



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2020-1073; Project Identifier MCAI-2020-01303-A]

RIN 2120-AA64

#### **Airworthiness Directives; Embraer S.A. (Type Certificate previously held by Empresa Brasileira de Aeronáutica S.A.) Airplanes**

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

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

**SUMMARY:** The FAA proposes to supersede Airworthiness Directive (AD)

2020-12-08, which applies to all Embraer S.A. Model EMB-505 airplanes.

AD 2020-12-08 requires inspections of the mass-balance weights of the elevators, ailerons, and rudder (flight control surfaces) and their attachment parts, and corrective actions if necessary, and revising the airworthiness limitation section of the maintenance manual or instructions for continued airworthiness to incorporate new airworthiness limitations. Since AD 2020-12-08 was issued, the FAA has determined that new applicable airplane serial numbers and new criteria for the replacement of affected parts must be required in order to address the unsafe condition. This proposed AD would retain the actions required by AD 2020-12-08 and would require, for certain airplanes, cleaning and weighing certain mass-balances and installation or replacement, as applicable; and for certain other mass-balances for certain airplanes, replacement of those mass-balances. 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 <https://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 Phenom Maintenance Support, Avenida Brigadeiro Faria Lima, 2170, P.O. Box 36/2, São José dos Campos, 12227-901, Brazil; phone: +55 12 3927 1000; email: [phenom.reliability@embraer.com.br](mailto:phenom.reliability@embraer.com.br); website: <https://www.embraer.com.br/en-US/Pages/home.aspx>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1073; 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 MCAI, any comments received, and other information. The street address for Docket Operations is listed above.

**FOR FURTHER INFORMATION CONTACT:** Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4165; fax: (816) 329-4090; email: [jim.rutherford@faa.gov](mailto:jim.rutherford@faa.gov).

### **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 ADDRESSES. Include “Docket No. FAA-2020-1073; Project Identifier MCAI-2020-01303-A” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data.

The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposed AD.

### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, 901 Locust, Room 301, Kansas City, MO 64106. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

### **Background**

The FAA issued AD 2020-12-08, Amendment 39-21143 (85 FR 36312, June 16, 2020) (AD 2020-12-08), for Embraer S.A. (type certificate previously held by Empresa Brasileira de Aeronáutica S.A.) Model EMB-505 airplanes, all serial numbers.

AD 2020-12-08 was prompted by reports of corrosion in the mass-balance weights of the flight control surfaces and a determination that new airworthiness limitations are necessary. AD 2020-12-08 was based on mandatory continuing airworthiness information (MCAI) issued by the Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil. ANAC issued Brazilian Emergency AD No. 2020-01-01, dated

January 9, 2020, to address the unsafe condition on all Embraer S.A. Model EMB-505 airplanes.

AD 2020-12-08 requires, for certain serial-numbered airplanes, inspecting the mass-balance weights of the flight control surfaces and their attachment parts for corrosion and fragmentation, and corrective actions if necessary, including sending inspection results to Embraer. For all airplanes, AD 2020-12-08 requires revising the airworthiness limitation section of the maintenance manual or instructions for continued airworthiness to incorporate new airworthiness limitations.

The FAA issued AD 2020-12-08 to address corrosion in the mass-balance weights of the flight control surfaces. The unsafe condition, if not addressed, could result in loss of mass or the detachment of the mass-balance weights, resulting in an unbalanced control surface, which could lead to flutter and loss of airplane control.

#### **Actions Since AD 2020-12-08 Was Issued**

Since the FAA issued AD 2020-12-08, ANAC superseded Brazilian Emergency AD No. 2020-01-01, dated January 9, 2020, and issued Brazilian AD No. 2020-09-01, dated September 8, 2020 (referred to after this as “the MCAI”). The MCAI states:

It has been found the occurrence of corrosion in the mass-balance weights of the control surfaces. The corrosion may lead to loss of mass or detachment of the mass-balance weights, resulting in an unbalance control surface, which, in conjunction with certain flight conditions, could lead to flutter and possible loss of airplane control.

Since this condition may occur in other airplanes of the same type and affects flight safety, a corrective action is required. Thus, sufficient reason exists to request compliance with this [ANAC] AD in the indicated time limit.

