Airbus SB A340-57-

4106, as applicable to aeroplane type, **or** on which a crack has been found on hole Nr 5 during embodiment of Airbus SB A330-57-3098 or Airbus SB A340-57-4106, as applicable to aeroplane type, within the compliance time specified in Table 3 of this AD, accomplish an ultrasonic inspection at hole Nr 6 in the junction keel beam fitting at Frame 40 LH and RH side, in accordance with the instructions of Airbus SB A330-57-3117 or Airbus SB A340-57-4126, as applicable to aeroplane type.

Table 3 – One-time ultrasonic inspection

	Compliance time (whichever occurs later, E or F)
E	Within the threshold defined in Airbus SB A330-57-3117 or Airbus SB A340-57-4126, as applicable to aeroplane type, depending on aeroplane configuration and utilisation.
F	For A330: within 2 400 flight cycles (FC) or 24 months after 22 January 2014 [the effective date of this AD at original issue], whichever occurs first. For A340: within 1 300 FC or 24 months after 22 January 2014 [the effective date of this AD at original issue], whichever occurs first.

- (7) If, during any inspection as required by paragraph (2), (4) or (6) of this AD, as applicable, any crack is detected, before next flight, contact Airbus for approved repair instructions and, within the defined compliance time, accomplish those instructions accordingly. The need and definition of any subsequent repetitive inspections can be defined in the relevant repair instructions.

Note: Inspection and, depending on findings, accomplishment of corrective action(s) as required by paragraphs (6) and (7) of this AD, are equal to the additional work as specified in Airbus SB A330-57-3098 Revision 03, or Airbus SB A340-57-4106 Revision 03, as applicable to aeroplane type. See also paragraph (11) of this AD.

- (8) For aeroplanes on which a rototest at hole Nr 6 has been accomplished before cold working during accomplishment of Airbus SB A330-57-3098 Revision 01 or Revision 02 or Airbus SB A340-57-4106 Revision 01 or Revision 02, as applicable to aeroplane type, the ultrasonic inspection of paragraph (6) of this AD is not required.
- (9) Modification of an aeroplane in accordance with the instructions of Airbus SB A330-57-3090 (any revision), or Airbus SB A340-57-4098 (any revision), or Airbus SB A330-57-3098 Revision 03, or Airbus SB A340-57-4106 Revision 03, as applicable to aeroplane type, constitutes terminating action for the requirements of this AD for that aeroplane.
- (10) For aeroplanes that have been modified before 22 January 2014 [the effective date of this AD at original issue] in accordance with the instructions of Airbus SB A330-57-3098 Revision 01 or Revision 02, or Airbus SB A340-57-4106 Revision 01 or Revision 02, as applicable to aeroplane type, no actions are required by this AD, except for aeroplanes that are affected by the requirements of paragraph (6) of this AD.
- (11) Accomplishment on an aeroplane of the inspection as required by paragraph (6) and, depending on findings, corrective action as required by paragraph (7) of this AD, constitutes terminating action for the requirements of this AD for that aeroplane.

Ref. Publications:

Airbus SB A330-57-3081 original issue dated 30 October 2003, or Revision 01 dated 18 May 2004, or Revision 02 dated 24 January 2006, or Revision 03 dated 31 July 2009, or Revision 04 dated 31 May 2011, or Revision 05 dated 13 November 2012.

	Airbus SB A340-57-4089 original issue dated 30 October 2003, or Revision 01 dated 02 March 2004, or Revision 02 dated 24 January 2006, or Revision 03 dated 31 July 2009, or Revision 04 dated 31 May 2011, or Revision 05 dated 13 November 2012. Airbus SB A330-57-3098 original issue dated 30 August 2007, or Revision 01 dated 31 July 2009, or Revision 02 dated 15 June 2011, or Revision 03 dated 24 September 2012. Airbus SB A340-57-4106 original issue dated 30 August 2007, or Revision 01 dated 31 July 2009, or Revision 02 dated 15 June 2011, or Revision 03 dated 24 September 2012. Airbus SB A330-57-3090 original issue dated 27 March 2006, or Revision 01 dated 15 June 2011. Airbus SB A340-57-4098 original issue dated 27 March 2006, or Revision 01 dated 15 June 2011. Airbus SB A330-57-3117 original issue dated 25 January 2013. Airbus SB A340-57-4126 original issue dated 25 January 2013. The use of later approved revisions of these 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 26 November 2013 as PAD 13-174 for consultation until 24 December 2013. No comments were received during the consultation period. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact: Airbus – Airworthiness Office – EIAL; E-mail: airworthiness.A330-A340@Airbus.com.