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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2005-21302; Directorate Identifier 2004-NM-189-AD; Amendment 39-14267; AD 2005-19-02]**

**RIN 2120-AA64**

### **Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-110P1 and EMB-110P2 Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all EMBRAER Model EMB-110P1 and EMB-110P2 airplanes. This AD requires repetitive inspections for corrosion or cracking of the rotating cylinder assembly in the nose landing gear (NLG), and related investigative/corrective actions if necessary. This AD also requires the eventual replacement of the rotating cylinder assembly with a new part, which terminates the need for the repetitive inspections. This AD results from reports of corrosion on the NLG rotating cylinder assembly. We are issuing this AD to prevent cracks from emanating from corrosion pits in the NLG rotating cylinder assembly, which could result in failure of the NLG.

**DATES:** Effective October 19, 2005.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of October 19, 2005.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC.

Contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343-CEP 12.225, Sao Jose dos Campos-SP, Brazil, for service information identified in this AD.

**FOR FURTHER INFORMATION CONTACT:** Todd Thompson, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1175; fax (425) 227-1149.

## **SUPPLEMENTARY INFORMATION:**

### **Examining the Docket**

You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

### **Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to all EMBRAER Model EMB-110P1 and EMB-110P2 airplanes. That NPRM was published in the Federal Register on May 25, 2005 (70 FR 30028). That NPRM proposed to require repetitive inspections for corrosion or cracking of the rotating cylinder assembly in the nose landing gear (NLG), and related investigative/corrective actions if necessary. That NPRM also proposed to require the eventual replacement of the rotating cylinder assembly with a new part, which terminates the need for the repetitive inspections.

### **Comments**

We provided the public the opportunity to participate in the development of this AD. We have considered the comments on the NPRM that have been received from a single commenter.

### **Request for Clarification of Paragraph (g)**

The commenter asks for clarification of the language used to identify the location of the instructions for the evaluation inspection specified in paragraph (g) of the NPRM. The commenter reiterates the language used in that paragraph and asks that paragraph (g) be changed to read, "Within 150 flight hours or 4 months after the effective date of this AD, whichever is first: Perform the evaluation inspection for corrosion or cracking of the nose landing gear (NLG) rotating cylinder assembly, by doing all the actions specified in the Evaluation Inspection section of EMBRAER Service Bulletin 110-32-0088, Revision 03, Part II." (Part II of the service bulletin is identified in the NPRM as the location of the procedures for performing the evaluation inspection.)

We infer that the commenter is asking that paragraph (g) of this AD be changed to identify the exact location of the procedures used for accomplishing the evaluation inspection specified in the service bulletin. Those procedures are identified in the "Evaluation Inspection" section of the service bulletin (paragraph 2.3.1.1.). We agree and have identified that section in paragraph (g) for clarification.

### **Request To Change Paragraph (h)(1) To Add Terminating Action**

The commenter asks that paragraph (h)(1) of the NPRM be changed to add that accomplishing the requirements specified in that paragraph would terminate the requirements specified in paragraph (i) of the NPRM. The commenter states that it is not necessary to replace the NLG rotating cylinder with a new one, as required by paragraph (i), if the bench detailed inspection specified in paragraph (h)(1) reveals no signs of corrosion or cracking. The commenter notes that the protective coating must be applied in order to resume normal operation of the airplane. The commenter reiterates the language used in paragraph (h)(1) and asks that it be changed to read, "If no corrosion or cracking is found during any inspection, before further flight: Perform all of the actions specified in the

Protection Procedure section of EMBRAER Service Bulletin 110-32-0088, Revision 03, Part II. Application of this protection on parts with no signs of corrosion or cracking terminates the requirement of paragraph (i)."

We do not agree to change paragraph (h)(1) of the AD. Application of the protective coating on parts with no signs of corrosion or cracking does not terminate the requirements of paragraph (i) of the AD. Eventual replacement of the NLG is required regardless of inspection findings, and only that replacement terminates the repetitive inspections required by this AD.

**Clarification of Paragraph (f) and Note 1**

We have changed paragraph (f) and Note 1 of the NPRM to provide the correct service bulletin citation.

**Conclusion**

We have carefully reviewed the available data, including the comments that have been received, and determined that air safety and the public interest require adopting the AD with the changes described previously. These changes will neither increase the economic burden on any operator nor increase the scope of the AD.

**Costs of Compliance**

The following table provides the estimated costs for U.S. operators to comply with this AD.

<b>ESTIMATED COSTS</b>						
<b>Action</b>	<b>Work hours</b>	<b>Average labor rate per hour</b>	<b>Parts cost</b>	<b>Cost per airplane</b>	<b>Number of U.S.-registered airplanes</b>	<b>Fleet cost</b>
Inspections in Part II of service bulletin, per inspection cycle.	5	\$65	None	\$325	30	\$9,750, per inspection cycle.
Application of protection compound	2	65	None	130	30	\$3,900.
Replacement of rotating cylinder assembly (terminating action).	9	65	\$38,000	38,585	30	\$1,157,550.

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

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under 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. See the ADDRESSES section for a location to examine the regulatory evaluation.

## **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 Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at [www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2005-19-02 Empresa Brasileira De Aeronautica S.A. (EMBRAER):** Amendment 39-14267.  
Docket No. FAA-2005-21302; Directorate Identifier 2004-NM-189-AD.

