

[Federal Register: March 25, 2010 (Volume 75, Number 57)]
[Rules and Regulations]
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From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr25mr10-4]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0274; Directorate Identifier 2010-NM-055-AD; Amendment 39-16248; AD 2010-07-04]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 170 and Model ERJ 190 Airplanes

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

ACTION: Final rule; request for comments.

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:

It has been determined that due to an intermittent communication between AMS [Air Management System] controller cards and both Secondary Power Distribution Assemblies (SPDAs) the message "RECIRC SMK DET FAIL" is displayed in the Engine Indication and Crew Alerting System (EICAS). This communication failure could result in loss of automatic activation of engine inlet ice protection system when in ice condition. In this situation the caution messages "A-I Eng 1 Fail" and "A-I Eng 2 Fail" will be displayed and if the flight crews do not follow the associated procedures ice may accrete in the engines inlet and cause a dual engine shut down.

* * * * *

This AD requires actions that are intended to address the unsafe condition described in the MCAI.

DATES: This AD becomes effective April 9, 2010.

We must receive comments on this AD by May 10, 2010.

ADDRESSES: You may send comments 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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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 this AD, 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.

FOR FURTHER INFORMATION CONTACT: Cindy Ashforth, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2768; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued Brazilian Airworthiness Directives 2010-01-01 and 2010-01-02, both effective January 31, 2010 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

It has been determined that due to an intermittent communication between AMS [Air Management System] controller cards and both Secondary Power Distribution Assemblies (SPDAs) the message "RECIRC SMK DET FAIL" is displayed in the Engine Indication and Crew Alerting System (EICAS). This communication failure could result in loss of automatic activation of engine inlet ice protection system when in ice condition. In this situation the caution messages "A-I Eng 1 Fail" and "A-I Eng 2 Fail" will be displayed and if the flight crews do not follow the associated procedures ice may accrete in the engines inlet and cause a dual engine shut down.

* * * * *

The required action includes revising the Limitations section of the airplane flight manual to prohibit dispatch with message "RECIRC SMK DET FAIL" displayed on the ground unless troubleshooting action confirms the message has not been triggered due to a failure of an AMS controller card. You may obtain further information by examining the MCAI in the AD docket.

FAA's Determination and Requirements of This AD

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 issuing this AD because we evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between the 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 FAA policies. Any such differences are highlighted in a NOTE within the AD.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because an intermittent communication failure between AMS controller cards and both SPDAs could result in the loss of automatic activation of the engine inlet ice protection system when in icing conditions. In this situation, the caution messages "A-I Eng 1 Fail" and "A-I Eng 2 Fail" will be displayed. If the flight crews do not follow the associated procedures, ice may accrete in the engines' inlet and cause a dual engine shut down. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2010-0274; Directorate Identifier 2010-NM-055-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD 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 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.

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.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, 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:



2010-07-04 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-16248.
Docket No. FAA-2010-0274; Directorate Identifier 2010-NM-055-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective April 9, 2010.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; Model ERJ 170-200 LR, -200 SU, and -200 STD 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; certificated in any category; equipped with Air Management System (AMS) controller cards having part number 1001050-1-YYY or 1001050-2-YYY containing software version Black Label 08 or lower installed.

Subject

- (d) Air Transport Association (ATA) of America Code 26: Fire protection.

Reason

- (e) The mandatory continued airworthiness information (MCAI) states:

It has been determined that due to an intermittent communication between AMS [Air Management System] controller cards and both Secondary Power Distribution Assemblies (SPDAs) the message "RECIRC SMK DET FAIL" is displayed in the Engine Indication and Crew Alerting System (EICAS). This communication failure could result in loss of automatic activation of engine inlet ice protection system when in ice condition. In this situation the caution messages "A-I Eng 1 Fail" and "A-I Eng 2 Fail" will be displayed and if the flight crews do not follow the associated procedures ice may accrete in the engines inlet and cause a dual engine shut down.

* * * * *

The required action includes revising the Limitations section of the airplane flight manual to prohibit dispatch with message "RECIRC SMK DET FAIL" displayed on the ground unless troubleshooting action confirms the message has not been triggered due to a failure of an AMS controller card.

Compliance

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

Actions

(g) Within 10 days after the effective date of this AD, revise the Limitations section of the airplane flight manual (AFM) to include the following statement. This may be done by inserting a copy of this AD in the AFM.

"Dispatch with the message 'RECIRC SMK DET FAIL' displayed on the ground is prohibited unless troubleshooting action confirms the message has not been triggered due to a failure of an AMS controller card."

Note 1: When a statement identical to that in paragraph (g) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

Note 2: The limitation and procedure specified in paragraph (g) of this AD is an interim solution until a final action is identified, at which time the FAA might consider further rulemaking.

FAA AD Differences

Note 3: This AD differs from the MCAI and/or service information as follows: No differences.

Other FAA AD Provisions

(h) 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: Cindy Ashforth, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2768; 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. The AMOC approval letter must specifically reference this AD.

(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.

(i) Special Flight Permits: We are prohibiting the issuance of special flight permits to operate the airplane to a location to replace the AMS controller card, unless the following condition is met: The flight crew must manually engage the engine anti-ice system if icing conditions occur during any ferry flight.

Related Information

(j) Refer to MCAI Brazilian Airworthiness Directives 2010-01-01 and 2010-01-02, both effective January 31, 2010, for related information.

Material Incorporated by Reference

(k) None.

Issued in Renton, Washington, on March 16, 2010.
Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.