



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0519; Product Identifier 2019-NM-089-AD]

RIN 2120-AA64

Airworthiness Directives; Embraer S.A. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2017-16-08, which applies to certain Embraer S.A. Model ERJ 190-100 STD, -100 LR, -100 IGW, and -100 ECJ airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes. AD 2017-16-08 requires revising the existing maintenance or inspection program, as applicable, to incorporate more restrictive airworthiness limitations. Since the FAA issued AD 2017-16-08, the FAA determined that new or more restrictive airworthiness limitations are necessary. This proposed AD would require revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations. This proposed AD would also add airplanes to the applicability. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Embraer S.A., Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170 - Putim - 12227-901 São Jose dos Campos - SP – Brasil; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; email distrib@embraer.com.br; Internet <http://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.

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-2019-0519; 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 NPRM, the regulatory evaluation, any comments received,

and other information. The street address for Docket Operations is listed above.

Comments will be available in the AD docket shortly after receipt.

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.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2019-0519; Product Identifier 2019-NM-089-AD” at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. The FAA will consider all comments received by the closing date and may amend this proposed AD based on those comments.

The FAA will post all comments received, without change, to <http://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this proposed AD.

Discussion

The FAA issued AD 2017-16-08, Amendment 39-18985 (82 FR 42021, September 6, 2017) (“AD 2017-16-08”), for certain Embraer S.A. Model ERJ 190-100 STD, -100 LR, -100 ECJ and -100 IGW airplanes and Model ERJ 190-200 STD,

-200 LR, and -200 IGW airplanes. AD 2017-16-08 requires revising the existing maintenance or inspection program, as applicable, to incorporate more restrictive airworthiness limitations. AD 2017-16-08 resulted from a determination that more restrictive airworthiness limitations are necessary. The FAA issued AD 2017-16-08 to address fatigue cracking of structural components and to address failure of certain system components; these conditions could result in reduced structural integrity and system reliability of the airplane.

Actions Since AD 2017-16-08 Was Issued

The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued Brazilian AD 2019-05-02, effective May 2, 2019 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Embraer S.A. Model ERJ 190-100 STD, -100 LR, -100 ECJ, and -100 IGW airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes. The MCAI states:

This [Brazilian] AD was prompted by a new revision to the airworthiness limitations of the Maintenance Review Board Report. This [Brazilian] AD is being issued to ensure that fatigue cracking of principal structural elements is detected and corrected. Such fatigue cracking could adversely affect the structural integrity of these airplanes.

The required action is revising the existing maintenance or inspection program, as applicable, to incorporate the airworthiness limitations in Appendix A – Airworthiness Limitations to the EMBRAER 190/195 Maintenance Review Board Report, MRB-1928, Revision 12, dated September 27, 2018; and Appendix A – Airworthiness Limitation to the EMBRAER Lineage 1000/1000E Maintenance Planning Guide, MPG-2928,

Revision 8, dated October 10, 2018; as applicable. The service information is divided into four parts: 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).

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-2019-0519.

Related Service Information Under 1 CFR part 51

Embraer has issued 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; to the EMBRAER 190/195 Maintenance Review Board Report, MRB-1928, Revision 12, dated September 27, 2018.

Embraer has also issued 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; to the EMBRAER Lineage 1000/1000E Maintenance Planning Guide, MPG-2928, Revision 8, dated October 10, 2018.

This service information describes airworthiness limitations for fuel tank systems, safe life limits, and certification maintenance requirements. These documents are distinct since they apply to different airplane models.

This proposed AD would also require Appendix A – Airworthiness Limitations (AL), of the EMBRAER ERJ 190/195 Maintenance Review Board Report, MRB-1928,

Revision 9, dated August 14, 2015; Appendix A – Airworthiness Limitations (AL), of the EMBRAER Lineage 1000/1000E Maintenance Planning Guide, MPG-2928, Revision 4, dated July 14, 2014; EMBRAER MPG—Temporary Revision 4–2, dated February 13, 2015; EMBRAER MPG—Temporary Revision 4–3, dated October 30, 2015; EMBRAER MRB—Temporary Revision 9–1, dated October 27, 2015; and EMBRAER MRB—Temporary Revision 9–3, dated October 27, 2015; which the Director of the Federal Register approved for incorporation by reference as of October 11, 2017 (82 FR 42021, September 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.

