



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0624; Product Identifier 2016-NM-135-AD; Amendment 39-19067; AD 2017-20-10]

RIN 2120-AA64

Airworthiness Directives; Airbus 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 Model A319 series airplanes, Model A320-211, -212, -214, -231, -232, and -233 airplanes, and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes. This AD was prompted by a runway excursion due to an unexpected thrust increase leading to an unstable approach performed using the current flight management and guidance computer (FMGC) standard. This AD requires identification of potentially affected FMGCs, replacement of any affected FMGC, and applicable concurrent actions. 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, 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; Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 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-2017-0624.

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-2017-0624; 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 Office (telephone 800-647-5527) is 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 20590.

FOR FURTHER INFORMATION CONTACT: Sanjay Ralhan, Aerospace Engineer, International Section, Transport Standards Branch, 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 A319 series airplanes, Model A320-211, -212, -214, -231, -232, and -233 airplanes, and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes. The NPRM published in the Federal Register on June 29, 2017 (82 FR 29440) (“the NPRM”). The NPRM was prompted by a runway excursion due to an unexpected thrust increase leading to an unstable approach performed using the current FMGC standard. The NPRM proposed to require identification of potentially affected FMGCs, replacement of any affected FMGC, and applicable concurrent actions. We are issuing this AD to prevent unstable approaches due to an unexpected thrust increase, which could result in reduced controllability of the airplane and runway excursions.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2016-0122, dated June 21, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model A319 series airplanes, Model A320-211, -212, -214, -231, -232, and -233 airplanes, and Model A321-111, -112, -131, -211, -212, -213, -231, and 232 airplanes.

The MCAI states:

Following an instrument landing system (ILS) approach, during night, in rainy condition, an A321 aeroplane experienced a longitudinal runway excursion. Investigation revealed that the approach was not stabilized with an overspeed of 19 knots (kts) over the runway threshold, followed by a long flare (18 seconds) with touchdown far behind the touchdown zone. The aeroplane exited the runway at 75 kts and came to rest around 300 meters beyond the end of the runway. During the final approach, at 150 feet Radio Altimeter (RA) altitude, the corrected airspeed of the aeroplane was 165 kts (24 kts overspeed). Auto thrust (ATHR) commanded a transient N1 increase up to 70% due to the ATHR speed Mach control law.

The ATHR system on A320 family aeroplane was designed to maintain accurately the aircraft speed/Mach to speed/Mach target by commanding the thrust, featuring also a trade-off at low altitude between thrust corrections to maintain speed equal to speed target and too large thrust corrections destabilizing the aircraft trajectory near the ground. The conclusions of the investigations were that the main contributor to this runway excursion was a non-stabilized approach not followed by a go-around. ATHR misbehaviour in case of large overspeed led to an unexpected thrust increase, which is considered as a contributor to the long flare.

This ATHR characteristic, reported as “Spurious thrust increase during approach,” was initially found in 1996 and a modification was developed and introduced in Flight Guidance (FG) 2G standard “C8 or I8” (C for CFM engines and I for IAE engines) in 2001.

Prompted by these findings, Airbus introduced a programme to encourage operators to replace the FMGC Legacy with the FMGC equipped with Flight Management System type 2 (FMS2) and FG standard, which introduces additional operational capabilities, including Runway Overrun Protection System / Runway Overrun Warning (ROPS/ROW) and Autopilot/Traffic Collision Avoidance System (AP/TCAS). It was determined that the ROPS, in a scenario similar to the one described above, would have

triggered a «RUNWAY TOO SHORT» aural alert before touchdown. Information was made available through Airbus Service Information Letter (SIL) 22-039 (later superseded by Word In Service Experience (WISE) In Service Information 22.83.00003), and EASA published Safety Information Bulletin (SIB) 2013-19, recommending the FMGC upgrade.

Since EASA SIB was published, it was determined that many operators have chosen not to implement the optional upgrade that improves the ATHR behaviour.

More recently, prompted by a recommendation from the BEA (Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile) of France, to reduce the risk of further runway excursions due to uninterrupted unstable approaches performed with the legacy FMGC standard, EASA decided to require installation of at least the first version of the FMS2 and associated FG for legacy aeroplanes.

