



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0499; Product Identifier 2019-NM-088-AD; Amendment 39-21015; AD 2019-25-16]

RIN 2120-AA64

Airworthiness Directives; Embraer S.A. Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2017-06-08, which applied to certain Embraer S.A. Model ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; and Model ERJ 170-200 LR, -200 SU, and -200 STD airplanes. AD 2017-06-08 required revising the existing maintenance or inspection program, as applicable, to incorporate more restrictive airworthiness limitations. This AD continues to require that revision; adds a new requirement for revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations; and adds airplanes to the applicability. Since the FAA issued AD 2017-06-08, the agency determined that new or more restrictive airworthiness limitations are necessary. The FAA is 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].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of May 11, 2017 (82 FR 16725, April 6, 2017).

ADDRESSES: For service information identified in this final rule, contact Embraer S.A., Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170-Putim-12227-901 São Jose dos Campos-SP-Brazil; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; email distrib@embraer.com.br; Internet <https://www.flyembraer.com>. You may view this referenced 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 <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0499.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0499; 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 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: Krista Greer, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3221; email krista.greer@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued Brazilian AD 2019-05-01, effective May 2, 2019; corrected July 1, 2019 (“Brazilian AD 2019-05-01”) (also referred to as the Mandatory Continuing Airworthiness Information, or “the MCAI”); to correct an unsafe condition for certain Embraer S.A. Model ERJ 170 airplanes. You may examine the MCAI in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0499.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2017-06-08, Amendment 39-18832 (82 FR 16725, April 6, 2017) (“AD 2017-06-08”). AD 2017-06-08 applied to certain Embraer S.A. Model ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; and Model ERJ 170-200 LR, -200 SU, and -200 STD airplanes. The NPRM published in the Federal Register on July 1, 2019 (84 FR 31246). The NPRM was prompted by a determination that new or more restrictive airworthiness limitations are necessary. The NPRM proposed to continue

to require revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations. The NPRM also proposed to require a new revision of the existing maintenance or inspection program, as applicable, to incorporate additional new or more restrictive airworthiness limitations, and to add airplanes to the applicability. The FAA is issuing this AD to address fatigue cracking of various principal structural elements (PSEs); such cracking could result in reduced structural integrity of the airplane. The FAA is also issuing this AD to prevent safety significant latent failures; such failures, in combination with one or more other specified failures or events, could result in a hazardous or catastrophic failure condition of avionics, hydraulic systems, fire detection systems, fuel systems, or other critical systems. Furthermore, the FAA is issuing this AD to address potential ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions; such failures, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane. See the MCAI for additional background information.

Action Since the NPRM was Issued

Since the NPRM was issued ANAC published a correction to Brazilian AD 2019-05-01 to clarify that the initial compliance times identified as “Threshold” or “T” in EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB-1621, Revision 14, dated September 27, 2018 (“EMBRAER 170/175 MRB-1621, Revision 14”), are expressed in total flight cycles and total flight hours. The FAA has revised paragraph (i)(1) of this AD to state “For the purposes of this AD, the initial

compliance times (identified as ‘Threshold’ or ‘T’ in EMBRAER 170/175 MRB-1621, Revision 14) are expressed in ‘total flight cycles’ or ‘total flight hours,’ as applicable.”

Comments

The FAA 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.

Request to Revise/Remove Initial Compliance Time for New Maintenance Tasks

Republic Airways, Inc., (Republic) requested that the compliance time specified in paragraph (i)(1) of the proposed AD be revised to more closely reflect the requirements of Brazilian AD 2019-05-01. The commenter also requested that the 90-day initial compliance time specified in paragraph (i)(2) of the proposed AD be removed. The commenter noted that Brazilian AD 2019-05-01 does not include a calendar day compliance time. The commenter asserted that a 90-day compliance time could require accomplishment of the tasks before they are required to be included in the maintenance program.

The FAA agrees to clarify the compliance times specified in this AD. The compliance time in paragraph (a)(1) of Brazilian AD 2019-05-01 requires operators to revise the maintenance or inspection program, as applicable, within three months after the effective date of that Brazilian AD. Paragraph (i) of this AD requires revising the existing maintenance or inspection program, as applicable, within 90 days after the effective date of this AD. The FAA typically specifies AD compliance times for revisions to the

maintenance or inspection program as 90 days. Therefore, the FAA has not revised this AD regarding this issue.