FAA’s Determination

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to a bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed Requirements of this NPRM

This proposed AD would retain all of the requirements of AD 2017-16-08. This proposed AD would require revising the existing maintenance or inspection program, as

applicable, to incorporate new or more restrictive airworthiness limitations. This proposed AD would also add airplanes having serial numbers 19000697 through 19000758 inclusive to the applicability.

This proposed AD would require revisions to certain operator maintenance documents to include new actions (e.g., inspections) and Critical Design Configuration Control Limitations (CDCCLs). Compliance with these actions and CDCCLs is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (k)(1) of this proposed AD.

Costs of Compliance

The FAA estimates that this proposed AD affects 107 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

The actions that are required by AD 2017-16-08 and retained in this NPRM 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 2017-16-08 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 x \$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 proposed 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

- (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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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) 2017-16-08, Amendment 39-18985 (82 FR 42021, September 6, 2017), and adding the following new AD:

Embraer S.A: Docket No. FAA-2019-0519; Product Identifier 2019-NM-089-AD.

(a) Comments Due Date

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2017-16-08, Amendment 39-18985 (82 FR 42021, September 6, 2017) (“AD 2017-16-08”).

(c) Applicability

This AD applies to Embraer S.A. Model ERJ 190-100 STD, -100 LR, -100 ECJ, and -100 IGW airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes; certificated in any category; serial numbers 19000002, 19000004, 19000006 through 19000213 inclusive, 19000215 through 19000276 inclusive, 19000278 through 19000466 inclusive, 19000468 through 19000525 inclusive, and 19000527 through 19000758 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 structural components and to address failure of certain system components, which could result in reduced structural integrity and system reliability 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 2017-16-08, with no changes. For airplanes having serial numbers 19000002, 19000004, 19000006 through 19000213 inclusive, 19000215 through 19000276 inclusive, 19000278 through 19000466 inclusive, 19000468 through 19000525 inclusive, and 19000527 through 19000696 inclusive, do the revision required by paragraph (g)(1) or (g)(2) of this AD, as applicable.

(1) For Model ERJ 190-100 STD, ERJ 190-100 LR, ERJ 190-100 IGW, ERJ 190-200 STD, ERJ 190-200 LR, and ERJ 190-200 IGW airplanes: Within 90 days after October 11, 2017 (the effective date of AD 2017-16-08), revise the maintenance or inspection program, as applicable, to incorporate the tasks specified in Part 2 – Airworthiness Limitation Inspections – Structures, of Appendix A – Airworthiness Limitations (AL), of the EMBRAER 190/195 Maintenance Review Board Report, MRB-1928, Revision 9, dated August 14, 2015 (“MRB-1928, Revision 9”); EMBRAER MRB—Temporary Revision 9–1, dated October 27, 2015, to Part 2 – Airworthiness Limitation Inspections – Structures, and Part 4 – Life Limited Items, of Appendix A –

Airworthiness Limitations (AL), of MRB-1928, Revision 9; and EMBRAER MRB—Temporary Revision 9–3, dated October 27, 2015, to Part 2 – Airworthiness Limitation Inspections – Structures, of Appendix A – Airworthiness Limitations (AL), of MRB-1928, Revision 9; with the thresholds and intervals stated in these documents. The initial compliance times for the tasks are at the later of the times specified in paragraphs (g)(1)(i) and (g)(1)(ii) of this AD.

(i) Within the applicable times specified in MRB-1928, Revision 9; EMBRAER MRB—Temporary Revision 9–1, dated October 27, 2015, to Part 2 – Airworthiness Limitation Inspections – Structures, and Part 4 – Life Limited Items, of Appendix A – Airworthiness Limitations (AL), of MRB-1928, Revision 9; and EMBRAER MRB—Temporary Revision 9–3, dated October 27, 2015, to Part 2 – Airworthiness Limitation Inspections – Structures, of Appendix A – Airworthiness Limitations (AL), of MRB-1928, Revision 9. Where tasks are listed in both MRB-1928, Revision 9, and a temporary revision, the compliance times in the temporary revision take precedence.

(ii) Within 90 days or 600 flight cycles after October 11, 2017 (the effective date of AD 2017-16-08), whichever occurs later.