DGAC [Direction Générale de l'Aviation Civile] France issued AD 1999-411-140(B)R1 [which corresponds to FAA AD 2000-12-13, Amendment 39-11791 (65 FR 37845, June 19, 2000) (“AD 2000-12-13”)] and AD 1998-226-119(B)R1 [which corresponds to FAA AD 98-19-08, Amendment 39-10750 (63 FR 50503, September 22, 1998)] to address different unsafe conditions, requiring to install a certain previous FMGC standard that may be susceptible to the “Spurious thrust increase during approach”.

For the reasons described above, this [EASA] AD * * * requires replacement of the affected FMGC units with upgraded units [and applicable concurrent actions].

Concurrent actions include the installation of certain FMGCs, wiring, display management computers, wiring associated with pin programming, and applicable operational program configuration disks. 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-2017-0624.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comment received. Air Line Pilots Association, International supported the NPRM.

Conclusion

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this AD as proposed, except for minor editorial changes. We have determined that these minor changes:

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

Related Service Information under 1 CFR part 51

Airbus has issued the following service information, which describes procedures for replacement of any affected FMGC with a serviceable FMGC. These documents are distinct since they apply to different airplane configurations.

- Airbus Service Bulletin A320-22-1090, Revision 11, dated July 20, 2004.
- Airbus Service Bulletin A320-22-1103, Revision 04, dated March 12, 2004.
- Airbus Service Bulletin A320-22-1116, Revision 04, dated March 29, 2004.
- Airbus Service Bulletin A320-22-1152, Revision 03, dated February 18, 2005.

- Airbus Service Bulletin A320-22-1243, Revision 05, dated May 31, 2010.
- Airbus Service Bulletin A320-22-1519, Revision 02, dated December 21, 2015.

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 1,032 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
Inspection	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$87,720

We estimate the following costs to do any necessary replacements required based on the results of the inspection. We have no way of determining the number of aircraft that might need these replacements.

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replacement	9 work-hours X \$85 per hour = \$765	\$30,000	\$30,765

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 to the Director of the System Oversight Division.

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.

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):

2017-20-10 Airbus: Amendment 39-19067; Docket No. FAA-2017-0624; Product Identifier 2016-NM-135-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 2000-12-13, Amendment 39-11791 (65 FR 37845, June 19, 2000) (“AD 2000-12-13”).

(c) Applicability

This AD applies to the Airbus airplanes, certificated in any category, identified in paragraphs (c)(1) through (c)(3) of this AD, all manufacturer serial numbers.

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

(2) Airbus Model A320-211, -212, -214, -231, -232, and -233 airplanes.

(3) 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.

(e) Reason

This AD was prompted by a report of a runway excursion due to an unexpected thrust increase leading to an unstable approach performed using the current flight management and guidance computer (FMGC) standard. We are issuing this AD to prevent unstable approaches due to an unexpected thrust increase, which could result in reduced controllability of the airplane and runway excursions.

(f) Compliance

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

(g) Inspection and Replacement of Affected FMGC

(1) Within 36 months after the effective date of this AD: Inspect the FMGC to determine if any FMGC with an affected part number identified in Figure 1 to paragraphs (g)(1), (g)(2), (h)(1), (h)(2), and (j) of this AD is installed. A review of airplane maintenance records is acceptable in lieu of inspecting the FMGC, provided those records can be relied upon for that purpose and the part number of the FMGC can be conclusively identified from that review.

(2) If any affected FMGC with an affected part number identified in Figure 1 to paragraphs (g)(1), (g)(2), (h)(1), (h)(2), and (j) of this AD is found during any inspection or review required by paragraph (g)(1) of this AD: Within 36 months after the effective date of this AD, replace the FMGC with a serviceable FMGC having a part number that is not identified in Figure 1 to paragraphs (g)(1), (g)(2), (h)(1), (h)(2), and (j) of this AD, in accordance with the Accomplishment Instructions and paragraph 1.B. (concurrent actions) of the applicable service information specified in paragraphs (g)(2)(i) through (g)(2)(vi) of this AD, or using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA). Refer to Figure 2 to paragraph (g)(2) of this AD and Figure 3 to paragraph (g)(2) of this AD for the lists of approved eligible FMGCs certified as of the effective date of this AD.