Regarding the initial compliance time for doing the new tasks, paragraph (a)(3) of Brazilian AD 2019-05-01 states that the initial compliance time is at the applicable times specified in the revised maintenance program or within 600 flight cycles after the effective date of Brazilian AD 2019-05-01. Paragraph (i) of this AD states that the operator may choose to use the later of the compliance times specified in paragraphs (i)(1) and (2) of this AD. Paragraph (i)(1) of this AD states the initial compliance time is “within the applicable times specified in EMBRAER 170/175 MRB-1621, Revision 14.” Paragraph (i)(2) of this AD states the initial compliance time is “within 90 days or 600 flight cycles after the effective date of this AD, whichever occurs later.” The compliance time specified in paragraph (i)(2) of this AD matches the compliance time in paragraph (a)(3) of Brazilian AD 2019-05-01, along with an additional 90-day compliance time for operators who may reach the 600 flight cycles early (i.e., before reaching 90 days). The 90-day compliance time is intended to provide relief for this scenario. Therefore, the FAA has not revised this AD regarding this issue.

Request to Allow Alternative Actions/Intervals in Subsequent Service Information

Horizon Air requested that paragraph (j) of the proposed AD be revised to allow for alternative actions and intervals provided in subsequent revisions of the identified service information. The commenter explained that paragraph (b) of Brazilian AD 2019-05-01 allows for alternative actions and intervals if the alternative action or interval is published in a subsequent revision of EMBRAER 170/175 MRB-1621 and approved

by ANAC. The commenter noted that Revision 15 to EMBRAER 170/175 MRB-1621 was issued June 28, 2019, and that there is no current temporary revision to this manual.

The FAA agrees with the commenter's observation that EMBRAER 170/175 MRB-1621, Revision 15, dated June 28, 2019 ("EMBRAER 170/175 MRB-1621, Revision 15"), was approved by ANAC. Changes in EMBRAER 170/175 MRB-1621, Revision 15, include incorporation of the life-limited item provided in EMBRAER Temporary Revision (TR) 14-1, dated November 13, 2018 ("EMBRAER TR 14-1"). Therefore, the same level of safety is maintained by incorporating the information in EMBRAER 170/175 MRB-1621, Revision 15, as incorporating the information in Part 1-Certification Maintenance Requirements, Part 2-Airworthiness Limitation Inspections (ALI)-Structures, Part 3-Fuel System Limitation Items, and Part 4-Life Limited Items; and EMBRAER TR 14-1 to Part 4-Life Limited Item; of Appendix A-Airworthiness Limitations of EMBRAER 170/175 MRB-1621, Revision 14.

Once the information in EMBRAER 170/175 MRB-1621, Revision 14, has been included in the general revisions of the EMBRAER 170/175 Maintenance Review Board Report, and the general revisions have been inserted into the maintenance or inspection program, as applicable, the requirement in paragraph (i)(1) of this AD is satisfied. Since EMBRAER 170/175 MRB-1621, Revision 15, contains the same information relative to this issue that is specified in both EMBRAER 170/175 MRB-1621, Revision 14, and EMBRAER TR 14-1, a request for an AMOC is not necessary. The FAA has not revised this AD regarding this issue.

Requests for Credit for Previously Accomplished Actions

Embraer and Republic Airways requested that operators be allowed to substitute the last accomplishment of tasks 53-23-014-0001 and 53-23-016-0001 for performing the initial accomplishment of tasks 53-23-014-005 and 53-23-016-0005. Republic Airways justified its request by explaining that tasks 53-23-014-0005 and 53-23-016-0005 were introduced in EMBRAER 170/175 MRB-1621, Revision 14, splitting existing tasks from previous EMBRAER 170/175 MRB-1621 revisions in order to increase the interval for some parts of the inspection reducing the frequency of access in areas that are difficult to access. Republic Airways noted that tasks 53-23-014-0001 and 53-23-016-0001 in EMBRAER 170/175 MRB-1621, Revision 13, dated May 10, 2017, and earlier revisions, included the same inspections as tasks 53-23-014-0005 and 53-23-016-0005. The commenters pointed out that ANAC granted an AMOC to Brazilian AD 2019-05-01 to provide credit for previously accomplished inspections, provided that the inspections included the area under the scuff plates.

