Airworthiness Directive

AD No.: 2018-0276R1

Issued: 11 January 2019

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 aeroplanes

Effective Date:	13 January 2019 [same as original issue]
TCDS Number(s):	EASA.A.004
Foreign AD:	Not applicable
Revision:	This AD revises EASA AD 2018-0276 dated 14 December 2018. The original issue of this AD superseded EASA AD 2016-0207 dated 19 October 2016.

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

Manufacturer(s):
Airbus, formerly Airbus Industrie

Applicability:
Airbus A330-201, A330-202, A330-203, A330-223, A330-243, A330-223F, 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).

Reason:
An analysis conducted on A330 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, reducing the 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 2016-0207 to require accomplishment of these modifications and reinforcements.

Since that AD was issued, Airbus developed new Mods for A330-223F and A330-243F aeroplanes and issued associated SBs accordingly. In addition, for certain required modifications, upper thresholds in flight hours (FH) have been defined and the Applicability of some required actions was redefined to certain aeroplane configurations.

For the reasons described above, EASA issued AD 2018-0276, retaining the requirements of EASA AD 2016-0207, which was superseded, requiring new actions for A330-200F aeroplanes, introducing references to the related Airbus SBs, and amending some compliance times (see Table 3 – Applicability of this AD).

Since EASA AD 2018-0276 was issued, prompted by operator comments, it was determined that there was need to clarify the compliance time for aeroplanes that, for **Action 9**, were modified by using a previous revision of Airbus SB A330-53-3238. Consequently, this AD is revised and introduces paragraph (6) that clarifies this specific scenario. In addition, Note 2 of this AD is corrected to clarify that the instructions of each SB are applicable for certain configurations, not limited to those MSN listed in the Effectivity of the SB.

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

Required as indicated, unless accomplished previously:

Modification(s):

(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 reaching 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.

Alternative Method(s):

(2) Modification of an aeroplane in accordance with the instructions of Airbus SB A330-53-3273 is an acceptable alternative method to comply with the modification requirements of Action 6 (SB A330-53-3226) for that aeroplane.

(3) Modification of an aeroplane in accordance with the instructions of Airbus SB A330-53-3291 is an acceptable alternative method to comply with the modification requirements of Action 7 (SB A330-53-3236) for that aeroplane.

(4) Modification of an aeroplane in accordance with the instructions of Airbus SB A330-53-3288 is an acceptable alternative method to comply with the modification requirements of Action 17 (SB A330-53-3259) for that aeroplane.

(5) Modification of an aeroplane in accordance with the instructions of Airbus SB A330-53-3289 is an acceptable alternative method to comply with the modification requirements of Action 22 (SB A330-53-3256) for that aeroplane.

(6) For an aeroplane on which modification of **Action 9** was accomplished, before the effective date of this AD, using the instructions of Airbus SB A330-53-3238 at original issue or Revision 01, it is allowed to accomplish the additional work within the special compliance times

specified in SB A330-53-3238 Revision 02 to enable compliance demonstration of **Action 9** for that aeroplane.

Ref. Publications:

Airbus SB A330-53-3144 Revision 01 dated 25 July 2006, or Revision 02 dated 20 April 2011, or Revision 03 dated 15 January 2015, or Revision 04 dated 23 November 2015.

Airbus SB A330-53-3222 Revision 01 dated 31 March 2016, or Revision 02 dated 10 April 2017.

Airbus SB A330-53-3223 original issue dated 19 January 2015, or Revision 01 dated 18 January 2017, or Revision 02 dated 10 September 2018.

Airbus SB A330-53-3224 original issue dated 16 January 2015, or Revision 01 dated 14 April 2016.

Airbus SB A330-53-3225 original issue dated 16 January 2015, or Revision 01 dated 26 February 2016, or Revision 02 dated 08 June 2016.

Airbus SB A330-53-3226 original issue dated 15 January 2015, or Revision 01 dated 03 March 2016, or Revision 02 dated 27 October 2016, or Revision 03 dated 10 September October 2018.

Airbus SB A330-53-3236 original issue dated 15 January 2015, or Revision 01 dated 24 August 2015, or Revision 02 dated 23 March 2016, or Revision 03 dated 17 January 2017.

Airbus SB A330-53-3237 Revision 01 dated 08 February 2016.

Airbus SB A330-53-3238 original issue dated 15 January 2015, or Revision 01 dated 19 October 2015, or Revision 02 dated 16 June 2017.

Airbus SB A330-53-3239 original issue dated 20 April 2015, or Revision 01 dated 04 July 2016.