- (i) Airbus Service Bulletin A320-22-1090, Revision 11, dated July 20, 2004
(installation of FMGC part number (P/N) C13042BA01).
- (ii) Airbus Service Bulletin A320-22-1103, Revision 04, dated March 12, 2004
(installation of FMGC P/N C13043AA01).
- (iii) Airbus Service Bulletin A320-22-1116, Revision 04, dated March 29, 2004
(installation of FMGC P/N C13043BA01).
- (iv) Airbus Service Bulletin A320-22-1152, Revision 03, dated February 18, 2005
(installation of FMGC P/N C13043AA02).
- (v) Airbus Service Bulletin A320-22-1243, Revision 05, dated May 31, 2010
(installation of FMGC P/N C13043BA04).
- (vi) Airbus Service Bulletin A320-22-1519, Revision 02, dated December 21,
2015 (installation of FMGC P/N C13207CA00).

Figure 1 to paragraphs (g)(1), (g)(2), (h)(1), (h)(2), and (j) of this AD – Affected FMGCs

Airplanes	FMGC part number			
A319-111, A319-112, A319-113, A319-114, A319-115, A320-211, A320-212, A320-214, A321-111, A321-112, A321-211, A321-212, and A321-213 (all CFM56)	B398AAM0303	B398AAM0304	B398AAM0405	B398AAM0406
	B398AAM0407	B398AAM0408	B398AAM0409	B398AAM0410
	B398AAM0411	B398AAM0412	B398BAM0101	B398BAM0202
	B398BAM0203	B398BAM0204	B398BAM0205	B398BAM0206
	B398BAM0207	B398BAM0208	B398BAM0209	B546BAM0101
	B546BAM0202	B546BAM0203	B546BAM0204	B546BAM0205
	B546BAM0206	B546CAM0101	B546CAM0102	B546CAM0103
A319-131 A319-132 A319-133 A320-231 A320-232 A320-233 A321-131 A321-231 and A321-232 (all V2500)	B398BCM0101	B398BCM0102	B398BCM0103	B398BCM0104
	B398BCM0105	B398BCM0106	B398BCM0107	B398BCM0108
	B398BCM0109	B546BCM0101	B546BCM0102	B546BCM0203
	B546BCM0204	B546BCM0205	B546CCM0101	B546CCM0102
	B546CCM0103	B546CCM0104	B546CCM0105	B546CCM0106

Figure 2 to paragraph (g)(2) of this AD –
List of approved eligible FMGCs certified as of the effective date of this AD

Airplanes	FMGC part number	
A319-111, A319-112, A319-113, A319-114, A319-115, A320-211, A320-212, A320-214, A321-111, A321-112, A321-211, A321-212, and A321-213 (all CFM56)	C13042AA01 C13042AA02 C13042AA03 C13042AA04 C13042AA05 C13042AA06 C13042AA07 C13043AA01 C13043AA02 C13043AA03 C13043AA04 C13043AA05 C13043AA06	
	FMGC hardware	Flight Guidance (FG) software
	C13207AA00	G2858AAA01
	C13207CA00	G2858AAA02
	C13207CA00	G2858AAA03
	C13208AA00	G2858AAA01
	C13208AA00	G2858AAA02
	C13208AA00	G2858AAA03

Figure 3 to paragraph (g)(2) of this AD –
List of approved eligible FMGCs certified as of the effective date of this AD

Airplanes	FMGC part number	
A319-131, A319-132, A319-133, A320-231, A320-232, A320-233, A321-131, A321-231, and A321-232 (all V2500)	C13042BA01 C13042BA02 C13042BA03 C13042BA04 C13042BA05 C13042BA06 C13042BA07 C13042BA08 C13043BA01 C13043BA02 C13043BA03 C13043BA04 C13043BA05 C13043BA06 C13043BA07 C13043BA08	
	FMGC hardware	FG software
	C13207BA00	G2859AAA01
	C13207DA00	G2859AAA02
	C13207DA00	G2859AAA03
	C13207DA00	G2859AAA04
	C13208BA00	G2859AAA01
	C13208BA00	G2859AAA02
	C13208BA00	G2859AAA03
	C13208BA00	G2859AAA04

(h) Unaffected Airplanes

(1) An airplane on which Airbus Modification 31896 or Airbus Modification 31897 has been embodied in production is not affected by the requirements of paragraph (g) of this AD, provided it is conclusively determined that no FMGC with an affected part number identified in Figure 1 to paragraphs (g)(1), (g)(2), (h)(1), (h)(2), and (j) of this AD has been installed on that airplane since the date of issuance of the original certificate of airworthiness or the original export certificate of airworthiness. A review of airplane maintenance records is acceptable to make this determination provided those records can be relied upon for that purpose and the part number of the FMGC can be conclusively identified from that review.