After [ANAC] EAD 2020-01-01 was released, a reassessment of the unsafe condition by Embraer and, subsequently, the SB 505-55-0004, revisions 0 and 1, dated March 25<sup>th</sup>, 2020 and June 24, 2020, respectively, expanding the list of affected aircraft serial numbers (S/Ns) as well as inserting more restrictive criteria to determine the replacement of affected P/Ns.

Therefore, this [ANAC] AD retains the requirements of [ANAC] EAD 2020-01-01, which is superseded, and incorporates new applicable aircraft S/Ns and new criteria for the replacement of affected P/Ns.

You may examine the MCAI at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1073.

### **Comments on AD 2020-12-08**

The FAA issued AD 2020-12-08 as a final rule; request for comments. The FAA received comments on AD 2020-12-08 from Flexjet LLC (Flexjet), an individual, and two anonymous commenters.

Flexjet and an anonymous commenter requested that AD 2020-12-08 allow credit for previous actions using Embraer Alert Service Bulletin SB505-55-A004, Revision 5, dated December 12, 2019 (SB505-550A004 R5), as that service bulletin is not listed in paragraph (l) of AD 2020-12-08 (“Credit for Previous Actions” paragraph).

The FAA notes that the actions of AD 2020-12-08 must be done in accordance with SB505-55A004 R5. Paragraph (f) of AD 2020-12-08 requires compliance “unless already done.” Thus, AD 2020-12-08 already allows operators to take credit for using SB505-55A004 R5 if done before the effective date of the AD.

Flexjet and an anonymous commenter requested AD 2020-12-08 include Embraer Service Bulletin SB505-55-0004, dated March 24, 2020 (SB505-55-0004), as this service bulletin addresses the worldwide fleet.

The FAA agrees. SB505-55-0004 includes additional actions, which are required by ANAC AD No. 2020-09-01, dated September 8, 2020. This proposed AD would include those additional requirements.

The individual commenter noted that SB505-55-0004, SB505-55A004 R5, and Embraer Alert Service Bulletin SB505-55-A004, Revision 06, dated March 25, 2020, apply to different ranges of serial numbers and requested the FAA clarify the correct serial numbers for AD 2020-12-08.

AD 2020-12-08 applies to all Model EMB-505 airplanes, regardless of serial number. However, only those airplanes with a serial number in SB505-55A004 R5 are required to do the actions in paragraphs (h) and (k) of AD 2020-12-08.

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

The FAA reviewed Embraer Alert Service Bulletin SB505-55-A004, Revision 06, dated March 25, 2020. This service information specifies procedures for inspecting the

mass-balance weights of the flight control surfaces and their respective attachment parts for corrosion and fragmentation, and performing corrective actions on certain serial-numbered Model EMB-505 airplanes. Corrective actions include installation of a stainless steel mass-balance, replacement of the mass-balance, and replacement of attachment parts.

The FAA also reviewed Embraer Service Bulletin SB505-55-0004, Revision 01, dated June 24, 2020. This service information specifies procedures, for certain airplanes, for cleaning and weighing the elevator, aileron, and rudder mass-balances, and installing or replacing the mass-balances (includes replacing attachment parts), as applicable, and for certain elevator mass-balances for certain airplanes, replacing those elevator mass-balances (includes replacing attachment parts).

Embraer has also issued Alert Service Bulletin SB505-55-A004, Revision 5, dated December 12, 2019, which the Director of the Federal Register approved for incorporation by reference as of July 1, 2020 (85 FR 36312, June 16, 2020).

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 ADDRESSES.

#### **Other Related Service Information**

Embraer has issued Embraer Service Bulletin SB505-55-0004, dated March 25, 2020. The actions specified in Embraer Service Bulletin SB505-55-0004, dated March 25, 2020, are the same as those specified in Embraer Alert Service Bulletin SB505-55-0004, Revision 01, dated June 24, 2020; however, Embraer Alert Service Bulletin SB505 55-0004, Revision 01, dated June 24, 2020, was issued to add serial-numbered airplanes to the effectivity. No additional work is required for airplanes on which Embraer Service Bulletin SB505-55-0004, dated March 25, 2020, has been accomplished.