The FAA agrees with the commenters' requests for the reasons provided. The FAA has included Brazilian AMOC No. 632/2019/GCPR/GGCP/SAR-ANAC, dated June 13, 2019, in paragraph (k)(1)(ii) of this AD as an approved AMOC for the corresponding provision of this AD. The FAA finds that inclusion of this superseding AMOC addresses the commenters' requests.

Conclusion

The FAA 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. The FAA 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.

The FAA 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

Embraer has issued Appendix A-Airworthiness Limitations, to EMBRAER 170/175 MRB-1621, Revision 14, dated September 27, 2018. This service information describes airworthiness limitations.

Embraer has also issued EMBRAER TR 14-1, to Part 4-Life-Limited Items, of Appendix A-Airworthiness Limitations, of the EMBRAER 170/175 MRB-1621, Revision 14, dated September 27, 2018. This service information describes, in Table 1 of the life-limited items, a new part number associated with main landing gear (MLG) life-limited components.

This AD also requires Appendix A-Airworthiness Limitations, of the EMBRAER 170/175 MRBR, MRB-1621, Revision 10, dated February 23, 2015, which the Director of the Federal Register approved for incorporation by reference on May 11, 2017 (82 FR 16725, April 6, 2017).

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

The FAA estimates that this AD affects 540 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD.

The actions that are required by AD 2017-06-08 and retained in this AD take about 1 work-hour per product, at an average labor rate of \$85 per work hour. Required parts cost about \$0 per product. Based on these figures, the estimated cost of the actions that were required by AD 2017-06-08 is \$85 per product.

The FAA has determined that revising the existing maintenance or inspection program takes an average of 90 work-hours per operator, although the agency recognizes that this number may vary from operator to operator. In the past the FAA has estimated that this action takes 1 work-hour per airplane. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), the FAA has determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, the FAA estimates the total cost per operator to be \$7,650 (90 work-hours × \$85 per work-hour).

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.

The FAA is 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

The FAA 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) Will not affect intrastate aviation in Alaska, and

(3) 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 removing Airworthiness Directive (AD) 2017-06-08, Amendment 39-18832 (82 FR 16725, April 6, 2017), and adding the following new AD:

2019-25-16 Embraer S.A.: Amendment 39-21015; Docket No. FAA-2019-0499; Product Identifier 2019-NM-088-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 replaces AD 2017-06-08, Amendment 39-18832 (82 FR 16725, April 6, 2017) (“AD 2017-06-08”).

(c) Applicability

This AD applies to Embraer S.A. Model ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; and Model ERJ 170-200 LR, -200 SU, -200 STD, and -200 LL airplanes; certificated in any category; manufacturer serial numbers 17000002, 17000004 through 17000013 inclusive, and 17000015 through 17000761 inclusive.

(d) Subject

Air Transport Association (ATA) of America Codes 27, Flight controls; 28, Fuel; 52, Doors; 53, Fuselage; 54, Nacelles/pylons; 55, Stabilizers; 57, Wings; 71, Powerplant; and 78, Exhaust.

(e) Reason

This AD was prompted by a determination that new or more restrictive airworthiness limitations are necessary. The FAA is issuing this AD to address fatigue cracking of various principal structural elements (PSEs); such cracking could result in reduced structural integrity of the airplane. The FAA is also issuing this AD to prevent safety significant latent failures; such failures, in combination with one or more other specified failures or events, could result in a hazardous or catastrophic failure condition of avionics, hydraulic systems, fire detection systems, fuel systems, or other critical systems. Furthermore, the FAA is issuing this AD to address potential ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions; such failures, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

(f) Compliance

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

(g) Retained Revision of Maintenance or Inspection Program, With No Changes

This paragraph restates the requirements of paragraph (i) of AD 2017-06-08, with no changes. For Model ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; and Model ERJ 170-200 LR, -200 SU, and -200 STD airplanes; manufacturer serial numbers 17000002, 17000004 through 17000013 inclusive, and 17000015 through 17000453 inclusive: Within 12 months after May 11, 2017 (the effective date of AD 2017-06-08), revise the existing maintenance or inspection program, as applicable, to incorporate the airworthiness limitations specified in Part 1-Certification Maintenance Requirements (CMR); Part 2-Airworthiness Limitation Inspections (ALI)-Structures; Part 3-Fuel System Limitation Items (FSL); and Part 4-Life Limited Items (LLI); of Appendix A-Airworthiness Limitations; of the EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB-1621, Revision 10, dated February 23, 2015. The initial compliance times and repetitive intervals are specified in the applicable part of the EMBRAER 170/175 MRBR, MRB-1621, Revision 10, dated February 23, 2015.

