



## AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL – BRAZIL

### BRAZILIAN AIRWORTHINESS DIRECTIVE

**AD No.: 2016-04-01**

**Effective Date: 04 abr. 2016**

The following Brazilian Airworthiness Directive (AD), issued by the Agência Nacional de Aviação Civil (ANAC) in accordance with provisions of Chapter IV, Title III of Código Brasileiro de Aeronáutica – Law No. 7,565 dated 19 December 1986 – and Regulamento Brasileiro da Aviação Civil (RBAC) 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. 2016-04-01 - EMBRAER S.A. / 39-1397.**

#### **APPLICABILITY:**

This Airworthiness Directive (AD) applies to Embraer S.A. model ERJ 190-100 STD, ERJ 190-100 LR, ERJ 190-100 IGW, ERJ 190-100 ECJ, ERJ 190-100 SR, ERJ 190-200 STD, ERJ 190-200 LR, and ERJ190-200 IGW airplanes with manufacturer serial number 19000002, 19000004, 19000006 through 19000213, 19000215 through 19000276, 19000278 through 19000466, 19000468 through 19000525, 19000527 through 19000696, inclusive.

**Note (1):** Airplanes with an original airworthiness certificate or original export certificate of airworthiness issued on or after October 30, 2015 must comply with the airworthiness limitations specified as part of the airworthiness certification of those airplanes, or in accordance with operations specifications approved under “Regulamento Brasileiro da Aviação Civil” (RBAC) 121 or 135, or an inspection program approved under paragraph 91.409(e) of “Regulamento Brasileiro de Homologação Aeronáutica” (RBHA) 91 (equivalent to paragraph 91.409(e) of 14CFR Part 91).

**Note (2):** This AD requires revisions to certain operator maintenance documents to include new inspections or modification to the existing ones and its respective thresholds and intervals. Compliance with these inspections is required by RBHA 91.403(c) (equivalent to paragraph 91.403(c) of 14CFR Part 91). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with RBHA 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (d) of this AD. The request should include a description of changes to the required inspections that will ensure the continued damage tolerance of the affected structure.

#### **CANCELLATION / REVISION:**

This AD supersedes AD 2010-08-03 / 39-1315 and AD 2012-10-02 / 39-1363.

#### **REASON:**

This AD was prompted by a determination that existing maintenance requirements and airworthiness limitations are inadequate to ensure the structural integrity of the airplane. We are issuing this AD to prevent failure of certain system components, which could result in reduced structural integrity of the airplane.

#### **REQUIRED ACTION:**

This AD requires revision to the maintenance or inspection program, as applicable, to incorporate the applicable Certification Maintenance Requirements, Airworthiness Limitation Inspections, Fuel System Limitation Items, and Life Limited Items.

#### **COMPLIANCE:**

Comply with this AD within the compliance times specified, unless already done.

**(a) Retained Revisions of Airworthiness Limitation Section (ALs)**

(1) This paragraph restates the compliance requirements of AD 2010-08-03 / 39-1315. For Embraer S.A. model ERJ 190-100 STD, ERJ 190-100 LR, ERJ 190-100 IGW, ERJ 190-100 SR, ERJ 190-200 STD, ERJ 190-200 LR and ERJ 190-200 IGW airplanes: Within 60 days after the September 20, 2010, the effective date of AD 2010-08-03, revise the ALS of the ICA to incorporate the new or revised tasks specified in Appendix A, Part 2, Airworthiness Limitations Inspections (ALI) – Structures, of the Embraer ERJ 190 Maintenance Review Board Report (MRB-1928) Revision 4, dated January 14, 2010, with the thresholds and intervals stated in that document. The initial compliance times (thresholds) for the tasks start from the initial delivery date of the applicable airplane at the applicable time specified in the tasks or within 600 flight cycles after revising the ALS, whichever occurs later. Repeat the applicable inspection thereafter at the interval specified in the Appendix A, Part 2, Airworthiness Limitations Inspections (ALI) – Structures, of the Embraer ERJ 190 Maintenance Review Board Report (MRB-1928) Revision 4, dated January 14, 2010, observing for each task, the pre and post-mod condition, if applicable.

(2) This paragraph restates the requirements of paragraph (a) of AD 2012-10-02 / 39-1363. For Embraer S.A. model ERJ 190-100 STD, ERJ 190-100 LR, ERJ 190-100 IGW, ERJ 190-100 SR, ERJ 190-200 STD, ERJ 190-200LR, and ERJ 190-200 IGW airplanes: Within 60 days after October 29, 2012, the effective date of AD 2012-10-02, revise the Maintenance Plan for the Embraer ERJ 190 aircraft to include Airworthiness Limitations Inspections updates, as described on Maintenance Review Board Report (MRB-1928) revision 06, dated August 20th, 2012, or further revision approved by ANAC, observing for each task, the pre and post-mod condition of the associated service bulletin.

**(b) New Requirements of this AD: Revision of maintenance program**

Within three months after the effective date of this AD, revise the maintenance or inspection program, as applicable, to incorporate the applicable Certification Maintenance Requirements, Airworthiness Limitation Inspections, Fuel System Limitation Items, and Life Limited Items in paragraph (b)(1), or (b)(2) of this AD, as applicable.

