



# CONDIÇÃO ESPECIAL

CE/SC nº 23 – 007

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**Título:** **Condição Especial Aplicável ao Sistema Automático de Proteção Contra Gelo**

**Title:** **Special Condition for Ice Protection Automatic System**

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**Aprovação:** Resolução nº 123, de 1º de dezembro de 2009, publicada no Diário Oficial da União, Nº 230, S/1, p. 34, de 02/12/2009 **Origem:** SAR

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## APLICABILIDADE

Esta condição especial se aplica ao sistema automático de proteção contra gelo do avião Embraer EMB-505.

## CONDIÇÃO ESPECIAL

Esta condição especial complementa as seções 23.1419, emenda 23-55.

### “§ SC 23-007 Special Condition for Ice Protection Automatic System.

In addition to compliance with 23.1419, the following apply:

**SC RBHA 23.1419(e) If the wing or empennage anti-ice or de-icing systems are controlled in a manner that inhibit the system operation above certain altitudes automatically, with no means for the flightcrew to override, the following applies:**

**(1) Flight in icing conditions will be restricted to altitudes below those where the system cannot be manually activated.**

**(i) Substantiated icing cues or an icing detector must be installed to allow exiting inadvertent icing encounters above the altitude where the system is automatically inhibited.**

**(ii) There must be a limitation in the Airplane Flight Manual stating that the Airplane is not certified for flight in icing at altitudes above the altitude in which system operation is automatically inhibited.**

**(iii) The stall warning must be provided by the same means as in non-icing conditions and must provide at least five knot margin to stall with the ice accretions defined in paragraphs (e)(2)(ii) and (e)(2)(iii).**

**(iv) The stall characteristics with the ice accretions defined in paragraph (e)(2)(i), (e)(2)(ii) and (e)(2)(iii) must comply with the requirements of § 23.201.**

**As an alternate to complying with paragraph (e)(1), the provisions of paragraph (e)(2) apply:**

**(2) For certification without restrictions in icing conditions above the system automatic shut off altitude, the airplane controllability, maneuverability, stability, stall characteristics and stall warning must not be less than required in part 23, Subpart B with the following ice accretions:**

**(i) The ice shape(s) that would be on the airplane after a climb through the critical icing conditions of 14 CFR part 25, Appendix C, Figure 1.**

**(ii) The critical ice shape(s) from paragraph (i) above, plus an exposure to one 17.4 nautical mile continuous maximum cloud at altitudes between the automatic shut off altitude feet and the maximum op-**

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erating altitude with the ice protection system off. The ice shape(s) must be based on the liquid water content for the coldest temperature shown in 14 CFR part 25, Appendix C, Figure 1.

(iii) The critical ice shape(s) from paragraph (i) above plus an exposure to one 2.6 nautical mile intermittent maximum cloud at altitudes between 30,000 feet and the maximum operating altitude with the ice protection system off. The substantiation will assume the liquid water content for the coldest temperature shown in 14 CFR part 25, Appendix C, Figure 4.

The AFM must contain appropriate procedures for activating the airframe ice protection system at altitudes where the system can be activated, and for exiting icing conditions at altitudes where the system is inhibited.

**SC RBHA 23.1419(f)** The engine anti-icing system must not be subject to the automatic shut off feature but must be operable at any altitude.

**SC RBHA 23.1419(g)** It must be shown that engine operation is not affected by ice shedding from the inboard wing, with the ice accretions defined in paragraph (e)(2), after the airplane has descended below the inhibit altitude.