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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2015-0251; Directorate Identifier 2014-NM-200-AD; Amendment 39-18330; AD 2015-23-13]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Airbus Model A318, A319, A320, and A321 series airplanes. This AD was prompted by a determination that, in specific flight conditions, the allowable load limits on the vertical tail plane could be reached and possibly exceeded. Exceeding allowable load could result in detachment of the vertical tail plane. This AD requires modification of the pin programming flight warning computer (FWC) to activate the stop rudder input warning (SRIW) logic; and an inspection to determine the part numbers of the FWC and the flight augmentation computer (FAC), and replacement of the FWC and FAC if necessary. We are issuing this AD to prevent detachment of the vertical tail plane and consequent loss of control of the airplane.

**DATES:** This AD becomes effective December 29, 2015.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 29, 2015.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2015-0251>; or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Airbus, Airworthiness Office–EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0251.

**FOR FURTHER INFORMATION CONTACT:** Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

## **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 Model A318, A319, A320, and A321 series airplanes. The NPRM published in the Federal Register on March 5, 2015 (80 FR 11960). The NPRM was prompted by a determination that, in specific flight conditions, the allowable load limits on the vertical tail plane could be reached and possibly exceeded. Exceeding allowable load could result in detachment of the vertical tail plane. The NPRM proposed to require modification of the pin programming of the FWC to activate the SRIW logic; and an inspection to determine the part numbers of the FWC and the FAC, and replacement of the FWC and FAC if necessary. We are issuing this AD to prevent detachment of the vertical tail plane and consequent loss of 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 Airworthiness Directive 2014-0217R1, dated February 26, 2015 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition. The MCAI states:

During design reviews that were conducted following safety recommendations related to in-service incidents and one accident on another aircraft type, it has been determined that, in specific flight conditions, the allowable load limits on the vertical tail plane could be reached and possibly exceeded.

This condition, if not corrected, could lead, in the worst case, to detachment of the vertical tail plane in flight and consequent loss of the aeroplane.

To prevent such a possibility, Airbus has developed modifications within the flight augmentation computer (FAC) to reduce the vertical tail plane stress and to activate a conditional aural warning within the flight warning computer (FWC) to further protect against pilot induced rudder doublets.

Consequently, EASA issued AD 2014-0217 ([ad.easa.europa.eu/blob/easa\\_ad\\_2014\\_0217.pdf/AD\\_2014-0217\\_1](http://ad.easa.europa.eu/blob/easa_ad_2014_0217.pdf/AD_2014-0217_1)) to require installation and activation of the stop rudder input warning (SRIW) logic. In addition, that [EASA] AD required, prior to or concurrent with modification of an aeroplane with the activation of the SRIW, upgrades of the FAC and FWC, to introduce the SRIW logic and SRIW aural capability, respectively. After modification, the [EASA] AD prohibited installation of certain Part Number (P/N) FWC and FAC.

Since that [EASA] AD was issued, an additional previously-published Airbus Service Bulletin (SB) was identified, and a new SB was published, for the concurrent requirement to replace the FAC with a unit having a P/N as listed in Table 3 of Appendix 1 of the AD.

For the reasons described above, this [EASA] AD is revised to amend paragraph (2), adding references to additional Airbus SBs.

In addition, this AD requires, prior to or concurrent with modification of an airplane with the activation of the SRIW, upgrades of the FAC and FWC to introduce the SRIW logic and SRIW aural capability, respectively. After modification, this AD prohibits installation of FWCs and FACs having certain part numbers. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2015-0251-0003>.

## **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (80 FR 11960, March 5, 2015) and the FAA's response to each comment.

### **Request To Refer to Revised Service Information**

Airbus requested that we refer to revised service information.

We agree with the Airbus request to refer to revised service information. No additional work is required by the revised service information. We have revised paragraph (g) of this AD to refer to Airbus Service Bulletin A320-22-1480, Revision 02, dated March 30, 2015. We have added new paragraph (m)(1) of this AD to provide credit for the actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-22-1480, dated July 9, 2014; or Airbus Service Bulletin A320-22-1480, Revision 01, dated February 6, 2015.

We have revised paragraph (i) of this AD to refer in part to the following service information.