(1) For model ERJ 190-100 STD, ERJ 190-100 LR, ERJ 190-100 IGW, ERJ 190-100 SR, ERJ 190-200 STD, ERJ 190-200 LR, and ERJ 190-200 IGW airplanes: Incorporate information in Part 1, Certification Maintenance Requirements, Part 2, Airworthiness Limitation Inspections - Structures, Part 3, Fuel System Limitation Items, and Part 4, Life Limited Items, of Appendix A, Airworthiness Limitation, of the Embraer 190/195 Maintenance Review Board Report, MRB 1928, Revision 9, dated August 14, 2015, including temporary revision (TR) 9-1, dated October 27, 2015, and temporary revision (TR) 9-3, dated October 27, 2015. Doing the task required by this paragraph terminates the corresponding task required by paragraph (a) of this AD.

(i) The compliance times depend on the airplane configuration, and the pre-modification and post-modification conditions specified in Part 1, Certification Maintenance Requirements, and in Part 2, Airworthiness Limitation Inspections – Structures, of Appendix A, Airworthiness Limitations, of the Embraer 190/195 Maintenance Review Board Report, MRB 1928, Revision 9, dated August 14, including temporary revision (TR) 9-1, dated October 27, 2015, and temporary revision (TR) 9-3, dated October 27, 2015.

(ii) The initial compliance time (threshold) for the inspections is within the applicable times specified in Part 1, Certification Maintenance Requirements, and in Part 2, Airworthiness Limitation Inspections - Structures of Appendix A, Airworthiness Limitation, of the Embraer 190 / 195 Maintenance Review Board Report, MRB 1928, Revision 9, dated August 14, 2015, including temporary revision (TR) 9-1, dated October 27, 2015, and temporary revision (TR) 9-3, dated October 27, 2015, or within 600 flight cycles after the effective date of this AD, whichever occurs later. For the purposes of this AD, the initial compliance times (identified as "Threshold" or "T" in the service information) are expressed in "total flight cycles".

(2) For model ERJ 190-100 ECJ airplanes: Incorporate information in Part 1, Certification Maintenance Requirements, Part 2, Airworthiness Limitation Inspections - Structures, Part 3, Fuel System Limitation Items, and Part 4, Life Limited Items, of Appendix A, Airworthiness Limitation, of the Embraer ERJ 190-100 ECJ Maintenance Planning Guide, MPG-2928, Revision 4, dated July 14, 2014, including temporary revision (TR) 4-2, dated February 13, 2015, and TR 4-3, dated October 30, 2015.

(i) The compliance times depend on the airplane configuration, and the pre-modification

and post-modification conditions specified in Part 1, Certification Maintenance Requirements, and in Part 2, Airworthiness Limitation Inspections – Structures, of Appendix A, Airworthiness Limitations, of the Embraer ERJ 190-100 ECJ Maintenance Planning Guide, MPG-2928, Revision 4, dated July 14, 2014, including temporary revision (TR) 4-2, dated February 13, 2015, and TR 4-3, dated October 30, 2015.

(ii) The initial compliance time (threshold) for the inspections is within the applicable times specified in Part 1, Certification Maintenance Requirements, and in Part 2, Airworthiness Limitation Inspections - Structures of Appendix A, Airworthiness Limitation, of the Embraer ERJ 190-100 ECJ Maintenance Planning Guide, MPG-2928, Revision 4, dated July 14, 2014, including temporary revision (TR) 4-2, dated February 13, 2015, and TR 4-3, dated October 30, 2015, or within 600 flight cycles after the effective date of this AD, whichever occurs later. For the purposes of this AD, the initial compliance times (identified as "Threshold" or "T" in the service information) are expressed in "total flight cycles".

#### **(c) Alternative actions and intervals**

After accomplishment of the revisions required by paragraph (b) of this AD, no alternative actions or intervals may be used unless the alternative action or interval is approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (d) of this AD.

#### **(d) Alternative Methods of Compliance (AMOC)**

A different method or a different compliance time with the requirements of this AD may be used if approved by the General Manager of ANAC's Aeronautical Product Certification Branch (Gerência-Geral de Certificação de Produtos Aeronáuticos – GGCP). The AMOC approval letter must specifically reference this AD.

#### **(e) Material incorporated by reference**

You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise

(1) Appendix A, Airworthiness Limitations, of the Embraer 190/195 Maintenance Review Board Report, MRB 1928, Revision 9, dated August 14, 2015, including temporary revision (TR) 9-1, dated October 27, 2015, and temporary revision (TR) 9-3, dated October 27, 2015.

(2) Appendix A, Airworthiness Limitations, of the Embraer ERJ 190-100 ECJ Maintenance Planning Guide, MPG-2928, Revision 4, dated July 14, 2014, including temporary revision (TR) 4-2, dated February 13, 2015, and TR 4-3, dated October 30, 2015.

Record compliance with this AD in the applicable maintenance logbook.

#### **CONTACT:**

For additional technical information, contact:  
National Civil Aviation Agency (ANAC)  
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#### **APPROVAL:**

MÁRIO IGAWA  
General Manager  
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**NOTE:** Original in Portuguese language signed and available in the files of the Aeronautical Products Certification Branch (GGCP) of the National Civil Aviation Agency (ANAC).