Airbus SB A330-53-3240 original issue dated 10 April 2015, or Revision 01 dated 18 July 2016.

Airbus SB A330-53-3243 original issue dated 07 April 2015.

Airbus SB A330-53-3244 original issue dated 07 April 2015, or Revision 01 dated 02 August 2016.

Airbus SB A330-53-3248 original issue dated 07 April 2015, or Revision 01 dated 29 February 2016, or Revision 02 dated 27 July 2016.

Airbus SB A330-53-3250 original issue dated 01 April 2015.

Airbus SB A330-53-3251 original issue dated 13 May 2015, or Revision 01 dated 23 June 2016.

Airbus SB A330-53-3252 original issue dated 10 April 2015, or Revision 01 dated 30 June 2016.

Airbus SB A330-53-3255 original issue dated 07 April 2015, or Revision 01 dated 01 October 2015, or Revision 02 dated 31 August 2016.

Airbus SB A330-53-3256 original issue dated 13 May 2015.

Airbus SB A330-53-3257 original issue dated 21 July 2015, or Revision 01 dated 15 March 2016.

Airbus SB A330-53-3258 original issue dated 20 April 2015.

Airbus SB A330-53-3259 original issue dated 11 May 2015, or Revision 01 dated 26 February 2016, or Revision 02 dated 18 July 2016.

Airbus SB A330-53-3260 original issue dated 15 April 2015.

Airbus SB A330-53-3266 original issue dated 11 May 2015.

Airbus SB A330-53-3273 original issue dated 28 September 2016, or Revision 01 dated 09 May 2018.

Airbus SB A330-53-3288 original issue dated 31 July 2018.

Airbus SB A330-53-3289 original issue dated 21 June 2018.

Airbus SB A330-53-3291 original issue dated 26 June 2018.

Airbus SB A330-57-3122 original issue dated 05 August 2016.

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 31 October 2018 as PAD 18-145 for consultation until 28 November 2018. 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.

5. 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.

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 by configuration for which the actions are required. The affected Weight Variant (WV) Group definitions are provided in Table 1 of this AD:

Table 1 – WV Group Definitions

Aeroplanes	**WV Group**	**Weight variants**
A330-200	Group 32A	020, 021, 022, 023, 024, 025, 026 and 027
	Group 32E	050, 051, 052, 053, 054, 055, 056, 057, 058, 059, 060, 061, 062, 063, 064, 080, 081, 082 and 083
A330-200F	-	000, 001 and 002
A330-300	Group 33A	000, 001, 002, 003 and 004
	Group 33B	010, 011, 012, 013 and 014
	Group 33C	020, 024, 025, 026 and 027
	Group 33D	022
	Group 33E	030, 031, 032, 033, 034, 035, 039, 050, 051, 052, 053, 054, 055, 056, 057, 058, 059, 060, 080, 081, 082 and 083

Note 3: For some modifications, a lower threshold, as defined in flight cycles (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	A330-53-3222 R01	Groups 32A, 32E, 33A, 33C, 33D and 33E	10 000 FC
		Group 33B	12 000 FC
		A330-200F	8 900 FC and 26 600 FH
5	A330-53-3225	Group 33A	3 900 FC and 10 200 FH
8	A330-53-3237 R01	Groups 32A, 33A, 33B, 33C and 33D	3 900 FC
9	A330-53-3238 R01	Groups 32A, 33A, 33B, 33C and 33D	9 000 FC
21	A330-53-3255	A330-200F	8 000 FC
22	A330-53-3256 or A330-53-3289	A330-200F	12 000 FC

Note 4: For certain actions as specified in Table 3, SMP limits in FH have been determined but are not shown in Table 3 because they exceed the currently applicable certified limit (DSG, ISG or ESG) of the aeroplane. For the purpose of this AD, SMP limits in FH, as defined in the applicable SB, are currently not applicable, as they depend on later extension of the certified limit and associated certification by EASA.