(h) Retained No Alternative Actions Intervals, and/or Critical Design Configuration Control Limitations (CDCCLs), With New Exception

This paragraph restates the action required by paragraph (j) of AD 2017-06-08, with a new exception. Except as required by paragraph (i) of this AD, after accomplishing the revisions required by paragraph (g) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs may be used unless the actions, intervals, and CDCCLs are approved as an alternative method of compliance (AMOC) in accordance

with the procedures specified in paragraph (k)(1) of this AD.

(i) New Existing Maintenance or Inspection Program Revision

Within 90 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to incorporate the information specified in Part 1-Certification Maintenance Requirements, Part 2-Airworthiness Limitation Inspections (ALI)-Structures, Part 3-Fuel System Limitation Items, and Part 4-Life Limited Items; and EMBRAER Temporary Revision (TR) 14-1, dated November 13, 2018, to part 4-Life Limited Items; of Appendix A of the EMBRAER 170/175 MRBR, MRB-1621, Revision 14, dated September 27, 2018 (“EMBRAER 170/175 MRB–1621, Revision 14”). The initial compliance time for doing the tasks is at the later of the times specified in paragraphs (i)(1) and (2) of this AD. Accomplishing the revision required by this paragraph terminates the requirements of paragraph (g) of this AD.

(1) Within the applicable times specified in EMBRAER 170/175 MRB–1621, Revision 14. For the purposes of this AD, the initial compliance times (identified as “Threshold” or “T” in EMBRAER 170/175 MRB–1621, Revision 14) are expressed in “total flight cycles” or “total flight hours,” as applicable.

(2) Within 90 days or 600 flight cycles after the effective date of this AD, whichever occurs later.

(j) No Alternative Actions, Intervals, or CDCCLs

After the existing maintenance or inspection program has been revised as required by paragraph (i) of this AD, no alternative actions (e.g., inspections), intervals, or

CDCCLs may be used unless the actions, intervals, and CDCCLs are approved as an AMOC in accordance with the procedures specified in paragraph (k)(1) of this AD.

(k) Other FAA AD Provisions

(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 (l)(2) of this AD. Information may be emailed to 9-ANM-116-AMOC-REQUESTS@ faa.gov.

(i) 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.

(ii) Brazilian AMOC No. 632/2019/GCPR/GGCP/SAR-ANAC, dated June 13, 2019, is approved as an AMOC for the corresponding provisions of this AD.

(2) *Contacting the Manufacturer*: As of the effective date of this AD, 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 ANAC; or ANAC's authorized Designee. If approved by the ANAC Designee, the approval must include the Designee's authorized signature.

(l) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Brazilian AD 2019-05-01, effective May 2, 2019; corrected July 1, 2019; for related information.

This MCAI may be found in the AD docket on the Internet at

<https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0499.

(2) For more information about this AD, contact Krista Greer, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3221; email krista.greer@faa.gov.

(m) 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.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Appendix A-Airworthiness Limitations of EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB-1621, Revision 14, dated September 27, 2018.

(ii) Embraer Temporary Revision (TR) 14-1, dated November 13, 2018, to Part 4-Life Limited Items, of Appendix A of EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB-1621, Revision 14, dated September 27, 2018.

(4) The following service information was approved for IBR on May 11, 2017 (82 FR 16725, April 6, 2017).

(i) Appendix A-Airworthiness Limitations, of the EMBRAER 170/175 Maintenance Review Board Report (MRBR), MRB-1621, Revision 10, dated February 23, 2015.

(ii) [Reserved]

(5) For service information identified in this AD, contact Embraer S.A., Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170-Putim-12227-901 São Jose dos Campos-SP-Brazil; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; email distrib@embraer.com.br; internet [https:// www.flyembraer.com](https://www.flyembraer.com).

(6) 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.

(7) 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, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Des Moines, Washington, on December 12, 2019.

Jeffrey E. Duven,
Director,
System Oversight Division,
Aircraft Certification Service.

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