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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2009-0150; Directorate Identifier 2009-CE-010-AD; Amendment 39-15830; AD 2009-05-06]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-500 Airplanes**

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

**ACTION:** Final rule; request for comments.

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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) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

There is a possibility that during a go around procedure with a flap system failed the stall warning and the stick pusher triggering angles are anticipated reducing the margin between the real angle of attack and the stick pusher triggering angle. If the stick pusher is activated at a low altitude the pilot may be not able to recover the airplane control. Since this condition affects flight safety, an immediate corrective action is required. Thus, sufficient reason exists to request compliance with this EAD in the indicated time limit without prior notice.

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

**DATES:** This AD becomes effective February 27, 2009.

We must receive comments on this AD by March 30, 2009.

**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 20590, 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 Management Facility 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 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:** Karl Schletzbaum, Aerospace Engineer, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4146; fax: (816) 329-4090.

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

The AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL–BRAZIL, which is the aviation authority for Brazil, has issued EAD No.: 2009-02-04, dated February 13, 2009 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

There is a possibility that during a go around procedure with a flap system failed the stall warning and the stick pusher triggering angles are anticipated reducing the margin between the real angle of attack and the stick pusher triggering angle. If the stick pusher is activated at a low altitude the pilot may be not able to recover the airplane control. Since this condition affects flight safety, an immediate corrective action is required. Thus, sufficient reason exists to request compliance with this EAD in the indicated time limit without prior notice.

You may obtain further information by examining the MCAI in the AD docket.

#### **FAA's Determination and Requirements of the 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 this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all information provided by the State of Design Authority and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

#### **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 have also required different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are described in a separate paragraph of the AD. These requirements take precedence over those copied from the MCAI.

## **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 if the stick pusher is activated at a low altitude the pilot may not be able to recover the airplane control. 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-2009-0150; Directorate Identifier 2009-CE-010-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 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.

## **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:



**2009-05-06 Empresa Brasileira de Aeronautica S.A. (EMBRAER):** Amendment 39-15830;  
Docket No. FAA-2009-0150; Directorate Identifier 2009-CE-010-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective February 27, 2009.

**Affected ADs**

- (b) None.

**Applicability**

- (c) This AD applies to Models EMB-500 airplanes, all serial numbers, equipped with the stall warning computer part number (P/N) C100106-1, certificated in any category.

**Subject**

- (d) Air Transport Association of America (ATA) Code 27: Flight Controls.

**Reason**

- (e) The mandatory continuing airworthiness information (MCAI) states: There is a possibility that during a go around procedure with a flap system failed the stall warning and the stick pusher triggering angles are anticipated reducing the margin between the real angle of attack and the stick pusher triggering angle. If the stick pusher is activated at a low altitude the pilot may be not able to recover the airplane control. Since this condition affects flight safety, an immediate corrective action is required. Thus, sufficient reason exists to request compliance with this EAD in the indicated time limit without prior notice.

**Actions and Compliance**

- (f) Unless already done, before further flight, incorporate into the airplane flight manual (AFM) the following procedures and limitations section revisions. You may insert a copy of this AD into the appropriate sections of the AFM to comply with the requirements of this AD.

- (1) Revise the AFM by adding Figure 1 of this AD to the Limitations section 2.30.

**Figure 1 – AFM Limitations Section 2.30 Revision**

<p><b>FLAPS</b></p> <p>Flap FULL must not be used to land in no icing condition.</p>
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(2) Replace the GO-AROUND procedure in AFM Section 3-03, page 2, with the procedure in Figure 2 of this AD.

Figure 2 – AFM Section 3-03, GO-AROUND Procedure

**FLAPS MUST NOT BE RETRACTED DURING GO-AROUND MANEUVER**

**GO-AROUND**

TO/GA Buttons .....PRESS  
Thrust Levers.....TO/GA

Rotate the airplane following the flight director guidance.  
In case of flight director is inoperative, rotate the airplane according to the table below.

LANDING FLAPS POSITION	GO-AROUND PITCH ANGLE
2	7.5°

With positive rate of climb:  
LDG GEAR Lever .....UP  
Minimum Airspeed.....V<sub>AC</sub>

At the acceleration altitude proceed as in a normal takeoff.



(5) Replace the AFM performance tables (ANTI-ICE OFF) in Section 5-20, pages 2 and 3, with the table in Figure 5 of this AD.

Figure 5 – AFM Section 5-20, Performance Tables (ANTI-ICE OFF)

<b>APPROACH FLAPS 2 AND LANDING FLAPS 2</b>		
<b>ANTI-ICE OFF</b>		
<b>WEIGHT (kg)</b>	<b>APPROACH</b>	<b>LANDING (CLIMB/REFERENCE)</b>
	<b>FLAPS 2</b>	<b>FLAPS 2</b>
	<b>V<sub>AC</sub> – KIAS</b>	<b>V<sub>REF</sub> – KIAS</b>
3200	92	91
3300	93	91
3400	94	92
3500	95	93
3600	97	95
3700	98	96
3800	99	97
3900	100	98
4000	101	100
4100	102	101
4200	103	102
4300	104	104
4400	105	105
4500	107	106

(6) Replace the AFM performance tables (ANTI-ICE OFF) in Section 5-25, pages 2 and 3, with the table in Figure 6 of this AD.