(2) For Model ERJ 190-100 ECJ airplanes: Within 90 days after October 11, 2017 (the effective date of AD 2017-16-08), revise the maintenance or inspection program, as applicable, to incorporate the tasks specified in Part 1 – Certification Maintenance Requirements, Part 2 – Airworthiness Limitation Inspections – Structures, Part 3 – Fuel System Limitation Items, and Part 4 – Life Limited Items, of Appendix A – Airworthiness Limitations (AL), of the EMBRAER Lineage 1000/1000E Maintenance

Planning Guide, MPG-2928, Revision 4, dated July 14, 2014; EMBRAER MPG—Temporary Revision 4-2, dated February 13, 2015; and EMBRAER MPG—Temporary Revision 4-3, dated October 30, 2015; with the thresholds and intervals stated in these documents. The initial compliance times for the tasks are at the later of the times specified in paragraphs (g)(2)(i) and (g)(2)(ii) of this AD.

(i) Within the applicable times specified in Part 1, Certification Maintenance Requirements, Part 2, Airworthiness Limitation Inspections – Structures, Part 3, Fuel System Limitation Items, and Part 4, Life Limited Items, of Appendix A – Airworthiness Limitations (AL), of the EMBRAER Lineage 1000/1000E Maintenance Planning Guide, MPG-2928, Revision 4, dated July 14, 2014; EMBRAER MPG—Temporary Revision 4-2, dated February 13, 2015; and EMBRAER MPG—Temporary Revision 4-3, dated October 30, 2015. Where tasks are listed in both MPG-2928, Revision 4, and a temporary revision, the compliance times in the temporary revision take precedence.

(ii) Within 90 days or 600 flight cycles after October 11, 2017 (the effective date AD 2017-16-08), whichever occurs later.

(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 2017-16-08, with a new exception. Except as required by paragraph (i) of this AD, after accomplishment of the revision required by paragraph (g) of this AD, no alternative actions (e.g., inspections), intervals, and/or CDCCLs may be used unless the actions, intervals, and/or CDCCLs are approved as an AMOC in accordance with the procedures

specified in paragraph (k)(1) of this AD.

(i) New Requirement of this AD: Maintenance or Inspection Program Revision

(1) For Model ERJ 190-100 STD, ERJ 190-100 LR, ERJ 190-100 IGW, ERJ 190-200 STD, ERJ 190-200 LR, and ERJ 190-200 IGW airplanes: 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 (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; to the EMBRAER 190/195 Maintenance Review Board Report, MRB-1928, Revision 12, dated September 27, 2018 (“EMBRAER 190/195 MRB-1928, Revision 12”). The initial compliance time for doing the tasks are at the later of the times specified in paragraphs (i)(1)(i) and (i)(1)(ii) of this AD. Accomplishing the revision required by this paragraph terminates the requirements of paragraph (g)(1) of this AD.

(i) Within the applicable times specified in EMBRAER 190/195 MRB-1928, Revision 12. For the purposes of this AD, the initial compliance times (identified as "Threshold" or "T" in EMBRAER 190/195 MRB-1928, Revision 12) are expressed in “total flight cycles.”

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

(2) For Model ERJ 190-100 ECJ airplanes: Within 90 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to

incorporate the tasks 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 Limitation, of the EMBRAER Lineage 1000/1000E Maintenance Planning Guide, MPG-2928, Revision 8, dated October 10, 2018 (“EMBRAER Lineage 1000/1000E MPG-2928, Revision 8”). The initial compliance times for the tasks are at the later of the times specified in paragraphs (i)(2)(i) and (i)(2)(ii) of this AD. Accomplishing the revision required by this paragraph terminates the requirements of paragraph (g)(2) of this AD.

(i) Within the applicable times specified in EMBRAER Lineage 1000/1000E MPG-2928, Revision 8. For the purposes of this AD, the initial compliance times (identified as "Threshold" or "T" in EMBRAER Lineage 1000/1000E MPG-2928, Revision 8) are expressed in “total flight cycles.”

(ii) 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 (1)(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) AMOC letter AIR-676-18-241, dated May 14, 2018, approved previously for AD 2017-16-08, 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 the Agência Nacional de Aviação Civil (ANAC); or ANAC's authorized Designee. If approved by the ANAC Designee, the approval must include the Designee's authorized signature.

(I) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Brazilian AD 2019-05-02, effective May 2, 2019, 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-2019-0519.

(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.

(3) 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 – Brasil; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; email distrib@embraer.com.br; Internet <http://www.flyembraer.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.

Issued in Des Moines, Washington, on June 27, 2019.

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

[FR Doc. 2019-14192 Filed: 7/3/2019 8:45 am; Publication Date: 7/5/2019]