



Boletim Especial de Aeronavegabilidade (*Special Airworthiness Bulletin*)

ATA: 27 – Flight Controls

BEA Nº 2022-05

Date: March 30th 2022

Subject: Improvement of Control Column Electrical Wires
Installation

Introduction

This Special Airworthiness Bulletin (BEA) is intended to recommend owners and operators of Embraer ERJ 170 and ERJ 190 series airplanes the implementation of improvements of control column electrical wires installation (W251).

This bulletin is informative, and the recommendations are not mandatory. Until this time, there is no airworthiness concern that would warrant an Airworthiness Directive (AD) according to Regulamento Brasileiro da Aviação Civil (RBAC) nº 39.

Manufacturer: Embraer S.A.

Affected Aeronautic Product: Airplanes model ERJ 170-100, ERJ 170-200, ERJ 190-100 and ERJ 190-200.

Background

ANAC was informed about damages to the control column electrical harness (W251) of models of aircraft affected by this BEA occurred in field. According to investigations, the damages were caused by chafing of the W251 electrical wiring against the lock wire of the control column mechanical stop. These damages can cause malfunction of electrical commands that run through the W251 electrical wiring, including the horizontal stabilizer pitch trim.

In order to prevent similar occurrences, Embraer S. A. issued service bulletins which aim to improve the installation of W251 electrical harness, by means of installing a protection over this harness and repositioning of the lock wire of the control column mechanical stop.

Recommendation

ANAC recommends to the owners and operators of the aircraft affected by this BEA the implementation of the modifications proposed according to the following documents:

- 1) Service Bulletin Embraer S.A. 170-27-0060, revision 02, dated February 4th, 2022, or further revisions, for aircraft models ERJ 170-100 and ERJ 170-200.

- 2) Service Bulletin Embraer S.A. 190-27-0046, revision 02, dated February 4th, 2022, or further revisions, for aircraft models ERJ 190-100 and ERJ 190-200, except ERJ 190-100 ECJ.
- 3) Service Bulletin Embraer S.A. 190-27-0018, original revision, dated April 30th, 2021, or further revisions, for aircraft model ERJ 190-100 ECJ.

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