Figure 6 – AFM Section 5-25, Performance Tables (ANTI-ICE OFF)

**MAXIMUM LANDING WEIGHT – CLIMB LIMITED  
APPROACH FLAPS 2 – LANDING FLAPS 2 – ANTI-ICE OFF**

TEMP (°C)	MAXIMUM LANDING WEIGHT (kg)					
	Altitude (ft)					
	-1000 ft	0 ft	1000 ft	2000 ft	3000 ft	4000 ft
-40	4430 (S)	4430 (S)	4430 (S)	4426 (A)	4275 (A)	4125 (A)
-35	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4279 (A)	4129 (A)
-30	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4283 (A)	4133 (A)
-25	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4287 (A)	4137 (A)
-20	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4290 (A)	4141 (A)
-15	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4294 (A)	4145 (A)
-10	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4297 (A)	4148 (A)
-5	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4301 (A)	4152 (A)
0	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4304 (A)	4156 (A)
5	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4305 (A)	4157 (A)
10	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4301 (A)	4154 (A)
15	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4297 (A)	4151 (A)
20	4430 (S)	4430 (S)	4430 (S)	4430 (S)	4284 (A)	4137 (A)
25	4430 (S)	4430 (S)	4430 (S)	4338 (A)	4169 (A)	3998 (A)
30	4430 (S)	4430 (S)	4311 (A)	4126 (A)	3954 (A)	3788 (A)
35	4430 (S)	4262 (A)	4080 (A)	3908 (A)	3744 (A)	3584 (A)
40	4191 (A)	4030 (A)	3866 (A)	3701 (A)	3544 (A)	3397 (A)
45	3977 (A)	3826 (A)	3665 (A)	3509 (A)	-	-
50	3773 (A)	3629 (A)	-	-	-	-

TEMP (°C)	MAXIMUM LANDING WEIGHT (kg)					
	Altitude (ft)					
	5000 ft	6000 ft	7000 ft	8000 ft	9000 ft	10000 ft
-40	3977 (A)	3847 (A)	3723 (A)	3603 (A)	3485 (A)	3410 (A)
-35	3981 (A)	3850 (A)	3727 (A)	3606 (A)	3488 (A)	3412 (A)
-30	3984 (A)	3854 (A)	3730 (A)	3610 (A)	3492 (A)	3415 (A)
-25	3988 (A)	3857 (A)	3734 (A)	3613 (A)	3495 (A)	3417 (A)
-20	3992 (A)	3861 (A)	3737 (A)	3616 (A)	3498 (A)	3419 (A)
-15	3995 (A)	3864 (A)	3740 (A)	3619 (A)	3501 (A)	3422 (A)
-10	3998 (A)	3867 (A)	3743 (A)	3623 (A)	3504 (A)	3424 (A)
-5	4002 (A)	3870 (A)	3747 (A)	3626 (A)	3508 (A)	3426 (A)
0	4005 (A)	3874 (A)	3750 (A)	3629 (A)	3511 (A)	3429 (A)
5	4007 (A)	3877 (A)	3752 (A)	3631 (A)	3513 (A)	3431 (A)
10	4006 (A)	3874 (A)	3750 (A)	3630 (A)	3512 (A)	3429 (A)
15	4005 (A)	3872 (A)	3747 (A)	3627 (A)	3509 (A)	3409 (A)
20	3987 (A)	3828 (A)	3678 (A)	3535 (A)	3378 (A)	3223 (A)
25	3821 (A)	3654 (A)	3496 (A)	3345 (A)	3198 (A)	3124 (A)
30	3619 (A)	3455 (A)	3302 (A)	3175 (A)	3124 (A)	3124 (A)
35	3416 (A)	3268 (A)	3154 (A)	-	-	-
40	3242 (A)	-	-	-	-	-

Note 1: The above limitation and procedures are considered an interim solution until a final action is identified, at which time AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL–BRAZIL (ANAC) and the FAA may consider further AD action.

Note 2: Operation in icing conditions is not affected by the above limitations and procedures.

### **FAA AD Differences**

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

### **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, Standards Office, 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: Karl Schletzbaum, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4146; fax: (816) 329-4090. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(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 ANAC, EAD No.: 2009-02-04, dated February 13, 2009.

Issued in Kansas City, Missouri, on February 20, 2009.  
Kim Smith,  
Manager, Small Airplane Directorate,  
Aircraft Certification Service.