- Airbus Service Bulletin A320-22-1427, Revision 05, including Appendix 01, dated November 24, 2014 (FAC 622 hard B).
- Airbus Service Bulletin A320-22-1447, Revision 03, dated April 21, 2015 (FAC CAA02 hard C).
- Airbus Service Bulletin A320-22-1454, dated February 12, 2014 (FAC CAA02).
- Airbus Service Bulletin A320-22-1461, Revision 07, including Appendix 01, dated March 23, 2015 (FAC B623 hard B).
- Airbus Service Bulletin A320-22-1502, dated November 14, 2014 (FAC CAA02).

We have redesignated paragraph (m) of the proposed AD (80 FR 11960, March 5, 2015) as new paragraph (m)(2) of this AD to provide credit for the actions required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using the following additional service information.

- Airbus Service Bulletin A320-22-1427, Revision 04, dated February 11, 2014.
- Airbus Service Bulletin A320-22-1447, Revision 01, dated September 18, 2014.
- Airbus Service Bulletin A320-22-1447, Revision 02, dated December 2, 2014.
- Airbus Service Bulletin A320-22-1461, Revision 04, dated September 15, 2014.
- Airbus Service Bulletin A320-22-1461, Revision 05, dated November 13, 2014.
- Airbus Service Bulletin A320-22-1461, Revision 06, dated January 21, 2015.

### **Request To Clarify Approved Parts**

United Airlines (UAL) requested that we split paragraph (h)(3)(iv) of the proposed AD (80 FR 11960, March 5, 2015) into two paragraphs to clarify the approved parts. UAL stated that paragraphs (h)(3)(i), (h)(3)(ii), and (h)(3)(iii) of the proposed AD clearly denote three of the four possible standards of FAC, but paragraph (h)(3)(iv) of the proposed AD leads one to believe that a FAC CAA02 hard C is required regardless of the airplane configuration.

We agree with UAL's request to clarify the FWCs and FACs having the part numbers that are compatible with SRIW activation required by paragraph (g) of this AD. We have revised paragraph

(h)(3)(iv) of the AD to state that for all airplanes configured with an FAC standard CAA01, an FAC having soft P/N G2856AAA02 installed on hard P/N C13206AA00 (CAA02 hard C) are compatible with SRIW activation required by paragraph (g) of this AD. We have added new paragraph (h)(3)(v) of this AD to state that for all airplane configurations, an FWC having P/N 350E053021212 (H2-F7) are compatible with SRIW activation required by paragraph (g) of this AD.

### **Request for Additional Details and Clarification Regarding SRIW Changes**

The National Transportation Safety Board (NTSB) stated that there are differences between the Airbus Model A300/A310 series airplane SRIW system and the Airbus Model A320 series airplane SRIW system. The NTSB explained that the Model A300/A310 series airplane SRIW contains a red warning light on the glareshield, which lights when the SRIW is activated; however, the NPRM (80 FR 11960, March 5, 2015) did not mention the warning light as part of the Model A320 series airplane SRIW. The NTSB also stated that details associated with the modifications of the FAC and FWC are not stated in the NPRM (80 FR 11960, March 5, 2015). The NTSB stated that without details regarding the changes associated with the Model A320 series airplane SRIW it cannot fully assess the FAA response for the Model A320 series airplanes to NTSB safety recommendations A-04-56 ([http://www.nts.gov/safety/safety-recs/recletters/A04\\_56\\_62.pdf](http://www.nts.gov/safety/safety-recs/recletters/A04_56_62.pdf)) and A-04-57 ([http://www.nts.gov/safety/safety-recs/recletters/A04\\_56\\_62.pdf](http://www.nts.gov/safety/safety-recs/recletters/A04_56_62.pdf)). The NTSB also wanted the FAA to clarify whether the Model A320 series airplane SRIW has more comprehensive protections compared with the Model A300 series airplane SRIW.

We agree with the NTSB that there are differences between the Airbus Model A300/A310 series airplane and Model A318/A319/A320/A321 series airplane SRIW systems, such as, the latter does not include a light on the glareshield in front of each pilot; instead it includes a red master caution warning in addition to the aural synthetic voice warning to prevent pilots from making any further reversals. In addition, the Model Airbus A318/A319/A320/A321 series airplane SRIW modification includes a rudder travel limiter unit (RTL) modification in the FAC that minimizes the available deflections for all the possible combinations of altitude and speed. This will ensure that after one full rudder pedal reversal, the vertical tail plane (VTP) loads remain within the safe limits. After reviewing the design, analyses, and simulator demonstrations, the FAA has concluded that these warnings will prevent the flightcrew from continuing the inappropriate rudder inputs prior to exceeding the ultimate design loads that could result in failure of the vertical tail plane. We have determined that details associated with our disposition to NTSB safety recommendations A-04-56 and A-04-57 are outside the context of this AD. We will provide those details directly to the NTSB in our response to the safety recommendations. We have not changed this final rule in this regard.

