



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0556; Product Identifier 2018-NM-015-AD; Amendment 39-19555; AD 2019-03-03]

RIN 2120-AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Airbus SAS Model A318 series; Model A319 series; Model A320 series; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes. This AD was prompted by reports of multiple angle of attack (AoA) probe blockages. This AD requires all elevator aileron computer (ELAC) units to be upgraded with new software, or replaced with upgraded units. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Airbus SAS, Airworthiness Office – ELAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airworth-eas@airbus.com; Internet <http://www.airbus.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0556.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0556; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Sanjay Ralhan, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3223.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus SAS Model A318 series; Model A319 series; Model A320 series; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes. The NPRM published in the Federal Register on June 20, 2018 (83 FR 28555). The NPRM was prompted by reports of multiple AoA probe blockages. The NPRM proposed to require all ELAC units to be upgraded with new software, or replaced with upgraded units.

We are issuing this AD to address the blockage of AoA probes. This condition, if not corrected, could lead to undue activation of the AoA protection, reverting to manual control of the airplane, which, under specific circumstances, could result in reduced control of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2018-0007R1, dated January 19, 2018 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus SAS Model A318 series; Model A319 series; Model A320 series; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes. The MCAI states:

Occurrences were reported on multiple Angle of Attack (AoA) probes blockages. Investigation results indicated the need for improved AoA monitoring in order to detect cases of AoA probe blockage.

This condition, if not corrected, could lead to undue activation of the AoA protection, reverting to manual control of the aeroplane, which, under specific

circumstances, could result in reduced control of the aeroplane.

To address this potential unsafe condition, Airbus developed several Elevator Aileron Computer (ELAC) standards, i.e. ELAC units loaded with a specific software Part Number (P/N), and EASA issued AD 2017-0008, retaining part of the requirements of EASA AD 2015-0088R1 [which corresponds to FAA AD 2016-17-03, Amendment 39-18616 (81 FR 55358, August 19, 2016) (“AD 2016-17-03”)], which was superseded, and requiring an upgrade of all ELAC units with ELAC L99 standard, which introduces improvements in the AoA probe monitoring for Current Engine Option (CEO) aeroplanes, and also incorporates flight control aspects for New Engine Option (NEO) aeroplanes.

Since that [EASA] AD was issued, it was determined that clarification is necessary for the Parts Installation requirements, and some typographical (P/N) errors were detected. This [EASA] AD is revised accordingly.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0556.

Comments

We gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA’s response to each comment. United Airlines had no objection to the NPRM.

Request to Reduce the Compliance Time for Model A320 Airplanes

Air Line Pilots Association, International (ALPA), requested that the compliance time for the Model A320 series airplanes be reduced from 36 to 24 months, the same as for the other models. ALPA contended that 36 months is not an appropriate compliance time for the A320 because the severity of risk for the A320 is not less than for the other models.

We disagree with the request to reduce the compliance time for Model A320 series airplanes. We concur with the compliance time established by EASA, the state of design authority, which is based on the overall risk to the fleet, including the severity of the failure and the likelihood of the failure's occurrence. In conjunction with the manufacturer, we have determined that the compliance time for each airplane model will accommodate the time necessary to ensure the availability of required parts and maintain an adequate level of safety. However, if additional data are presented that would justify a shorter compliance time, we may consider further rulemaking on this issue. We have not changed this AD regarding this request.

Request to Modify Paragraphs (h)(3) and (j)(2)(iii) of the Proposed AD

Airbus SAS requested that we modify paragraphs (h)(3) and (j)(2)(iii) of the proposed AD to read: "The data-loadable ELAC unit is checked by two different means: by the line replaceable unit (LRU) identification and either the label call up or the Alpha Call Up ELA 1 and ELA 2 (if available)." We infer that this change was requested to clarify the meaning of those paragraphs.

We agree to clarify the specified paragraphs. We have changed paragraphs (h)(3) and (j)(2)(iii) of this AD accordingly.

Request to Clarify Paragraph (h)(3) of the Proposed AD

Delta Air Lines (DAL) asked whether paragraph (h)(3) of the proposed AD, as written, actually requires two separate methods of identification for the same unit. DAL explained that not all ELAC units are labeled with the software load, that the labels were added later by Thales, and that there is no guarantee they will be present on the LRU.

We agree to clarify that there are two methods of checking the data-loadable ELAC unit. As stated previously, we have revised paragraph (h)(3) of this AD and paragraph (j)(2)(iii) of this AD to make this more clear.

