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RGFM/m



U.S. Department of Transportation
Docket Operations, M-30, West Building Ground Floor, Room W12-140
1200 New Jersey Avenue, SE.
Washington, DC 20590
United States of America
Posted electronically on <http://www.regulations.gov>

*Subject: ERJ 190 FAA Certification
Embraer comments to NPRM Docket No. FAA-2008-0668*

Dear Sir:

Please find enclosed Embraer comments to NPRM Docket No. FAA-2008-0668

Since issuance of ANAC Airworthiness Directive 2008-01-02, effective February 25, 2008, Embraer developed new internal criteria to harmonize the action to be taken and correctly identify the possible unsafe conditions that cracks identified on ERJ 170/190 full scale fatigue tests (FSFT) could lead to these models. These criteria were presented to ANAC, FAA and EASA during March/2008 Service Difficulty Meeting and the methodology was accepted.

One of the topics in these guidelines addresses the consequences of a possible fuel leakage due to fatigue cracking on the fuel tank surrounding structure. The ERJ 190 complies with § 25.863, therefore, all flammable zones were designed to minimize the probability of ignition of fluids and vapors. The region affected by a possible fuel leakage due to fatigue cracking on the wing lower skin stringers between ribs 7 and 10 is considered a flammable zone. Based on this analysis, the reference to fuel leakage should be removed from the "AD Reason" since it does not affect flight safety.

On May 27, 2008, Embraer issued Service Bulletin 190-57-0005 Revision 2. Service Bulletin 190-57-0005 Revision 2 provides equivalent technical solution as the previous revisions and should be used as the primary reference on the AD Actions and Compliance text.

Revision 2 Service Bulletin 190-57-0005 replaced the dye-penetrant inspection required on paragraph (f)(2) with an eddy current inspection. The eddy-current inspection is considered as effective as the dye-penetrant inspection but uses more appropriate equipments to be handled inside the fuel tank. Those airplanes already inspected with dye-penetrant method do not need further actions. Paragraph (f)(2) should be amended

to require an eddy-current inspection according to Service Bulletin 190-57-0005 Revision 2. Previous dye-penetrant inspections according to Service Bulletin 190-57-0005 Revision 1 or Original should be considered an alternative method for compliance with this paragraph.

Paragraph (f)(2)(i) requires shot peening the stringers reworked if no cracking is detected after paragraph (f)(2) inspection. Instead of that, this paragraph should request “flap peening” the stringers, as described on Service Bulletin 190-57-0005 Revision 2, Accomplishment Instructions, paragraph O (page 11).

Paragraph (f)(2)(ii) requires the operator to contact ANAC for repair instructions in case any cracking is found after paragraph (f)(2) inspection. Embraer suggest a different text to clearly identify that ANAC delegated agents may also provide an approved repair for compliance with this paragraph: *“Before further flight, repair the airplane using a method approved by either the International Branch, ANM-116, Transport Airplane Directorate, FAA; or the Agencia Nacional de Aviação Civil (ANAC), or its delegated agent.”*

Best Regards,

A handwritten signature in black ink, appearing to be "Sergio Augusto Viana de Carvalho".

Eduardo Sanches Cerdeira
Certification Office

Sérgio Augusto Viana de Carvalho
Senior Certification Manager

C.c.: ANAC