

 SERVIÇO PÚBLICO FEDERAL DEPARTAMENTO DE AVIAÇÃO CIVIL	BRAZILIAN AIRWORTHINESS DIRECTIVE	
	EFFECTIVE DATE: 20 December 2001	AD No.: 2001-05-02R2

The following Airworthiness Directive (AD), issued by the Departamento de Aviação Civil (DAC) in accordance with provisions of Chapter IV, Title III of Código Brasileiro de Aeronáutica - Law NR 7,565 dated 19 December 1986 - and Regulamento Brasileiro de Homologação Aeronáutica (RBHA) 39, applies to all aircraft registered in the Registro Aeronáutico Brasileiro. No person may operate an aircraft to which this AD applies, unless it has previously complied with the requirements established herein.

AD No. 2001-05-02R2 - EMBRAER - Amendment 39-924.

APPLICABILITY:

This Airworthiness Directive is applicable to all Embraer EMB-120() aircraft models in operation.

CANCELLATION / REVISION:

This AD cancels and supersedes the AD No. 2001-05-02R1 – Amdt. 39-912, dated 30 Sep 2001, and is being issued to request a modification of the low speed warning system installation imposed by that revision, in order to permit the inhibition of the alarm with landing gear down and locked, or the cancellation of the aural alarm by the flight crew.

REASON:

Loss of control events involving the EMB-120 when flying in icing conditions have been recorded, which indicate flight crews may misjudge both the severity of the ice accretion and the need to take an immediate action to prevent excessive loss of airspeed, especially when using the autopilot.

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 AD in the indicated time limit without prior notice.

REQUIRED ACTION:

Incorporation of this AD in the Limitations Section of the applicable AFM; installation or replacement of placards in the main instrument panel; incorporation of AFM revisions; removal of leading edge boots inflation cycle control "light-heavy" switch; and installation of a low speed aural/visual alarm system with provisions for inhibition of the alarm and cancellation of the aural alarm by the flight crew.

COMPLIANCE:

Required as indicated below, unless already accomplished.

PART I: Within the next 20 flight operating hours after 6 Jun 2001, attach a copy of this PART I to the AFM adding the following limitations to the "Limitations Section", paragraph "Flight in Icing Conditions":

- 1) Do not use Autopilot;
- 2) Use the leading edge boots inflation cycle switches in the position "heavy" only;
- 3) Do not permit the airspeed to fall below 160 KIAS (with flaps and gear up) or below 140 KIAS (with flaps 15 and gear up).

PART II: Within the next 400 flight operating hours after 6 June 2001, accomplish as follows:

- 1) Install a placard in the main instrument panel, in accordance with the Embraer Service Bulletin No. 120-25-0258, original issue, or further revisions approved by the CTA, with the following wording:

"Whenever ice is detected:

- turn deice boots on
- disengage autopilot"

- 2) Incorporate an AFM revision that addresses:

On Limitations Section, paragraph "Flight in Icing Conditions:"

- prohibition to fly with autopilot engaged;
- definition of minimum airspeeds:
 - for flaps and gear up: 160 KIAS minimum;
 - for flaps 15 and gear up: 140 KIAS minimum;
- mandatory use of "heavy" mode of leading edge boots inflation cycle switches (if still available) in any condition of ice encounter.

- 3) Remove the leading edge boots inflation cycle control "light-heavy" switch, in accordance with the Embraer Service Bulletin No. 120-30-0032, original issue, or further revisions approved by the CTA.

PART III: No later than 01 Dec 2001 for operation in the northern hemisphere or 01 May 2002 for operation in the southern hemisphere, accomplish as follows:

- 1) In accordance with the Embraer Service Bulletin No. 120-30-0033 Rev. 01, or further revisions approved by the CTA:

- Install a placard in the main instrument panel with the following wording:

"Whenever ice is detected:
immediately turn deice boots on"

NOTE: If the placard described on PART II, item 1, has already been installed, it should be replaced by the placard above.

- Install a low speed aural/visual alarm system in the center glareshield.

NOTE: This system should be installed after or together with the removal of the leading edge boots inflation cycle control "light-heavy" switch, as per PART II, item 3 of this AD.

- 2) Incorporate an AFM revision that addresses:

On Limitation Section, paragraph "Flight in Icing Conditions":

- elimination of the instruction to disengage autopilot for airplanes that have the low speed aural/visual alarm system installed.

On Abnormal procedures, whenever the low speed aural/visual alarm system comes on:

- procedures to instruct pilots to increase airspeeds to above 160 KIAS and check de-ice boots operation
- procedures to monitor the ice accretion and corresponding procedures for flying in severe icing conditions, if these conditions are confirmed.

PARTE IV: No later than 01 Fev 2002 for operation in the northern hemisphere or 01 May 2002 for operation in the southern hemisphere, incorporate the modification of the low speed aural/visual alarm system, which permits the inhibition of the alarm when landing gear is down and locked or the cancellation of the aural alarm by the flight crew.

The detailed instructions and procedures to accomplish this AD are described in the Embraer Service Bulletins Nos. 120-25-0258, original issue, 120-30-0032, original issue, and 120-30-0033 Rev. 03, or respective further revisions approved by the CTA.

Record compliance with PARTS I, II, III and IV of this AD in the applicable maintenance log book.

CONTACT:

For additional technical information, contact:

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NOTE: Original in Portuguese language signed and available in the files of the Registro Geral de Aeronavegabilidade (RGA/TE-1/STE) of the Departamento de Aviação Civil.