### **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD 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 (80 FR 11960, March 5, 2015) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (80 FR 11960, March 5, 2015).

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

## **Related Service Information Under 1 CFR Part 51**

Airbus has issued Service Bulletin A320-22-1480, Revision 02, dated March 30, 2015. This service information describes procedures for modifying the pin programming to activate the SRIW logic.

Airbus has also issued the following service information. The service information describes procedures for replacing FWCs and FACs.

- Airbus Service Bulletin A320-22-1375, dated January 15, 2014.
- Airbus Service Bulletin A320-22-1427, Revision 05, dated November 24, 2014.
- Airbus Service Bulletin A320-22-1447, Revision 03, dated April 21, 2015.
- Airbus Service Bulletin A320-22-1454, dated February 12, 2014.
- Airbus Service Bulletin A320-22-1461, Revision 07, dated March 23, 2015.
- Airbus Service Bulletin A320-22-1502, dated November 14, 2014.
- Airbus Service Bulletin A320-31-1414, Revision 03, dated September 15, 2014.

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 of this AD.

## **Costs of Compliance**

We estimate that this AD affects 953 airplanes of U.S. registry.

We also estimate that it will take about 3 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$243,015, or \$255 per product.

In addition, we estimate that any necessary follow-on actions will take about 6 work-hours (3 work-hours for an FWC and 3 work-hours for an FAC), for a cost of up to \$510 per product. We have received no definitive data that will enable us to provide part cost estimates for the on-condition actions specified in this AD. We have no way of determining the number of aircraft that might need these actions.

## **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.

## **Regulatory Findings**

We determined that 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.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2015-0251>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section.

### **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):



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**2015-23-13 Airbus:** Amendment 39-18330. Docket No. FAA-2015-0251; Directorate Identifier 2014-NM-200-AD.

**(a) Effective Date**

This AD becomes effective December 29, 2015.

**(b) Affected ADs**

None.

**(c) Applicability**

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

- (1) Airbus Model A318-111, -112, -121, and -122 airplanes.
- (2) Airbus Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes.
- (3) Airbus Model A320-211, -212, -214, -231, -232, and -233 airplanes.
- (4) Airbus Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 22, Auto Flight; 31, Instruments.

**(e) Reason**

This AD was prompted by a determination that, in specific flight conditions, the allowable load limits on the vertical tail plane could be reached and possibly exceeded. Exceeding allowable load could result in detachment of the vertical tail plane. We are issuing this AD to prevent detachment of the vertical tail plane and consequent loss of control of the airplane.

**(f) Compliance**

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

**(g) Pin Programming Modification**

Within 48 months after the effective date of this AD, modify the pin programming to activate the stop rudder input warning (SRIW) logic, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-22-1480, Revision 02, dated March 30, 2015.

## **(h) Inspection To Determine Part Numbers (P/Ns), Flight Warning Computer (FWC) and Flight Augmentation Computer (FAC) Replacement**

Prior to or concurrently with the actions required by paragraph (g) of this AD: Inspect the part numbers of the FWC and the FAC installed on the airplane. If any FWC or FAC having a part number identified in paragraph (h)(1) or (h)(2) of this AD, as applicable, is installed on an airplane, prior to or concurrently with the actions required by paragraph (g) of this AD, replace all affected FWCs and FACs with a unit having a part number identified in paragraph (h)(3) of this AD, in accordance with the Accomplishment Instructions of the applicable Airbus service information specified in paragraph (i) of this AD.

(1) Paragraphs (h)(1)(i) through (h)(1)(xvii) of this AD identify FWCs having part numbers that are non-compatible with the SRIW activation required by paragraph (g) of this AD.

- (i) 350E017238484 (H1D1).
- (ii) 350E053020303 (H2E3).
- (iii) 350E016187171 (C5).
- (iv) 350E053020404 (H2E4).
- (v) 350E017248685 (H1D2).
- (vi) 350E053020606 (H2F2).
- (vii) 350E017251414 (H1E1).
- (viii) 350E053020707 (H2F3).
- (ix) 350E017271616 (H1E2).
- (x) 350E053021010 (H2F3P).
- (xi) 350E018291818 (H1E3CJ).
- (xii) 350E053020808 (H2F4).
- (xiii) 350E018301919 (H1E3P).
- (xiv) 350E053020909 (H2-F5).
- (xv) 350E018312020 (H1E3Q).
- (xvi) 350E053021111 (H2-F6).
- (xvii) 350E053020202 (H2E2).

(2) Paragraphs (h)(2)(i) through (h)(2)(xxxiv) of this AD identify FACs having part numbers that are non-compatible with the SRIW activation required by paragraph (g) of this AD.

- (i) B397AAM0202.
- (ii) B397BAM0101.
- (iii) B397BAM0512.
- (iv) B397AAM0301.
- (v) B397BAM0202.
- (vi) B397BAM0513.
- (vii) B397AAM0302.
- (viii) B397BAM0203.
- (ix) B397BAM0514.
- (x) B397AAM0303.
- (xi) B397BAM0305.
- (xii) B397BAM0515.
- (xiii) B397AAM0404.
- (xiv) B397BAM0406.
- (xv) B397BAM0616.
- (xvi) B397AAM0405.
- (xvii) B397BAM0407.
- (xviii) B397BAM0617.
- (xix) B397AAM0506.
- (xx) B397BAM0507.
- (xxi) B397BAM0618.



- (xxii) B397AAM0507.
- (xxiii) B397BAM0508.
- (xxiv) B397BAM0619.
- (xxv) B397AAM0508.
- (xxvi) B397BAM0509.
- (xxvii) B397BAM0620.
- (xxviii) B397AAM0509.
- (xxix) B397BAM0510.
- (xxx) B397CAM0101.
- (xxxi) B397AAM0510.
- (xxxii) B397BAM0511.
- (xxxiii) B397CAM0102.
- (xxxiv) Soft P/N G2856AAA01 installed on hard P/N C13206AA00.

(3) Paragraphs (h)(3)(i) through (h)(3)(v) of this AD identify the FWCs and FACs having the part numbers that are compatible with SRIW activation required by paragraph (g) of this AD.

- (i) For airplane configurations with no sharklet, an FAC having P/N B397BAM0621 (621 hard B).
- (ii) For airplanes configured with sharklet A320 and A319, an FAC having P/N B397BAM0622 (622 hard B).
- (iii) For airplanes configured with sharklet A321, an FAC having P/N B397BAM0623 (623 hard B).
- (iv) For all airplanes configured with an FAC standard CAA01, an FAC having soft P/N G2856AAA02 installed on hard P/N C13206AA00 (CAA02 hard C).
- (v) For all airplane configurations, an FWC having P/N 350E053021212 (H2-F7).

**(i) Service Information for Actions Required by Paragraph (h) of This AD**

Do the actions required by paragraph (h) of this AD in accordance with the Accomplishment Instructions of the applicable Airbus service information specified in paragraphs (i)(1) through (i)(7) of this AD.

- (1) Airbus Service Bulletin A320-22-1375, dated January 15, 2014 (FAC 621 hard B).
- (2) Airbus Service Bulletin A320-22-1427, Revision 05, including Appendix 01, dated November 24, 2014 (FAC 622 hard B).
- (3) Airbus Service Bulletin A320-22-1447, Revision 03, dated April 21, 2015 (FAC CAA02 hard C).
- (4) Airbus Service Bulletin A320-22-1454, dated February 12, 2014 (FAC CAA02).
- (5) Airbus Service Bulletin A320-22-1461, Revision 07, including Appendix 01, dated March 23, 2015 (FAC 623 hard B).
- (6) Airbus Service Bulletin A320-22-1502, dated November 14, 2014 (FAC CAA02).
- (7) Airbus Service Bulletin A320-31-1414, Revision 03, dated September 15, 2014 (FWC H-F7).

**(j) Exclusion From Actions Required by Paragraphs (g) and (h) of This AD**

An airplane on which Airbus Modification 154473 has been embodied in production is excluded from the requirements of paragraphs (g) and (h) of this AD, provided that within 30 days after the effective date of this AD, an inspection of the part numbers of the FWC and the FAC installed on the airplane is done to determine that no FWC having a part number listed in paragraph (h)(1) of this AD, and no FAC having a part number listed in paragraph (h)(2) of this AD, has been installed on that airplane since date of manufacture. A review of airplane maintenance records is acceptable in lieu of this inspection if the part numbers of the FWC and FAC can be conclusively determined from that review. If any FWC or FAC having a part number identified in paragraph (h)(1) or (h)(2) of this AD,

as applicable, is installed on a post-Airbus Modification 154473 airplane: Within 30 days after the effective date of this AD, do the replacement required by paragraph (h) of this AD.

