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| <b>EASA</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>AIRWORTHINESS DIRECTIVE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p><b>AD No.: 2015-0088</b></p> <p><b>Date: 22 May 2015</b></p> <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p>This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with 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 [EU 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>Design Approval Holder's Name:</b></p> <p>AIRBUS</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p><b>Type/Model designation(s):</b></p> <p>A318, A319, A320 and A321 aeroplanes</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| TCDS Number:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | EASA.A.064                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Foreign AD:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Supersedure:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | This AD cancels DGAC France AD 95-203-072 dated 11 October 1995; and supersedes DGAC France AD 2001-508 dated 17 October 2001, and AD F-2004-147 (EASA approval ref. 2004-8601) dated 18 August 2004.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>ATA 27</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Flight Controls – Elevator Aileron Computers – Replacement / Software Update</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Manufacturer(s):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Airbus (formerly Airbus Industrie)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Applicability:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Airbus A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231 and A321-232 aeroplanes, all manufacturer serial numbers (MSN).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Reason:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>The latest elevator aileron computer (ELAC) standard, L97+, implements enhanced Angle of Attack (AOA) monitoring in order to better detect cases of AOA blockage, including multiple AOA blockage.</p> <p>Two ELAC L97+ versions are currently available, Part Number (P/N) 3945129109 with data loading capability, and P/N 39455128215 without the data loading capability. Three existing ADs requiring installation of earlier ELAC (software) have been identified and taken into account for cancellation by this new AD.</p> <p>For the reasons described above, this AD cancels DGAC France AD 95-203-072 (no requirements retained), and partially retains the requirements of DGAC France AD 2001-508, and AD F-2004-147 (EASA approval ref. 2004-8601), which are superseded, and requires replacement of all ELAC with ELAC L97+ standard.</p> |
| Effective Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 01 June 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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

Required as indicated, unless accomplished previously:

**Restatement of (part of) the requirements of DGAC France AD 2001-508:**

- (1) For certain A319 and A320 aeroplanes, as identified by MSN in Airbus Service Bulletin (SB) A320-27-1135, before 31 December 2002, replace all ELAC L80 units with ELAC L81 standard units in accordance with the instructions of Airbus SB A320-27-1135.

**Restatement of (part of) the requirements of DGAC France AD F-2004-147:**

- (2) For certain A321 aeroplanes, as identified by MSN in Airbus SB A320-27-1151 or SB A320-27-1152, before 31 December 2005, install ELAC L83 or L91 software, in accordance with the instructions of Airbus SB A320-27-1151 or Airbus SB A320-27-1152, as applicable.

**New requirements of this AD:**

- (3) Within the compliance time as defined in Table 1 of this AD, as applicable, replace each ELAC unit with an ELAC L97+ P/N 3945129100 unit with software P/N 3945129109, or modify ELAC units into ELAC P/N 3945129100 units with L97+ operational software P/N 3945129109 loaded, in accordance with the instructions of Airbus SB A320-27-1243.

Table 1 – ELAC L97+ Installation

| <b>Aeroplanes</b><br>(all models)           | <b>Compliance Time</b><br>(after the effective date of this AD) |
|---------------------------------------------|-----------------------------------------------------------------|
| A318 and A321<br>with UTAS AOA (see Note 1) | 5 months                                                        |
| A319 and A320<br>with UTAS AOA (see Note 1) | 10 months                                                       |
| All other aeroplanes                        | 25 months                                                       |

Note 1: Aeroplanes with UTAS (formerly Goodrich) AOA P/N 0861ED or P/N 0861ED2 installed in all 3 positions (Captain, First Officer and Standby).

- (4) Modification of an aeroplane by replacing existing ELAC units with ELAC L97+ PN 3945128215 units (see Note 2) in accordance with the instructions of Airbus SB A320-27-1244 is an acceptable method of compliance with the requirement of paragraph (3) of this AD for that aeroplane.

Note 2: The Non-Data-loadable ELACs L97+ PN 3945128215 are fully-interchangeable and mixable with Data-loadable ELAC L97+ PN 3945129100 with operational software P/N 3945129109 loaded.

- (5) An aeroplane with Airbus mod 156546 (installation of ELAC L97+ with software P/N 3945129109) embodied in production is not affected by the requirements of paragraphs (1) through (4) of this AD, provided it is determined that no ELAC having a P/N as listed in Appendix 1 of this AD has been installed on that aeroplane since its date of manufacture.
- (6) Installation of a version (P/N) of an ELAC unit approved after the effective date of this AD is equal to compliance with the requirements of paragraph (3) or (4) of this AD, provided the conditions as specified in paragraphs (6.1) and (6.2) of this AD are met.
- (6.1) The version (P/N) must be approved by EASA, or approved under Airbus Design Organisation Approval (DOA); and
- (6.2) The installation must be accomplished in accordance with aeroplane modification instructions approved by EASA, or approved under Airbus DOA.