(2) An airplane on which the actions specified in paragraph (g)(2) have been done before the effective date of this AD is not affected by the requirements in paragraph (g) of this AD, provided it is conclusively determined that no FMGC with an affected part number identified in Figure 1 to paragraphs (g)(1), (g)(2), (h)(1), (h)(2), and (j) of this AD has been installed on that airplane since accomplishing the actions specified in paragraph (g)(2) of this AD. A review of airplane maintenance records is acceptable to make this determination provided those records can be relied upon for that purpose and the part number of the FMGC can be conclusively identified from that review.

(i) Parts Installation Limitation

Installation of an FMGC standard approved after the effective date of this AD on any airplane, is acceptable for compliance with the actions required by paragraph (g)(2)

of this AD, provided the conditions specified in paragraphs (i)(1) and (i)(2) of this AD are accomplished.

(1) The software and hardware standard, as applicable, must be approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus's EASA DOA.

(2) The installation must be accomplished using airplane modification instructions approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus's EASA DOA.

(j) Parts Installation Prohibition

As of the effective date of this AD, no person may install on any airplane an FMGC with an affected part number identified in Figure 1 to paragraphs (g)(1), (g)(2), (h)(1), (h)(2), and (j) of this AD.

(k) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g)(2) of this AD, if those actions were performed before the effective date of this AD using the applicable service information identified in Figure 4 to paragraph (k) of this AD.

Figure 4 to paragraph (k) of this AD –
Service information acceptable for credit for actions in paragraph (g)(2) of this AD

FMGC/FG install	Airbus Service Bulletin	Revision	Date
C13042BA01	A320-22-1090	00	March 5, 2002
		01	April 15, 2002
		02	June 14, 2002
		03	October 1, 2002
		04	November 26, 2002
		05	January 13, 2003
		06	March 3, 2003
		07	June 26, 2003
		08	October 15, 2003
		09	November 7, 2003
		10	January 22, 2004
C13043AA01	A320-22-1103	00	October 8, 2002
		01	April 1, 2003
		02	August 28, 2003
		03	October 15, 2003
C13043BA01	A320-22-1116	00	January 31, 2003
		01	August 4, 2003
		02	October 17, 2003
		03	February 25, 2004
C13043AA02	A320-22-1152	00	May 5, 2004
		01	July 6, 2004
		02	October 15, 2004
C13043BA04	A320-22-1243	00	October 16, 2007
		01	April 1, 2008
		02	September 10, 2008
		03	February 17, 2009
		04	March 3, 2010
C13207CA00	A320-22-1519	00	June 26, 2015
		01	August 26, 2015

(l) Terminating Action for Other ADs

Accomplishing the actions required by paragraph (g)(1) of this AD, and, as applicable, paragraph (g)(2) of this AD, terminates all requirements of AD 2000-12-13.

(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 manager of 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's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(n) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2016-0122, dated June 21, 2016, 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-2017-0624.

(2) For more information about this AD, contact Sanjay Ralhan, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

(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 A320-22-1090, Revision 11, dated July 20, 2004.

(ii) Airbus Service Bulletin A320-22-1103, Revision 04, dated March 12, 2004.

(iii) Airbus Service Bulletin A320-22-1116, Revision 04, dated March 29, 2004.

(iv) Airbus Service Bulletin A320-22-1152, Revision 03, dated February 18, 2005.

(v) Airbus Service Bulletin A320-22-1243, Revision 05, dated May 31, 2010.

(vi) Airbus Service Bulletin A320-22-1519, Revision 02, dated December 21, 2015.

(3) For service information identified in this AD, contact Airbus, Airworthiness Office – ELIAS, 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; Internet <http://www.airbus.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 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 September 20, 2017.

Dionne Palermo,
Acting Director,
System Oversight Division,
Aircraft Certification Service.

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