

# 2010-04-08

## EMPRESA BRASILEIRA DE AERONAUTICA S.A. (EMBRAER)

Amendment 39-16201

Docket No. FAA-2009-0418; Directorate Identifier 2009-NM-020-AD

### PREAMBLE

#### Effective Date

(a) This airworthiness directive (AD) becomes effective March 30, 2010.

#### Affected ADs

(b) None.

#### Applicability

(c) This AD applies to Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 190-100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW airplanes, certificated in any category, serial numbers 19000002, 19000004, and 19000006 through 19000062 inclusive.

#### Subject

(d) Air Transport Association (ATA) of America Code 57: Wings.

#### Reason

(e) The mandatory continuing airworthiness information (MCAI) states:

During routine inspection procedures on the wing assembly line it was identified the possibility of cracks and deformation developing during assembly on the internal wing spars and rib flanges, causing a safe[ty] margin reduction.

\* \* \* \* \*

The unsafe condition is cracking and deformation of wing spar and rib flanges, which could result in loss of structural integrity of the wing. Corrective actions include performing a detailed inspection for damage on wing spar I, II, and III flanges and on certain rib flanges, and contacting Agência Nacional de Aviação Civil (ANAC) (or its delegated agent) and Embraer for an approved repair.

#### Actions and Compliance

(f) Unless already done, do the following actions.

(1) Before the accumulation of 5,000 total flight cycles on the airplane, or within 1,000 flight cycles after the effective date of this AD, whichever occurs later: Perform a detailed inspection of the left and right wing rib and spars I, II, and III flanges to detect cracking or deformation, in accordance with the Accomplishment Instructions of Embraer Service Bulletin 190-57-0023, dated June 9, 2008.

(2) If any cracking or deformation is detected during the inspection required by paragraph (f)(1) of this AD, before further flight, send the inspection results and request for repair instructions to ANAC (or its delegated agent) and Embraer Technical Support; e-mail: [structure@embraer.com.br](mailto:structure@embraer.com.br); and do the repair.

(3) If no cracking or deformation is detected during the inspection required by paragraph (f)(1) of this AD, no further action is required by this AD.

## FAA AD Differences

### NOTE 1

**This AD differs from the MCAI and/or service information as follows: Although the MCAI or service information allows further flight after cracks are found during compliance with the required action, paragraph (f)(2) of this AD requires that you repair the crack(s) before further flight.**

## Other FAA AD Provisions

(g) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Kenny Kaulia, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2848; fax (425) 227-1149. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

## Related Information

(h) Refer to MCAI Brazilian Airworthiness Directive 2008-10-03, effective October 21, 2008; and

Embraer Service Bulletin 190-57-0023, dated June 9, 2008; for related information.

### **Material Incorporated by Reference**

(i) You must use Embraer Service Bulletin 190-57-0023, dated June 9, 2008, as applicable, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), 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; e-mail: [distrib@embraer.com.br](mailto:distrib@embraer.com.br); Internet: <http://www.flyembraer.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221 or 425-227-1152.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**FOR FURTHER INFORMATION CONTACT:** Kenny Kaulia, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2848; fax (425) 227-1149.

Issued in Renton, Washington, on February 5, 2010.

**Stephen P. Boyd**, *Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*

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[Rules and Regulations]  
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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2009-0418; Directorate Identifier 2009-NM-020-AD; Amendment 39-16201; AD 2010-04-08]**

**RIN 2120-AA64**

**Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 190-100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

During routine inspection procedures on the wing assembly line it was identified the possibility of cracks and deformation developing during assembly on the internal wing spars and rib flanges, causing a safe[ty] margin reduction.

\* \* \* \* \*

The unsafe condition is cracking and deformation of wing spar and rib flanges, which could result in loss of structural integrity of the wing. We are issuing this AD to require actions to correct the unsafe condition on these products.

**DATES:** This AD becomes effective March 30, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of March 30, 2010.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Kenny Kaulia, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2848; fax (425) 227-1149.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on May 7, 2009 (74 FR 21285). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

During routine inspection procedures on the wing assembly line it was identified the possibility of cracks and deformation developing during assembly on the internal wing spars and rib flanges, causing a safe[ty] margin reduction.

\* \* \* \* \*

The unsafe condition is cracking and deformation of wing spar and rib flanges, which could result in loss of structural integrity of the wing. Corrective actions include performing a detailed inspection for damage on wing spar I, II, and III flanges and on certain rib flanges, and contacting Agência Nacional de Aviação Civil (ANAC) (or its delegated agent) and Embraer for an approved repair. You may obtain further information by examining the MCAI in the AD docket.

**Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

**Request To Remove Certain Model ERJ 190 Airplanes**

Embraer requests that we remove Model ERJ 190-100 ECJ airplanes from the applicability of the NPRM, because that model is not included in the effectivity statement of Embraer Service Bulletin 190-57-0023, dated June 9, 2008, and is not subject to the unsafe condition addressed by the NPRM.

We agree, for the reasons provided by the commenter. We have revised the applicability statement of the AD accordingly.

**Request To Change Repair Contact Authority**

Embraer requests that we change paragraph (f)(2) of the NPRM to require that any repair of detected cracking or deformation be approved by either the FAA or the ANAC, and that Embraer may be contacted for repair support. Embraer states that the appropriate corrective action would be applying an authority-approved repair to the damaged wing rib and spar flanges.

We disagree with the commenter's request to change paragraph (f)(2) of this AD. As specified in paragraph (g)(2) of this AD, corrective actions obtained from a manufacturer cannot be used unless they are FAA-approved. Paragraph (g)(2) of this AD also states that corrective actions are considered FAA-approved if they are approved by the State of Design Authority, in this case ANAC (or its delegated agent). We have not changed the AD in this regard.

## **Request To State When No Further Action Is Required**

Embraer requests that we add a paragraph (f)(3) to the NPRM stating "If no cracking or deformation is detected during the inspection required by paragraph (f)(1) of this AD, no further action is required." Embraer did not provide justification for this request.

We agree with Embraer's request to add the statement as clarification. We have therefore added paragraph (f)(3) to the AD.

## **Explanation of Change to Costs of Compliance**

Since issuance of the NPRM, we have increased the labor rate used in the Costs of Compliance from \$80 per work-hour to \$85 per work-hour. The Costs of Compliance information, below, reflects this increase in the specified hourly labor rate.

## **Conclusion**

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

## **Differences Between This AD and the MCAI or Service Information**

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a NOTE within the AD.

## **Costs of Compliance**

We estimate that this AD will affect 27 products of U.S. registry. We also estimate that it will take about 10 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$22,950, or \$850 per product.

## **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.

## **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD: