



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-0325; Product Identifier 2019-NM-038-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Embraer S.A. Airplanes**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain Embraer S.A. Model ERJ 170 airplanes; 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. This proposed AD was prompted by reports of the ram air turbine (RAT) compartment door seal peeling off and tangling up on the RAT rotor during flight test. This proposed AD would require a general visual inspection for peeling-off of the RAT compartment door seal, bonding if necessary, and the rework of the RAT compartment door seal attachment. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We 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](mailto: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.

### **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-2019-0325; 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 (phone: 800-647-5527) 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**

We invite 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-2019-0325; Product Identifier 2019-NM-038-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

**Discussion**

The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued Brazilian AD 2019-02-02, dated February 28, 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 170 airplanes; 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:

It has been found the occurrence some events of the Ram Air Turbine (RAT) compartment door seal peeling off and tangling up on the RAT rotor during flight test. We are issuing this [Brazilian] AD to prevent the loss of the RAT function, which associated with an emergency electrical event, can result in the loss of airplane controllability.

Required actions include an inspection for peeling-off condition, bonding as necessary, and rework of the RAT compartment door seal attachment. 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-2019-0325.

#### **Related Service Information under 1 CFR part 51**

Embraer S.A. has issued Service Bulletin SB170-53-0142, Revision 01, dated December 12, 2018; Service Bulletin SB190-53-0098, Revision 01, dated December 12, 2018; and Service Bulletin SB190LIN-53-0072, Revision 01, dated January 9, 2019. This service information describes procedures for rework of the RAT compartment door seal attachment, which includes installing fasteners around the RAT door seal attachment. These documents are distinct since they apply to different airplane models.

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 our bilateral agreement with

the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we 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 require a general visual inspection for peeling-off of the RAT compartment door seal, bonding if necessary, and the rework of the RAT compartment door seal attachment.

**Costs of Compliance**

We estimate that this proposed AD affects 570 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

**Estimated costs for required actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
3 work-hours X \$85 per hour = \$255	\$0*	\$255	\$145,350

\*We have received no definitive data that would enable us to provide a parts cost estimate for the actions specified in this proposed AD.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD.

**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 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**

We 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. 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.

**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 adding the following new airworthiness directive (AD):

**Embraer S.A.:** Docket No. FAA-2019-0325; Product Identifier 2019-NM-038-AD.

**(a) Comments Due Date**

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

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Embraer S.A. airplanes, identified in paragraphs (c)(1) through (c)(3) of this AD, certificated in any category.

(1) 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, as identified in Embraer Service Bulletin SB170-53-0142, Revision 01, dated December 12, 2018.

(2) Model ERJ 190-100 STD, -100 LR, and -100 IGW airplanes; and ERJ 190-200 STD, -200 LR, and -200 IGW airplanes, as identified in Embraer Service Bulletin SB190-53-0098, Revision 01, dated December 12, 2018.

(3) Model ERJ 190-100 ECJ airplanes, as identified in Embraer Service Bulletin SB190LIN-53-0072, Revision 01, dated January 9, 2019.

**(d) Subject**

Air Transport Association (ATA) of America Code 53, Fuselage.

**(e) Reason**

This AD was prompted by reports of the ram air turbine (RAT) compartment door seal peeling off and tangling up on the RAT rotor during flight test. We are issuing this AD to address the possible loss of the RAT function, which associated with an emergency electrical event, can result in the loss of airplane controllability.

**(f) Compliance**

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

**(g) Inspection and Rework**

(1) For airplanes identified in paragraphs (c)(1) and (c)(2) of this AD: Within 750 flight hours after the effective date of this AD, do a general visual inspection of the RAT compartment door seal for peeling-off condition (disbonding), do all applicable bonding, and rework the RAT compartment door seal attachment, in accordance with the Accomplishment Instructions of the service information identified in paragraph (c)(1) or (c)(2) of this AD, as applicable. Do all applicable bonding before further flight.

(2) For airplanes identified in paragraph (c)(3) of this AD: Within 400 flight hours or 6 months after the effective date of this AD, whichever occurs first, do all applicable bonding, and rework the RAT compartment door seal attachment, in accordance with the Accomplishment Instructions of the service information identified in paragraph (c)(3) of this AD, as applicable. Do all applicable bonding before further flight.

**(h) Credit for Previous Actions**

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 Embraer Service Bulletin 170-53-0142, dated December 8, 2017; Embraer Service Bulletin 190-53-0098, dated December 8, 2017; or Embraer Service Bulletin 190LIN-53-0072, dated December 15, 2017; as applicable.

**(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Section, Transport Standards Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with

14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Section, send it to the attention of the person identified in paragraph (j)(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 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.

(3) *Required for Compliance (RC):* Except as specified by paragraphs (g) and (i)(2) of this AD: For service information that contains steps that are labeled as RC, the provisions of paragraphs (i)(3)(i) and (i)(3)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled "RC Exempt," then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled 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 RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

**(j) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Brazilian AD 2019-02-02, dated February 28, 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-2019-0325.

(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](mailto: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 May 15, 2019.

Michael Kaszycki,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

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