Request to Clarify Paragraphs (h) and (j)(2) of the Proposed AD

Alaska Airlines asked whether the four conditions given in paragraphs (h)(1) through (h)(4) and (j)(2)(i) through (j)(2)(iv) of the proposed AD apply only to the “modification instructions approved by an EASA Design Organization Approval (DOA) (other than Airbus SAS’s EASA DOA),” or also to the modification instructions approved by other authorities, as mentioned earlier in the paragraph.

We agree to clarify this aspect of the specified paragraphs. We have revised the language regarding the applicability of the four conditions given in paragraphs (h)(1) through (h)(4) and (j)(2)(i) through (j)(2)(iv) of this AD to clarify that these paragraphs are applicable only to the modification instructions that are part of an FAA-accepted maintenance or inspection program, as applicable. We have revised the language in paragraphs (h) and (j)(2) of this AD accordingly.

Request to Address Onboard Data Loading of ELAC Units

Alaska Airlines requested that we modify paragraph (j) of the proposed AD to address onboard loading of ELAC units with later software. Alaska Airlines also requested that we revise paragraphs (j)(2) and (j)(4) of the proposed AD to specify that those paragraphs are not applicable to onboard data loading, since they refer to removing and re-installing the data-loadable ELAC units. We infer that Alaska Airlines wants us to revise paragraphs (j)(2)(ii) and (j)(2)(iv) of the proposed AD because those paragraphs refer to the removal and re-installation of the data-loadable ELAC units.

We agree. We have modified paragraph (j) of this AD to include onboard loading of ELAC software and revised paragraphs (j)(2)(ii) and (j)(2)(iv) of this AD as requested.

Request to Remove DOA Signature Requirement

DAL requested that the DOA signature requirement be removed from the proposed AD and that the previously established statement “The technical content of this document is approved under the authority of Design Organization Approval No. EASA 21J.031” used by the DOA in Airbus SAS service bulletins be deemed sufficient. DAL observed that if this document requires a signature, it is deviating from the previously established standard and will generate unnecessary alternative method of compliance (AMOC) requests from the administrator and/or unnecessary revisions of service bulletins by the manufacturer. DAL also stated that requiring a signature does not enhance or affect the safety of the aircraft.

We disagree with DAL’s request to remove the DOA signature requirement. The FAA specifies the DOA signature requirement in the “contacting the manufacturer” paragraph (such as paragraph (m)(2) of this AD) because in the past some U.S. operators misinterpreted that any document, including an email message, received from a manufacturer or the manufacturer’s customer support organization was considered DOA approved. Under the EASA DOA system, the only documents officially recognized as EASA-approved are those accompanied by the DOA-authorized signature. For the purpose of compliance with the “contacting the manufacturer” paragraph in FAA ADs, the FAA can only recognize the documents approved by the FAA, or EASA, or those authorized to make an EASA approval under the DOA system.

We also disagree with the request to use the statement “The technical content of this document is approved under the authority of Design Organization Approval No. EASA 21J.031.” This statement only recognizes that the service bulletin was originally approved under the authority of the DOA system as approved by EASA, and does not provide any process for an operator to receive other approved instructions from either EASA or the authorized DOA as a means of compliance to the FAA AD. The current “contacting the manufacturer” paragraph and the requirement for the DOA-authorized signature actually results in fewer AMOCs because of the FAA’s recognition of both EASA and specific EASA DOA approvals under the “contacting the manufacturer” paragraph in this and other FAA ADs. We have not changed this AD in this regard.

Request to Clarify Paragraph (h)(1) of the Proposed AD

DAL questioned the purpose of the condition stated in paragraph (h)(1) of the proposed AD, i.e., that there should be no warning or maintenance message before the ELAC unit is removed. DAL stated that if an electronic centralized aircraft monitor (ECAM) has a maintenance message or ECAM warning that is not airworthy, as a standard procedure the aircraft will be repaired and put back in an airworthy condition prior to return to service.

We agree that clarification is necessary. The intent of the condition stated in paragraph (h)(1) of this AD is to ensure that all pre-existing conditions have been fixed before uploading new software to an ELAC unit or installing a unit with updated software. We have not changed this AD regarding this question.

Request to Clarify Whether Certain Steps are Required for Compliance

DAL questioned whether all of the steps in Airbus SAS Aircraft Maintenance Manual (AMM) Tasks 27-93-34-000-001-A and 27-93-34-400-001-A, such as accessing the access doors using an adjustable platform, are required for compliance.