#### **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 the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition

described in the MCAI and service information described above. The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

### **Proposed AD Requirements in this NPRM**

This proposed AD would retain the actions required by AD 2020-12-08 and would require, for certain airplanes, cleaning and weighing the elevator, aileron, and rudder mass-balances, and installation or replacement, as applicable of the mass-balances. This proposed AD would also remove the reporting required by AD 2020-12-08.

For the retained requirement to revise the airworthiness limitations section (ALS) of the existing maintenance manual or instructions for continued airworthiness in paragraph (i) of this proposed AD, the FAA notes the inspection tasks are part of Chapter 5 of the aircraft maintenance manual - Part III - scheduled maintenance requirements. This proposed AD would require these tasks as new airworthiness limitations.

### **Differences Between this Proposed AD and the Service Information**

Embraer Alert Service Bulletin SB505-55-A004, Revision 5, dated December 12, 2019; and Revision 06, dated March 25, 2020, contain procedures for inspecting for the integrity of the mass-balance weights of flight control surfaces and their attachment parts. This proposed AD would not include that requirement.

### **Costs of Compliance**

The FAA estimates that this AD, if adopted as proposed, would affect 392 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

#### **Estimated costs for required actions**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Retained inspections from AD 2020-12-08	9 work-hours x \$85 per hour = \$765	\$100	\$865	\$339,080

Retained ALS revision from AD 2020-12-08	1 work hour x 85 per hour = \$85	\$0	\$85	\$33,320
New cleaning, weighing, and replacement	Up to 130 work-hours X \$85 per hour = Up to \$11,050	Up to \$18,118	Up to \$29,168	Up to \$11,433,856

The FAA estimates the following costs to do any necessary installations or replacements that would be required based on the results of the inspections and weighing. The FAA has no way of determining the number of aircraft that might need these actions:

**Estimated costs of on-condition actions**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Installation or replacement	Up to 129 work-hours x \$85 per hour = Up to \$10,965	Up to \$18,118	Up to \$29,083

The FAA has included all known costs in this cost estimate. According to the manufacturer, however, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

**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.



## **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 that the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would 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:

- a. Removing Airworthiness Directive 2020-12-08, Amendment 39-21143 (85 FR 36312, June 16, 2020); and

- b. Adding the following new airworthiness directive:

**Embraer S.A. (Type Certificate previously held by Empresa Brasileira de Aeronáutica S.A.):** Docket No. FAA-2020-1073; Project Identifier MCAI-2020-01303-A.

**(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2020-12-08, Amendment 39-21143 (85 FR 36312, June 16, 2020) (AD 2020-12-08).

**(c) Applicability**

This AD applies to Embraer S.A. (type certificate previously held by Empresa Brasileira de Aeronáutica S.A.) Model EMB-505 airplanes, all serial numbers, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 5520, Elevator Structure; 5540, Rudder Structure; and 5751, Ailerons.

**(e) Unsafe Condition**

This AD was prompted by reports of corrosion in the mass-balance weights of the flight control surfaces and a determination that new airworthiness limitations are necessary. The FAA is issuing this AD to address corrosion in the mass-balance weights of the flight control surfaces. The unsafe condition, if not addressed, could result in loss of mass or the detachment of the mass-balance weights, resulting in an unbalanced control surface, which could lead to flutter and loss of airplane control.

**(f) Compliance**

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

**(g) Retained Compliance Times for the Actions Required by Paragraph (h) of this AD, with No Changes**

This paragraph restates the requirements of paragraph (g) of AD 2020-12-08, with no changes. For airplanes with a serial number listed in Embraer Alert Service Bulletin SB505-55-A004, Revision 5, dated December 12, 2019 (SB505-55-A004R5): At the applicable compliance time specified in paragraph (g)(1), (2), or (3) of this AD, accomplish the actions required by paragraph (h) of this AD.

(1) For airplanes with a serial number listed in Group 1 of Embraer Alert SB505-55-A004R5: Within 3 calendar days or 5 hours time-in-service (TIS), whichever occurs first, after July 1, 2020 (the effective date of AD 2020-12-08).

