



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 18-169

Issued: 06 December 2018

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):

A340 aeroplanes

Effective Date: Revision 1: [TBD – expected: 7 days after revised AD publication]
Original issue: 18 November 2016

TCDS Number(s): EASA.A.015

Foreign AD: Not applicable

Revision: This PAD proposes to revise EASA AD 2016-0208 dated 19 October 2016.

ATA 53 – Fuselage – Structural Parts / Joints – Modification / Reinforcement

Manufacturer(s):

Airbus, formerly Airbus Industrie

Applicability:

Airbus A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, A340-542, A340-642 and A340-643 aeroplanes, all manufacturer serial numbers.

Reason:

An analysis conducted on A340 aeroplanes identified structural areas which are susceptible to widespread fatigue damage (WFD).

This condition, if not corrected, could lead to crack initiation and undetected propagation, leading to reduced structural integrity of the aeroplane, possibly resulting in rapid depressurisation and consequent injury to occupants.

To address this potential unsafe condition, Airbus developed a number of modifications (Mod) and published associated Service Bulletins (SB) for embodiment in service, to provide instructions to reinforce the various structural parts of the fuselage. Consequently, EASA issued AD 2016-0208 to require the accomplishment of these modifications and reinforcements.



Since that AD was issued, Airbus developed a modification which is an acceptable alternative method to Action 5 as required by this AD, and published SB A330-53-4237 accordingly.

For the reason described above, this AD is revised to provide an alternative solution for the Action 5 modification. In addition, recent data indicate that Action 1 and action 7 are no longer required, which are therefore deleted, and the configurations affected by some Actions have been amended, effectively clarifying the Applicability of those actions. This revised AD also contains some editorial changes to meet the latest AD writing standards, without changes to the technical content.

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

Required as indicated, unless accomplished previously:

Modification:

- (1) Before exceeding the applicable Structural Modification Point (SMP) for each action, as defined in Table 3 of Appendix 1 of this AD, but not before the lower limit as defined in Table 2 of Appendix 1 of this AD, as applicable, modify the aeroplane in accordance with the instructions of each Airbus SB, as applicable, as specified in Appendix 1 of this AD.

Grace Period(s):

- (2) Deleted.

Additional Work:

- (3) For aeroplanes that have already been modified, before 18 November 2016 [the effective date of the original issue of this AD], in accordance with the instructions of the original issue of Airbus SB A340-53-4151, within 12 months after 18 November 2016 [the effective date of the original issue of this AD], accomplish the additional work as specified in each applicable SB at Revision 01.

Alternative Method:

- (4) Modification of an aeroplane in accordance with the instructions of Airbus SB A340-53-4237 is an acceptable alternative method to comply with the modification requirements of Action 5 (SB A340-53-4218) for that aeroplane, provided this is accomplished without exceeding the applicable compliance times.

Ref. Publications:

Airbus SB A340-53-4151 Revision 01 dated 25 July 2006, or Revision 02 dated 15 March 2016.

Airbus SB A340-53-4194 original issue dated 04 October 2012, or Revision 01 dated 16 August 2016.

Airbus SB A340-53-4218 original issue dated 14 April 2015, or Revision 01 dated 03 March 2016, or Revision 02 dated 27 October 2016.

Airbus SB A340-53-4230 original issue dated 21 July 2015, or Revision 01 dated 15 March 2016.

Airbus SB A340-53-4231 original issue dated 16 July 2015, or Revision 01 dated 16 November 2015, or Revision 02 dated 08 August 2016, or Revision 03 dated 24 October 2016.



Airbus SB A340-53-4237 original issue dated 05 February 2018.

Airbus SB A340-53-5047 original issue dated 12 October 2009, or Revision 01 dated 01 April 2015, or Revision 02 dated 02 October 2015, or Revision 03 dated 29 January 2016.

Airbus SB A340-53-5073 original issue dated 13 May 2015.

Airbus SB A340-53-5050 original issue dated 16 October 2009, or Revision 01 dated 01 April 2015, or Revision 02 dated 28 September 2015.

Airbus SB A340-53-5070 original issue dated 09 April 2015, or Revision 01 dated 24 September 2015.

Airbus SB A340-53-5071 original issue dated 15 April 2015, or Revision 01 dated 04 July 2016.

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 20 December 2018.
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](#).
4. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – Airworthiness Office – EIAL. E-mail: airworthiness.A330-A340@airbus.com.