An aeroplane complies with the requirements of this AD when all applicable actions, as 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	Improve circumferential joints at Frame (FR) 45 and 54 of the fuselage	Group 32A – Pre-Mod 49202	A330-53-3144 R01	32 500 FC / 113 000 FH	26 600 FC (*)
		Group 33A		23 700 FC / 71 300 FH	20 400 FC / 122 400 FH
		Group 33B		27 600 FC / 83 000FH	23 700 FC (*)
		Group 33C – Pre-Mod 49202		23 300 FC / 70 000 FH	20 000 FC / 120 000 FH
		Group 33D – Pre-Mod 49202		22 700 FC / 68 300 FH	19 500 FC / 117 200 FH

<table>
<tr><th rowspan="2">Action</th><th rowspan="2">Description of action</th><th rowspan="2">Applicability
(Note 2)</th><th rowspan="2">Applicable SB
(Equivalent Airbus production Mod)</th><th>SMP SR (Note 1)</th><th>SMP LR (Note 1)</th></tr>
<tr><th colspan="2">(FC or FH, whichever occurs first)
(*) = Note 4</th></tr>
<tr><td rowspan="8">2</td><td rowspan="8">Improve splicing area from FR48 to FR53-2 between Stringer (STGR) 23 and 26 Left Hand (LH)/Right Hand (RH) of the fuselage</td><td>Group 32A – Post-Mod 42409S11839 and Pre-SB A330-53-3015</td><td rowspan="8">A330-53-3222 R01</td><td>23 100 FC /
80 900 FH</td><td>20 900 FC (*)</td></tr>
<tr><td>Group 32E – Post-Mod 42409S11839 and Pre-Mod 204315 and Pre-SB A330-53-3015</td><td>24 200 FC /
79 100 FH</td><td>21 800 FC (*)</td></tr>
<tr><td>Group 33A – Post-Mod 42409S11839 and Pre-SB A330-53-3015</td><td>19 700 FC /
64 300 FH</td><td>17 700 FC /
119 900 FH</td></tr>
<tr><td>Group 33B – Post-Mod 42409S11839 and Pre-SB A330-53-3015</td><td rowspan="2">21 600 FC /
70 600 FH</td><td rowspan="2">19 400 FC (*)</td></tr>
<tr><td>Groups 33C and 33D – Post-Mod 42409S11839 an Pre-SB A330-53-3015</td></tr>
<tr><td>Groups 33E – Post-Mod 42409S11839 and Pre-Mod 204315 and Pre-SB A330-53-3015</td></tr>
<tr><td>A330-200F – Post-Mod 42409S11839 and Pre-Mod 204315 and Pre-SB A330-53-3015</td><td colspan="2">27 400 FC /
82 200 FH</td></tr>
</table>

Action	Description of action	Applicability (Note 2)	Applicable SB (Equivalent Airbus production Mod)	**SMP SR** (Note 1) (FC or FH, whichever occurs first) (*) = Note 4	**SMP LR** (Note 1) (FC or FH, whichever occurs first) (*) = Note 4
3	Reinforce couplings in area FR20 – FR25 / STGR20 RH – STRG22 RH of the forward fuselage	Group 32A Group 32E – Pre-Mod 205552 Group 33B and 33C and 33D Group 33E – Pre-Mod 205552	A330-53-3223	30 900 FC	
4	Reinforce circumferential joint at FR72 of the fuselage	Group 33A – Pre-Mod 40556	A330-53-3224	29 700 FC / 89 600 FH	25 500 FC (*)
5	Reinforce circumferential joint at FR58 of the fuselage	Group 33A – Pre-Mod 40556	A330-53-3225	16 300 FC / 49 300 FH	13 300 FC / 90 700 FH
6	Reinforce circumferential joint between FR53.6 – FR53.7 for emergency door TYPE 1 area of the centre fuselage	Group 32A – Pre-Mod 40161 and Pre-SB A330-53-3273	A330-53-3226	26 100 FC / 91 600 FH	21 000 FC (*)
		Groups 33C, 33D and 33E – Pre-Mod 40161 and Pre-SB A330-53-3273		15 600 FC / 46 800 FH	12 600 FC / 84 800 FH
		Group 33A – Pre-Mod 40161 and Pre-SB A330-53-3273		34 400 FC / 103 300 FH	27 800 FC (*)
		Group 33B – Pre-Mod 40161 and Pre-SB A330-53-3273		19 900 FC / 59 800 FH	16 100 FC / 108 400 FH
		Group 32E – Pre-Mod 40161 and Pre-SB A330-53-3273		19 900 FC / 69 900 FH	16 200 FC / 105 100 FH