(2) For airplanes with a serial number listed in Group 3 of SB505-55-A004R5: Within 30 calendar days or 50 hours TIS, whichever occurs first, after July 1, 2020 (the effective date of AD 2020-12-08).

(3) For airplanes with a serial number listed in Group 2 of SB505-55-A004R5: Within 60 calendar days or 100 hours TIS, whichever occurs first, after July 1, 2020 (the effective date of AD 2020-12-08).

**(h) Retained Required Actions, without Reporting Requirement**

This paragraph restates the requirements of paragraph (h) of AD 2020-12-08, without the requirement to report information to Embraer. For airplanes with a serial number listed in SB505-55-A004R5, at the applicable time specified in paragraph (g) of this AD: Do the inspections identified in paragraphs (h)(1) through (6) of this AD and, before further flight, install or replace the mass-balance, as applicable, and replace the attachment parts, in accordance with Parts I through VI and Part VIII, as applicable, of the Accomplishment Instructions of SB505-55-A004R5; except, where the service information tells you to submit information to Embraer, this AD does not require that action.

(1) Do an inspection of the elevator horn mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance.

(2) Do an inspection of the elevator internal mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance. You must remove and weigh the mass-balance weight even if there is no sign of corrosion or material fragmentation.

(3) Do an inspection of the elevator adjustable mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance.

(4) Do an inspection of the aileron mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance. You must remove and weigh the mass-balance weight even if there is no sign of corrosion or material fragmentation.

(5) Do an inspection of the rudder adjustable mass-balance weights and attachment parts for corrosion and fragmentation, and weigh each mass-balance.

(6) Do an inspection of the rudder internal mass-balance weights and attachment parts for corrosion and fragmentation and, weigh each mass-balance. You must remove and weigh the mass-balance weight even if there is no sign of corrosion or material fragmentation.

**(i) Retained Revision of the Airworthiness Limitations Section, with No Changes**

This paragraph restates the requirements of paragraph (i) of AD 2020-12-08, with no changes. Within 10 days after July 1, 2020 (the effective date of AD 2020-12-08), revise the airworthiness limitations section (ALS) of the existing maintenance manual or instructions for continued airworthiness to add the information in table 1 to paragraph (i) of this AD and the initial compliance time information in table 2 to paragraph (i) of this AD.

**Table 1 of paragraph (i) – New Airworthiness Limitations**

<b>Maintenance Requirement</b>	<b>Inspection Type</b>	<b>Inspection Title</b>	<b>Interval</b>
55-20-04-001	General visual inspection (GVI)	Internal GVI of Elevator Mass-Balance Weight and Attachments	60 Months (MO)
55-20-04-002	Special detailed inspection (SDI)	SDI (Borescope Method) of Elevator Mass-Balance Weight and Attachments	60 MO
55-40-04-002	GVI	Internal GVI of Rudder Adjustable Mass-Balance Weight and Attachments	60 MO

<b>Maintenance Requirement</b>	<b>Inspection Type</b>	<b>Inspection Title</b>	<b>Interval</b>
55-40-04-003	SDI	SDI (Borescope Method) of Rudder Fixed Mass-Balance Weight and Attachments	60 MO
57-60-00-001	Detailed visual inspection (DET)	External DET of the Aileron	60 MO

**Table 2 of paragraph (i) – Initial compliance time for the inspections listed in Table 1 of paragraph (i) of this AD**

<b>Age of airplane on July 1, 2020 (the effective date of AD 2020-12-08)</b>	<b>Initial Compliance Time for Each Inspection</b>
Less than 48 MO since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness	Within 60 MO after the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness
Between 48 MO and 72 MO since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness	Within 12 MO after July 1, 2020 (the effective date of AD 2020-12-08), or within 72 MO after the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness, whichever occurs first
More than 72 MO since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness	Within 30 days after July 1, 2020 (the effective date of AD 2020-12-08)

**(j) Retained Provision: No Alternative Actions or Intervals, with No Changes**

This paragraph restates the requirements of paragraph (j) of AD 2020-12-08, with no changes. After the ALS has been revised as required by paragraph (i) of this AD, no alternative inspection intervals may be approved, except as provided in paragraph (p) of this AD.