#### **(k) Parts Installation Prohibitions**

After modification of an airplane as required by paragraphs (g), (h), and (j) of this AD: Do not install on that airplane any FWC having a part number listed in paragraph (h)(1) of this AD or any FAC having a part number listed in paragraph (h)(2) of this AD.

#### **(l) Later Approved Parts**

Installation of a version (part number) of the FWC or FAC approved after the effective date of this AD is an approved method of compliance with the requirements of paragraph (h) or (j) of this AD, provided the requirements specified in paragraphs (l)(1) and (l)(2) of this AD are met.

(1) The version (part number) must be approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA).

(2) The installation must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or Airbus's EASA DOA.

#### **(m) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-22-1480, dated July 9, 2014; or Airbus Service Bulletin A320-22-1480, Revision 01, dated February 6, 2015. This service information is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using the applicable Airbus service information identified in paragraphs (m)(2)(i) through (m)(2)(xviii) of this AD. This service information is not incorporated by reference in this AD.

(i) Airbus Service Bulletin A320-22-1427, dated January 25, 2013.

(ii) Airbus Service Bulletin A320-22-1427, Revision 01, dated July 30, 2013.

(iii) Airbus Service Bulletin A320-22-1427, Revision 02, dated October 14, 2013.

(iv) Airbus Service Bulletin A320-22-1427, Revision 03, dated November 8, 2013.

(v) Airbus Service Bulletin A320-22-1427, Revision 04, dated February 11, 2014.

(vi) Airbus Service Bulletin A320-22-1447, dated October 18, 2013.

(vii) Airbus Service Bulletin A320-22-1447, Revision 01, dated September 18, 2014.

(viii) Airbus Service Bulletin A320-22-1447, Revision 02, dated December 2, 2014.

(ix) Airbus Service Bulletin A320-22-1461, dated October 31, 2013.

(x) Airbus Service Bulletin A320-22-1461, Revision 01, dated February 25, 2014.

(xi) Airbus Service Bulletin A320-22-1461, Revision 02, dated April 30, 2014.

(xii) Airbus Service Bulletin A320-22-1461, Revision 03, dated July 17, 2014.

(xiii) Airbus Service Bulletin A320-22-1461, Revision 04, dated September 15, 2014.

(xiv) Airbus Service Bulletin A320-22-1461, Revision 05, dated November 13, 2014.

(xv) Airbus Service Bulletin A320-22-1461, Revision 06, dated January 21, 2015.

(xvi) Airbus Service Bulletin A320-31-1414, dated December 19, 2012.

(xvii) Airbus Service Bulletin A320-31-1414, Revision 01, dated March 21, 2013.

(xviii) Airbus Service Bulletin A320-31-1414, Revision 02, dated July 30, 2013.

## **(n) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, 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 Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149. 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. The AMOC approval letter must specifically reference this AD.

(2) 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.

(3) 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 Branch, ANM-116, Transport Airplane Directorate, FAA; or the EASA; or Airbus's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

## **(o) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2014-0217R1, dated February 26, 2015, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2015-0251-0003>.

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

## **(p) 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 A320-22-1375, dated January 15, 2014.

(ii) Airbus Service Bulletin A320-22-1427, Revision 05, including Appendix 01, dated November 24, 2014.

(iii) Airbus Service Bulletin A320-22-1447, Revision 03, dated April 21, 2015.

(iv) Airbus Service Bulletin A320-22-1454, dated February 12, 2014.

(v) Airbus Service Bulletin A320-22-1461, Revision 07, including Appendix 01, dated March 23, 2015.

(vi) Airbus Service Bulletin A320-22-1480, Revision 02, dated March 30, 2015.

(vii) Airbus Service Bulletin A320-22-1502, dated November 14, 2014.

(viii) Airbus Service Bulletin A320-31-1414, Revision 03, dated September 15, 2014.

(3) For service information identified in this AD, contact Airbus, Airworthiness Office–EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(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>.

Issued in Renton, Washington, on November 9, 2015.

Michael Kaszycki,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.