## Effective Date

- (a) This AD becomes effective October 19, 2005.

## Affected ADs

- (b) None.

## Applicability

- (c) This AD applies to all EMBRAER Model EMB-110P1 and EMB-110P2 airplanes, certificated in any category.

## Unsafe Condition

- (d) This AD results from reports of corrosion on the rotating cylinder assembly in the nose landing gear (NLG). We are issuing this AD to prevent cracks from emanating from corrosion pits in the NLG rotating cylinder assembly, which could result in failure of the NLG.

## Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

## Service Bulletin Reference

- (f) The term "service bulletin," as used in this AD, means the Accomplishment Instructions of EMBRAER Service Bulletin 110-32-0088, Revision 03, dated February 11, 2004.

## Inspections and Related Investigative/Corrective Actions

- (g) Within 150 flight hours or 4 months after the effective date of this AD, whichever is first: Perform the evaluation inspection for corrosion or cracking of the NLG rotating cylinder assembly,

by doing all the actions in accordance with Part II, paragraph 2.3.1.1., "Evaluation Inspection," of the service bulletin. Depending on the results of the inspections, perform the applicable action specified in paragraph (g)(1), (g)(2), (g)(3), or (g)(4) of this AD.

(1) If no corrosion or cracking is found: Perform the bench detailed inspection of the rotating cylinder assembly required by paragraph (h) of this AD at the time specified in paragraph (h) of this AD.

(2) If only light corrosion is found: Repeat the inspection required by paragraph (g) of this AD thereafter at intervals not to exceed 150 flight hours or 4 months, whichever occurs first, until the requirements specified in paragraph (h) or (i) of this AD are accomplished.

(3) If severe corrosion is found: Before further flight, perform the bench detailed inspection of the rotating cylinder assembly required by paragraph (h) of this AD for evidence of further corrosion or cracking.

**Note 1:** The criteria for determining light or severe corrosion are included in EMBRAER Service Bulletin 110-32-0088, Revision 03, dated February 11, 2004. The presence of oxidation is not considered to be corrosion.

(4) If any cracking is found, before further flight: Replace the rotating cylinder assembly with a new part, in accordance with Part II of the service bulletin. Replacing the rotating cylinder assembly terminates the requirements of paragraphs (h) and (i) of this AD.

### **Bench Inspections, Protection Procedures, and Corrective Actions**

(h) Within 600 flight hours or 12 months after the effective date of this AD, whichever occurs first: Perform the bench detailed inspection for corrosion or cracking of the NLG rotating cylinder assembly in accordance with Part II of the service bulletin.

(1) If no corrosion or cracking is found during any inspection, before further flight: Perform all of the actions specified in Part II, paragraph 2.3.1.3., "Protection Procedure," of the service bulletin.

(2) If only light corrosion is found during any inspection, before further flight: Perform all of the actions specified in Part II, paragraph 2.3.1.3., "Protection Procedure," of the service bulletin. Thereafter, repeat the inspection required by paragraph (g) of this AD at intervals not to exceed 600 flight hours or 9 months, whichever occurs first, until accomplishing paragraph (i) of this AD.

(3) If any cracking or severe corrosion is found during any inspection, before further flight: Replace the rotating cylinder assembly with a new part in accordance with Part II of the service bulletin. Replacing the rotating cylinder assembly terminates the inspections required by paragraphs (g)(2) and (h)(2) of this AD.

### **Replacement**

(i) If any NLG rotating cylinder assembly is found to have light corrosion during any inspection required by paragraph (g)(2) or (h)(2) of this AD, as applicable: Within 3,000 flight hours or 36 months after the effective date of this AD, whichever occurs first, replace the NLG rotating cylinder assembly with a new part, in accordance with Part II of the service bulletin. Replacing the rotating cylinder assembly terminates the inspections required by paragraphs (g)(2) and (h)(2) of this AD.

### **Actions Accomplished Previously**

(j) Actions accomplished before the effective date of this AD in accordance with EMBRAER Service Bulletin 110-32-0088, Revision 01, dated September 1, 2003; or EMBRAER Service

Bulletin 110-32-0088, Revision 02, dated October 30, 2003; are acceptable for compliance with the corresponding requirements of this AD.

### **Reporting Not Required**

(k) Where the service bulletin states to report inspection results to EMBRAER, that action is not required by this AD.

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

(l) The Manager, International Branch, ANM-116, Transport Airplane Directorate, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

### **Related Information**

(m) Brazilian airworthiness directive 2004-04-01R1, effective July 27, 2004, also addresses the subject of this AD.

### **Material Incorporated by Reference**

(n) Unless otherwise specified in this AD, the actions must be done in accordance EMBRAER Service Bulletin 110-32-0088, Revision 03, dated February 11, 2004, which contains the following list of effective pages:

<b>Page No.</b>	<b>Revision level shown on page</b>	<b>Date shown on page</b>
1-8	03	February 11, 2004.
2-7, 9	01	September 1, 2003.

The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343-CEP 12.225, Sao Jose dos Campos-SP, Brazil, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA).

For information on the availability of this material at the 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).

Issued in Renton, Washington, on September 6, 2005.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-18057 Filed 9-13-05; 8:45 am]

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