Action	Description of action	Applicability (Note 2)	Applicable SB (Equivalent Airbus production Mod)	**SMP SR** (Note 1) (FC or FH, whichever occurs first) (*) = Note 4	**SMP LR** (Note 1) (FC or FH, whichever occurs first) (*) = Note 4
7	Reinforce circumferential joint between FR53.6 – FR53.7 LH/RH of option emergency door TYPE A area of the centre fuselage	Group 33A – Post-Mod 40161 and Pre-SB A330-53-3291	A330-53-3236	30 900 FC / 93 200 FH	25 400 FC (*)
8	Improve fatigue life of internal centre fuselage structure on longitudinal beams above the centre wing box	Group 33A	A330-53-3237 R01	27 300 FC	
		Group 33B			
		Groups 32A, 33C and 33D – Pre-Mod 49202S16307			
9	Update lower / lateral frame splicing with corner fitting between FR53.3 and FR54 of the centre fuselage	Group 32A	A330-53-3238 R02	38 400 FC	
		Group 33A		28 800 FC	
		Group 33B		36 200 FC	
		Groups 33C and 33D		34 700 FC	
10	Reinforce longitudinal butt joints in section 13	A330-200F	A330-53-3239	15 100 FC	
11	Reinforce circumferential joint at FR31 between STRG7 LH and STRG8 RH of forward fuselage	A330-200F	A330-53-3244	15 500 FC / 46 500 FH	

Action	Description of action	Applicability (Note 2)	Applicable SB (Equivalent Airbus production Mod)	SMP SR (Note 1) (FC or FH, whichever occurs first) (*) = Note 4	SMP LR (Note 1) (FC or FH, whichever occurs first) (*) = Note 4
12	Reinforce frame couplings in section 13, 14 and 14A of the forward fuselage	Group 33A	A330-53-3248	32 000 FC	
13	Reinforce circumferential joint/stringer coupling in area of FR37.1 of the forward fuselage	Group 33C – Pre-Mod 46636	A330-53-3251	38 200 FC / 124 000 FH	32 000 FC (*)
		Groups 33C and 33D – Post-Mod 46636		30 600 FC / 99 500 FH	27 600 FC (*)
		Group 33E – Pre-Mod 205553		32 200 FC / 104 900 FH	29 100 FC (*)
14	Reinforce circumferential joint/stringer coupling in area of FR37.1 of the forward fuselage	Groups 33C and 33D – Post-Mod 46636	A330-53-3252	30 600 FC / 99 500 FH	27 600 FC (*)
		Group 33E – Pre-Mod 205553		32 200 FC / 104 900 FC	29 100 FC (*)
15	Reinforce frame couplings in rear area of the fuselage	Group 33A and 33B – Pre-Mod 44593 and Pre-Mod 44203	A330-53-3257	33 200 FC	
16	Reinforce corner fittings in section 13 of the forward fuselage	Group 32A – Pre-Mod 45403	A330-53-3258	31 800 FC	

Action	Description of action	Applicability (Note 2)	Applicable SB (Equivalent Airbus production Mod)	**SMP SR** (Note 1) (FC or FH, whichever occurs first) (*) = Note 4	**SMP LR** (Note 1) (FC or FH, whichever occurs first) (*) = Note 4
17	Reinforce circumferential joint at FR58 (aeroplane Post-Mod 40556/D18255) of the rear fuselage	Group 32E – Pre-Mod 205554 and Pre-Mod 206790 and Pre-SB A330-53-3288	A330-53-3259	18 500 FC / 65 400 FH	14 600 FC / 95 700 FH
		Group 33A – Post-Mod 40556D18255 and Pre-SB A330-53-3288		34 800 FC / 104 800 FH	28 400 FC (*)
		Group 33B – Pre-Mod 44593 and Pre-SB A330-53-3288		33 500 FC / 101 200 FH	27 400 FC (*)
18	Reinforce frames in rear area of the fuselage	Action (Airbus SB A330-53-3263) no longer required			
19	Reinforce longitudinal butt joint between FR21 and FR26 at STR35 LH	A330-200F	A330-53-3240	32 600 FC	
20	Reinforce frame couplings in area between FR21-FR25 and STGR20-STGR23 RH only	A330-200F	A330-53-3243	27 800 FC	
21	Reinforce stringer couplings and circumferential joint in area of FR76	A330-200F	A330-53-3255	26 750 FC / 80 250 FH	
22	Reinforce stringer couplings and circumferential joint in area of FR72	A330-200F – Pre-SB A330-53-3289	A330-53-3256	22 400 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	
23	Reinforce frame couplings from FR60 to FR64 between STGR20 RH and STGR23 RH	A330-200F	A330-53-3260	26 288 FC / 78 865 FH	
24	Reinforce frames in area of FR55-FR57 between STGR22 and STGR28 RH/LH	A330-200F	A330-53-3266	20 300 FC	