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | <p>(7) Do not install on any aeroplane an ELAC unit having a P/N as listed in Appendix 1 of this AD, as required by paragraph (7.1) or (7.2) of this AD, as applicable, except as specified in paragraph (7.3) of this AD.</p> <p>(7.1) For an aeroplane that, on the effective date of this AD, has an ELAC unit installed having a P/N as listed in Appendix 1 of this AD: After modification of that aeroplane as required by paragraph (3) of this AD.</p> <p>(7.2) For an aeroplane that, on the effective date of this AD, does not have an ELAC unit installed, having a P/N as listed in Appendix 1 of this AD: From the effective date of this AD.</p> <p>(7.3) From the effective date of this AD, it is allowed to install on any aeroplane a data-loadable ELAC B unit (P/Ns identified in Appendix 1 of this AD), provided that, before next flight after installation, L97+ operational software P/N 3945129109 (or later software – see paragraph (6) of this AD) is uploaded.</p> |
| Ref. Publications: | <p>Airbus SB A320-27-1135 original issue dated 29 June 2001, or Revision 01 dated 31 August 2001, or Revision 02 dated 18 April 2002.</p> <p>Airbus SB A320-27-1151 original issue dated 09 March 2004, or Revision 01 dated 19 October 2004.</p> <p>Airbus SB A320-27-1152 original issue dated 04 June 2004, or Revision 01 dated 19 October 2004, or Revision 02 dated 04 April 2006.</p> <p>Airbus SB A320-27-1243 original issue dated 17 March 2015.</p> <p>Airbus SB A320-27-1244 original issue dated 05 March 2015.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>                                                                                                                                                                                                                                                                                                                                     |
| Remarks:           | <ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. This AD was posted on 10 April 2015 as PAD 15-037 for consultation until 08 May 2015. The Comment Response Document can be found at <a href="http://ad.easa.europa.eu">http://ad.easa.europa.eu</a>.</li> <li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Certification Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – EIAS; Fax +33 5 61 93 44 51; E-mail: <a href="mailto:account.airworth-eas@airbus.com">account.airworth-eas@airbus.com</a>.</li> </ol>                                                                                                                                   |

## Appendix 1 – No longer to be installed ELAC

| P/N        | Designation                  | FIN            |
|------------|------------------------------|----------------|
| 3945122202 | ELAC A320-111 Type Def.      | 2 CE 1 / 2     |
| 3945122203 | ELAC L50C                    | 2 CE 1 / 2     |
| 3945122303 | ELAC L50C                    | 2 CE 1 / 2     |
| 3945122304 | ELAC L60                     | 2 CE 1 / 2     |
| 3945122305 | ELAC L61B                    | 2 CE 1 / 2     |
| 3945122306 | ELAC L61F                    | 2 CE 1 / 2     |
| 3945122307 | ELAC L62C                    | 2 CE 1 / 2     |
| C12370AA01 | ELAC L68C                    | 2 CE 1 / 2     |
| 3945122501 | ELAC L69                     | 2 CE 1 / 2     |
| 3945122502 | ELAC L69J                    | 2 CE 1 / 2     |
| 3945122503 | ELAC L77                     | 2 CE 1 / 2     |
| 3945122504 | ELAC L78                     | 2 CE 1 / 2     |
| 3945122505 | ELAC A L80                   | 2 CE 1 / 2     |
| 3945123505 | ELAC A' L80                  | 2 CE 1 / 2     |
| 3945122506 | ELAC A L81                   | 2 CE 1 / 2     |
| 3945123506 | ELAC A' L81                  | 2 CE 1 / 2     |
| 3945128102 | ELAC B L81                   | 2 CE 1 / 2     |
| 3945122507 | ELAC A L82                   | 2 CE 1 / 2     |
| 3945123507 | ELAC A' L82                  | 2 CE 1 / 2     |
| 3945128103 | ELAC B L82                   | 2 CE 1 / 2     |
| 3945122608 | ELAC A L83                   | 2 CE 1 / 2     |
| 3945123608 | ELAC A' L83                  | 2 CE 1 / 2     |
| 3945122609 | ELAC A L84                   | 2 CE 1 / 2     |
| 3945123609 | ELAC A' L84                  | 2 CE 1 / 2     |
| 3945128204 | ELAC B L90L                  | 2 CE 1 / 2     |
| 3945128205 | ELAC B L90N                  | 2 CE 1 / 2     |
| 3945128206 | ELAC B L91                   | 2 CE 1 / 2     |
| 3945129101 | ELAC B L91 data loadable     | 2 CE 1 / 2 SW1 |
| 3945128207 | ELAC B L92 data loadable     | 2 CE 1 / 2 SW1 |
| 3945128208 | ELAC B L92L data loadable    | 2 CE 1 / 2 SW1 |
| 3945128209 | ELAC B L93                   | 2 CE 1 / 2     |
| 3945129103 | ELAC B L93 data loadable     | 2 CE 1 / 2 SW1 |
| 3945128210 | ELAC B L94                   | 2 CE 1 / 2     |
| 3945129104 | ELAC B L94 data loadable     | 2 CE 1 / 2 SW1 |
| 3945128212 | ELAC B L96                   | 2 CE 1 / 2     |
| 3945129106 | ELAC B L96 data loadable     | 2 CE 1 / 2 SW1 |
| 3945129107 | ELAC B L96 H-A data loadable | 2 CE 1 / 2 SW1 |
| 3945128214 | ELAC B L97                   | 2 CE 1 / 2     |
| 3945129108 | ELAC B L97 data loadable     | 2 CE 1 / 2 SW1 |