**(k) New Definition**

For the purposes of this AD, “since new” is defined as since the date of issuance of the original airworthiness certificate or the original export certificate of airworthiness.

**(l) New Elevator Mass-Balance Actions (Groups 1, 2, and 3)**

At the applicable compliance time specified in paragraph (1)(1), (2), or (3) of this AD, clean, weigh, and, as applicable, install or replace the elevator mass-balances; or replace the elevator mass-balances; as applicable, in accordance with Part I of the Accomplishment Instructions in Embraer Service Bulletin SB505-55-0004, Revision 01, dated June 24, 2020 (SB505-55-0004R01). Where steps (1)(d), (2)(d), and (3)(e) of Part I

of the Accomplishment Instructions in SB505-55-0004R01 reference “criteria of the PART I,” use the criteria in section 1.D. of SB505-55-0004R01.

(1) For airplanes with a serial number listed as Group 1 or Group 3 in paragraphs 1.A.(1)(a) and (c), respectively, of SB505-55-0004R01: Within 12 months after the effective date of this AD.

(2) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(1)(b) of SB505-55-0004R01, which are not included in the effectivity of SB505-55-A004R5 or Embraer Alert Service Bulletin SB505-55-A004, Revision 06, dated March 25, 2020 (SB505-55-A004R06): At the applicable compliance time specified in paragraph (1)(2)(i), (ii), (iii), (iv), (v), or (vi) of this AD.

(i) For airplanes with 12 or fewer months since new as of the effective date of this AD: Within 18 months after the effective date of this AD.

(ii) For airplanes with more than 12 months but 24 or fewer months since new as of the effective date of this AD: Within 12 months after the effective date of this AD.

(iii) For airplanes with more than 24 months but 36 or fewer months since new as of the effective date of this AD: Within 9 months after the effective date of this AD.

(iv) For airplanes with more than 36 months but 48 or fewer months since new as of the effective date of this AD: Within 7 months after the effective date of this AD.

(v) For airplanes with more than 48 months but 60 or fewer months since new as of the effective date of this AD: Within 6 months after the effective date of this AD.

(vi) For airplanes with more than 60 months since new as of the effective date of this AD: Within 5 months after the effective date of this AD.

(3) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(1)(b) of SB505-55-0004R01, which are included in the effectivity of SB505-55-A004R5 or SB505-55-A004R06: Before further flight.

**(m) New Aileron Mass Balance Actions (Groups 1 and 2)**

At the applicable compliance time specified in paragraph (m)(1), (2), or (3) of this AD, clean, weigh, and, as applicable, install or replace the aileron mass-balance in accordance with Part II of the Accomplishment Instructions in SB505-55-0004R01.

Where steps (1)(c) and (2)(c) of Part II of the Accomplishment Instructions in SB505-55-0004R01 reference “criteria of the PART II,” use the criteria in section 1.D. of SB505-55-0004R01.

(1) For airplanes with a serial number listed as Group 1 in paragraph 1.A.(2)(a) of SB505-55-0004R01: Within 60 months after the effective date of this AD.

(2) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(2)(b) of SB505-55-0004R01, which are not included in the effectivity of SB505-55-A004R5 or SB505-55-A004R06: At the applicable compliance time specified in paragraph (m)(2)(i) or (ii) of this AD.

(i) For airplanes with 59 or fewer months since new as of the effective date of this AD: Within 60 months since new.

(ii) For airplanes with more than 59 months since new as of the effective date of this AD: Within 120 months since new.

(3) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(2)(b) of SB505-55-0004R01, which are included in the effectivity of SB505-55-A004R5 or SB505-55-A004R06: Before further flight.

**(n) New Rudder Mass Balance Actions (Groups 1 and 2)**

At the applicable compliance time specified in paragraph (n)(1), (2), or (3) of this AD, clean, weigh, and, as applicable, install or replace the rudder mass-balances in accordance with Part III of the Accomplishment Instructions in SB505-55-0004R01.

Where steps (1)(c) and (2)(c) of Part III of the Accomplishment Instructions in SB505-55-0004R01 reference “criteria of the PART III,” use the criteria in section 1.D. of SB505-55-0004R01.