Appendix 1 – SMP / Modifications

Notes referenced in Table 3 below:

Note 1: LR = Flight Hours (FH) optimized set for aeroplane in Long Range (LR) operations; SR = Flight Cycles (FC) optimized set for aeroplane in Short Range (SR) operations.

Note 2: Each applicable SB defines the aeroplanes (MSN) and configuration(s) for which the actions are required. The affected Weight Variant (WV) Group definitions are provided in Table 1 of this AD.

Table 1

Aeroplanes	WV Group	Weight variants
A340-200	Group 42A	000, 001 and 002
A340-300	Group 43A	000, 001, 002, 003 and 004
	Group 43B	020, 021, 023, 024, 025, 026, 028 and 029
	Group 43C	Deleted
	Group 43E	050, 051, 052, 053 and 054
A340-500	Group 45A	000, 001, 002, 003 and 004
	Group 45B	101, 102 and 103
A340-600	Group 46A	000 and 001
	Group 46B	101, 102 and 103

Note 3: For some modifications, a lower threshold, as defined in FC or FH, whichever occurs later, as specified in Table 2 of this AD, was determined to be necessary.

Table 2 - Window of Embodiment: Lower Threshold for Modification

Action No.	SB (Mod)	Applicability (Note 2)	Modification Not Before:
2	A340-53-5047	Group 45B	3 800 FC
4	A340-53-5050	Group 46A	4 300 FC

Note 4: For certain actions as specified in Table 3, SMP limits in FH have also been determined but are not shown in Table 3 because they exceed the currently applicable certified limit (DSG or ISG) of the aeroplane. These limits in FH, as defined in the listed SB, are currently not applicable and may be introduced later in a new AD for A340-500/-600, depending on the outcome of the corresponding Extended Service Goal (ESG) certification.

Note 5: Airbus SB A340-53-4194 (Action 10) is already required by EASA AD 2016-0035 for certain other aeroplanes.



An aeroplane complies with the requirements of this AD if all applicable actions from 1 to 10 defined in Table 3 of this AD are accomplished.

Table 3

Action	Description of action	Applicability (Note 2)	Applicable SB (Equivalent Airbus production Mod)	SMP SR (Note 1)	SMP LR (Note 1)
				(FC or FH, whichever occurs first) (*) = Note 4	
1	Reinforce frames in rear fuselage area	Action (Airbus SB A340-53-4231) no longer required			
2	Reinforce junction at level of FR54 of the fuselage	Group 45B	A340-53-5047	11 180 FC / 89 470 FH	
		Group 46B		10 530 FC / 72 400 FH	
3	Reinforce circumferential joint in area of FR72 between STGR5 and STGR11 LH and RH	Groups 45A and 45B	A340-53-5073	15 300 FC / 99 900 FH	
		Groups 46A and 46B		13 700 FC / 89 100 FH	
4	Reinforce orbital junction at level FR45 of the fuselage	Group 46A	A340-53-5050	14 100 FC / 92 200 FH	
5	Reinforce circumferential joint between frame FR53.6 and FR53.7 of standard TYPE 1 door area	Group 43E – Pre-Mod 40161 and Pre-SB A340-53-4237	A340-53-4218	15 400 FC / 61 900 FH	12 800 FC / 87 600 FH
6		Group 45A – Pre-Mod 47968	A340-53-5070	14 900 FC (*)	



Action	Description of action	Applicability (Note 2)	Applicable SB (Equivalent Airbus production Mod)	SMP SR (Note 1)	SMP LR (Note 1)
				(FC or FH, whichever occurs first) (*) = Note 4	
		Group 45A – Post- Mod 47968		12 800 FC / 98 000 FH	
		Group 45B		15 000 FC (*)	
7	Reinforce frame couplings in rear fuselage area	Action (Airbus SB A340-53-4230) no longer required			
8	Reinforce stringer couplings in area of FR58	Group 46B	A340-53-5071	14 700 FC (*)	
9	Improve fatigue life of circumferential joint at frame 53.3	Group 43A – Pre- Mod 40123	A340-53-4151 R01	27 900 FC	
10	Improve fatigue life of frame foot from FR48 to FR53.2 at stringer STR25 and STR26 of the centre fuselage	Group 43E	A340-53-4194 (Note 5)	13 100 FC / 52 700 FH	12 100 FC / 81 700 FH