We agree to clarify. The conditions in paragraphs (h)(2), (h)(4), (j)(2)(ii), and (j)(2)(iv) of this AD specified that actions must be done as specified in the AMM tasks. We did not intend the accessing and closing instructions of the AMM tasks to be required for compliance. We have revised paragraphs (h)(2), (h)(4), (j)(2)(ii), and (j)(2)(iv) of this AD accordingly.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related Service Information under 1 CFR part 51

Airbus has issued Service Bulletin A320-27-1263, dated April 28, 2017; and Service Bulletin A320-27-1264, dated April 28, 2017. The service information describes

the software upgrade or replacement of ELAC units. These documents are distinct because they apply to different airplane configurations.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 1,250 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Modification	Up to 3 work-hours X \$85 per hour = \$255	Up to \$7,970	Up to \$8,225	Up to \$10,281,250

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products

identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2019-03-03 Airbus SAS: Amendment 39-19555; Docket No. FAA-2018-0556; Product Identifier 2018-NM-015-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD affects AD 2016-17-03, Amendment 39-18616 (81 FR 55358, August 19, 2016) (“AD 2016-17-03”).

(c) Applicability

This AD applies to the Airbus SAS airplanes identified in paragraphs (c)(1) through (c)(4) of this AD, certificated in any category, all manufacturer serial numbers.

(1) Model A318-111, -112, -121, and -122 airplanes.

(2) Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes.

(3) Model A320-211, -212, -214, -216, -231, -232, -233, -251N, and -271N airplanes.

(4) Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight Controls.

(e) Reason

This AD was prompted by reports of multiple angle of attack (AoA) probe blockages. We are issuing this AD to address the blockage of AoA probes. This condition, if not corrected, could lead to undue activation of the AoA protection, reverting to manual control of the airplane, which, under specific circumstances, could result in reduced control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Definition of Affected Elevator Aileron Computer (ELAC) Units

For the purposes of this AD, ELAC units having a part number (P/N) listed in table 1 to paragraphs (g), (h), and (i) of this AD are hereafter referred to as “affected ELAC units” in this AD.

Table 1 to paragraphs (g), (h), and (i) of this AD – Affected ELAC Unit Part Numbers

ELAC Unit 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

ELAC Unit P/N	Designation	FIN
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
3945128101	ELAC B 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	2 CE 1 / 2
3945128208	ELAC B L92L	2 CE 1 / 2
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
3945128215	ELAC B L97+	2 CE 1 / 2
3945129109	ELAC B L97+ data loadable	2 CE 1 / 2 SW1
3945128216	ELAC B L98	2 CE 1 / 2
3945129110	ELAC B L98 data loadable	2 CE 1 / 2 SW1

(h) Required Actions

For airplanes with ELAC unit part numbers listed in table 1 to paragraphs (g), (h), and (i) of this AD: Within the applicable compliance times defined in figure 1 to paragraph (h) of this AD, upgrade each ELAC unit by uploading L99 software part number (P/N) 3945129111 or by replacing the existing ELAC unit with an ELAC L99 P/N 3945128217 unit in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-27-1263, dated April 28, 2017, or Airbus Service Bulletin A320-27-1264, dated April 28, 2017, as applicable; or in accordance with modification instructions approved by the Manager, International Section, Transport Standards Branch, FAA, or by the European Aviation Safety Agency (EASA), or by Airbus SAS's EASA Design Organization Approval (DOA); or in accordance with modification instructions that are part of an FAA-accepted maintenance or inspection program, as applicable, provided the conditions specified in paragraphs (h)(1) through (h)(4) of this AD are met. If approved by the DOA, the approval must include the DOA-authorized signature.

(1) Absence of electronic centralized aircraft monitor (ECAM) warning or maintenance message related to ELAC, before the data-loadable ELAC unit is removed and software is loaded.

(2) The data-loadable ELAC unit is removed as specified in Airbus SAS Aircraft Maintenance Manual (AMM) Task 27-93-34-000-001-A. The access and closing instructions identified in AMM Task 27-93-34-000-001-A are not required by this AD. Operators may perform those actions in accordance with instructions that are part of an FAA-accepted maintenance or inspection program, as applicable.

(3) The data-loadable ELAC unit is checked by two different means: by the line replaceable unit (LRU) identification and either the label call-up or the Alpha Call-up ELA 1 and ELA 2 (if available).

(4) After the software is loaded, the data-loadable ELAC unit is re-installed as specified in Airbus SAS AMM Task 27-93-34-400-001-A. The access and closing instructions identified in AMM Task 27-93-34-400-001-A are not required by this AD. Operators may perform those actions in accordance with instructions that are part of an FAA-accepted maintenance or inspection program, as applicable.

Note 1 to paragraph (h) of this AD: Non-data-loadable ELAC L99 P/N 3945128217 units are fully interchangeable and mixable with data-loadable ELAC L99 P/N 3945129100 units with L99 software P/N 3945129111 loaded.