(1) For airplanes with a serial number listed as Group 1 in paragraph 1.A.(3)(a) of SB505-55-0004R01: At the applicable compliance time specified in paragraph (n)(1)(i), (ii), or (iii) of this AD.

(i) For airplanes with 59 or fewer months since new as of the effective date of this AD: Within 60 months since new.



(ii) For airplanes with more than 59 months but 119 or fewer months since new as of the effective date of this AD: Within 120 months since new.

(iii) For airplanes with more than 119 months since new as of the effective date of this AD: Within 6 months after the effective date of this AD.

(2) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(3)(b) of SB505-55-0004R01, which are not included in the effectivity of SB505-55-A004R5 or SB505-55-A004R06: At the applicable compliance time specified in paragraph (n)(2)(i) or (ii) of this AD.

(i) For airplanes with 59 or fewer months since new as of the effective date of this AD: Within 60 months since new.

(ii) For airplanes with more than 59 months since new as of the effective date of this AD: Within 120 months since new.

(3) For airplanes with a serial number listed as Group 2 in paragraph 1.A.(3)(b) of SB505-55-0004R01, which are included in the effectivity of SB505-55-A004R5 or SB505-55-A004R06: Before further flight.

**(o) Credit for Previous Actions**

(1) This paragraph provides credit for the actions required by paragraph (h) of this AD, if you performed those actions before July 1, 2020 (the effective date of AD 2020-12-08) using the service information specified in paragraphs (o)(1)(i), (ii), or (iii) of this AD.

(i) Embraer Alert Service Bulletin SB505-55-A004, Revision 2, dated November 6, 2019.

(ii) Embraer Alert Service Bulletin SB505-55-A004, Revision 3, dated November 13, 2019.

(iii) Embraer Alert Service Bulletin SB505-55-A004, Revision 4, dated November 21, 2019.

(2) This paragraph provides credit for the actions required by paragraph (h) of this AD, if you performed those actions before the effective date of this AD using SB505-55-A004R06.

(3) This paragraph provides credit for the initial inspections required by table 2 of paragraph (i) of this AD, if you performed those actions before July 1, 2020 (the effective date of AD 2020-12-08) using the service information specified in paragraphs (o)(3)(i), (ii), or (iii) of this AD.

(i) Embraer Alert Service Bulletin SB505-55-A004, Revision 2, dated November 6, 2019.

(ii) Embraer Alert Service Bulletin SB505-55-A004, Revision 3, dated November 13, 2019.

(iii) Embraer Alert Service Bulletin SB505-55-A004, Revision 4, dated November 21, 2019.

(4) This paragraph provides credit for the initial inspections required by table 2 of paragraph (i) of this AD, if you performed those actions before the effective date of this AD using SB505-55-A004R5 or SB505-55-A004R06.

(5) This paragraph provides credit for the actions required by paragraphs (l), (m), and (n) of this AD, if you performed those actions before the effective date of this AD using Embraer Service Bulletin SB505-55-0004, dated March 25, 2020.

**(p) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, General Aviation & Rotorcraft Section, International Validation 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 General Aviation & Rotorcraft Section, International Validation Branch, send it to the attention of the person identified in Related Information or email: 9-AVS-AIR-730-AMOC@faa.gov.

(2) 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.

(3) AMOCs approved for AD 2020-12-08 are approved as AMOCs for the corresponding provisions of this AD.

**(q) Related Information**

(1) For more information about this AD, contact Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov.

(2) Refer to Mandatory Continuing Airworthiness Information (MCAI) Brazilian AD No. 2020-09-01, dated September 8, 2020, for related information. You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1073.

(3) For service information identified in this AD, contact Phenom Maintenance Support, Avenida Brigadeiro Faria Lima, 2170, P.O. Box 36/2, São José dos Campos, 12227-901, Brazil; phone: +55 12 3927 1000; email: phenom.reliability@embraer.com.br; website: <https://www.embraer.com.br/en-US/Pages/home.aspx>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued on August 31, 2021.

Ross Landes, Deputy Director for Regulatory Operations,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2021-19304 Filed: 9/8/2021 8:45 am; Publication Date: 9/9/2021]