Figure 1 to paragraph (h) of this AD – Compliance Times

Airplanes (models)	Compliance Time (after the effective date of this AD)
A318, A319, and A321 series airplanes	Within 24 months
A320 series airplanes	Within 36 months

(i) Parts Installation Prohibition

(1) For airplanes with ELAC units listed in table 1 to paragraphs (g), (h), and (i) of this AD: After modification of an airplane as required by paragraph (h) of this AD, do not install any affected ELAC unit on that airplane.

(2) For airplanes with ELAC units not listed in table 1 to paragraphs (g), (h), and (i) of this AD: From the effective date of this AD, do not install any affected ELAC unit on that airplane.

(j) Installation or Onboard Loading of Later Software Versions

Installation or onboard loading of an ELAC unit with a software standard above L99 is equal to compliance with the requirements of paragraph (h) of this AD, provided the conditions specified in paragraphs (j)(1) and (j)(2) of this AD are met.

(1) The ELAC unit part number is approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus SAS's EASA DOA.

(2) The installation is accomplished in accordance with modification instructions approved by the Manager, International Section, Transport Standards Branch, FAA, or by EASA, or by Airbus SAS's EASA DOA; or in accordance with modification instructions that are part of an FAA-accepted maintenance or inspection program, as applicable, provided the conditions in paragraphs (j)(2)(i) through (j)(2)(iv) of this AD are met.

(i) Absence of ECAM warning or maintenance message related to ELAC, before the data-loadable ELAC unit is removed and software is loaded.

(ii) The data-loadable ELAC unit is removed as specified in Airbus SAS AMM Task 27-93-34-000-001-A. This does not apply to the onboard loading of ELAC units. The access and closing instructions identified in AMM Task 27-93-34-000-001-A are not required by this AD. Operators may perform those actions in accordance with instructions that are part of an FAA-accepted maintenance or inspection program, as applicable.

(iii) The data-loadable ELAC unit is checked by two different means: by the LRU identification and either the label call-up or the Alpha Call-up ELA 1 and ELA 2 (if available).

(iv) After the software is loaded, the data-loadable ELAC unit is re-installed as specified in Airbus SAS AMM Task 27-93-34-400-001-A. This does not apply to the onboard loading of ELAC units. The access and closing instructions identified in AMM Task 27-93-34-400-001-A are not required by this AD. Operators may perform those actions in accordance with instructions that are part of an FAA-accepted maintenance or inspection program, as applicable.

(k) Airplanes not Affected by the Requirements of Paragraph (h) of this AD

(1) An airplane on which any modification (mod) specified in paragraphs (k)(1)(i) and (k)(1)(ii) of this AD was embodied in production is not affected by the requirements of paragraph (h) of this AD, provided it is determined that no affected ELAC unit is installed as of the effective date of this AD.

(i) Airbus SAS mod 161843 (installation of data-loadable ELAC P/N 3945129100 unit with L99 software P/N 3945129111) or mod 159979 (installation of non-data-loadable ELAC L99 P/N 3945128217 unit).

(ii) Airbus SAS mod 160577 (installation of data-loadable ELAC P/N 3945129100 unit with L101 software P/N 3945129112) or mod 162042 (installation of non-data-loadable ELAC L101 P/N 3945128218 unit).

(2) An airplane that has been modified as specified in the service information identified in paragraph (k)(2)(i), (k)(2)(ii), or (k)(2)(iii) of this AD is not affected by the requirements of paragraph (h) of this AD, provided it is determined that no affected ELAC unit is installed as of the effective date of this AD.

(i) Airbus Service Bulletin A320-27-1267, dated September 27, 2017 (installation of non-data-loadable ELAC L101 P/N 3945128218 unit).

(ii) Airbus Service Bulletin A320-27-1268, dated September 27, 2017
(installation of data-loadable ELAC P/N 3945129100 unit with L101 software P/N 3945129112 for A320 NEO).

(iii) Airbus Service Bulletin A320-27-1269, dated September 27, 2017
(installation of data-loadable ELAC P/N 3945129100 unit with L101 software P/N 3945129112).

(l) Terminating Action for AD 2016-17-03

Accomplishing the actions required by paragraph (h) of this AD or complying with the provisions specified in paragraph (k) of this AD terminates all requirements of AD 2016-17-03.

(m) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Section, Transport Standards Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Section, send it to the attention of the person identified in paragraph (n)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus SAS's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC)*: If any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(n) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2018-0007R1, dated January 19, 2018, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0556.

(2) For more information about this AD, contact Sanjay Ralhan, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3223.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (o)(3) and (o)(4) of this AD.

(o) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Airbus Service Bulletin A320-27-1263, dated April 28, 2017.

(ii) Airbus Service Bulletin A320-27-1264, dated April 28, 2017.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office – EIAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airworth-eas@airbus.com; Internet <http://www.airbus.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

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