

# AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRAZIL

# BRAZILIAN AIRWORTHINESS DIRECTIVE

# **ERRATA**

AD No: 2023-11-02 Effective Date: 21 Nov. 2023

#### AD No. 2023-11-02 - EMBRAER / 39-1537.

This Errata is issued to correct a printing error in the original English version of this Airworthiness Directive. The compliance times established in the paragraphs (b)(1), (c)(1), (d)(1), (e)(1), (f)(1) and (g)(1) of the AD 2023-11-02 must be read as follows:

## "COMPLIANCE:

(...)

()(1) Within 7,500 Flight Hours (FH) or 36 months after the effective date of this AD, (...)

(...)"

Please modify the original AD text and attach this Errata to it.

#### **APPROVAL:**

MARCO AURÉLIO BONILAURI SANTIN Head of Department, Deputy Department of Airworthiness (SAR) **ANAC** 

**NOTA:** Original in Portuguese language signed and available in the files of the Continuing Airworthiness Technical Branch (GTAC) of the National Civil Aviation Agency (ANAC).

**Referência:** Processo nº 00066.008357/2023-76 SEI nº 9358715



# AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRAZIL

# **BRAZILIAN AIRWORTHINESS DIRECTIVE**

AD No.: 2023-11-02 Effective Date: 21 Nov. 2023

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. 2023-11-02 - EMBRAER / 39-1537.

#### **APPLICABILITY:**

(a) This Airworthiness Directive (AD) applies to Embraer S.A. airplanes 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 as identified in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023.

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

Not applicable.

#### **REASON:**

This AD was prompted by a quality escape occurred on Kidde Aerospace & Defense manufacturing line affecting some Overheat Detection System (ODS) sensing elements produced before 31 January 2021. A defective sensing element may not be able to detect a thermal bleed leak, which is a latent failure, and depending on the affected area, may start an ignition source in the fuel tank, damaging some electronic boxes and expose the wing structure to high temperature gradients and unexpected thermal loads.

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.

#### **REQUIRED ACTION:**

Inspection and replacement, if necessary, of some ODS sensing elements of the airplane bleed lines.

### **COMPLIANCE:**

Required as indicated below, unless already accomplished.

- (b) Inspection and replacement of the APU bleed line ODS sensing elements located at mid-bay, aft-bay and stub areas of the airplane.
- (1) Within 7,500 Flight Hours (FH) or 36 months after the effective date of this AD, whichever occurs first, inspect the APU bleed line ODS sensing elements located at mid-bay, aft-bay and stub areas of the airplane.
- (i) If there is any TRUE condition of OVERHEAT, SHORT or OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of Central Maintenance Computer (CMC), or there is no 0.00 (ZERO) "EVENT LOCATION" indication for the loops of APU, then:
- (i)-a Do the applicable troubleshooting according to the airplane Fault Isolation Manual (FIM) and accomplish the paragraph (b)(1)(ii) and (b)(1)(iii) of this AD, as applicable.
- (i)-b If there is no sensor element available, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (b)(1)(ii) and (b)(1)(iii) of this AD, as applicable.
- **NOTE 1:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved Minimum Equipment List (MEL).
- (ii) Make sure that there is a FALSE condition of OVERHEAT, SHORT and OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, and there is 0.00 (ZERO) "EVENT LOCATION" indication for the loops of APU, or in case of any channel deactivation according to the paragraph (b)(1)(i)-b of this AD, and accomplish the paragraph (b)(1)(iii) of this AD.
- (iii) Make sure that the BLEED APU LEAK message is not active on Engine Indicating and Crew Alerting System (EICAS) display and perform a Detailed Inspection (DET) of sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (iii)-a If the BLEED APU LEAK message comes into view on EICAS display, no action is required.
- (iii)-b If the BLEED APU LEAK message does not come into view on EICAS display at any of tested positions, identify in CMC the channel with TRUE condition of SHORT. Replace the sensor associated to the other channel, ie, the sensor with FALSE condition of SHORT and in case of both channels presenting FALSE condition of SHORT, then replace both sensors by new ones with the same Part Number (P/N) or with a P/N presented in the Aircraft Illustrated Parts Catalog (AIPC), according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (iii)-c If there is no sensor element for replacement, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (b)(1)(ii) and (b)(1)(iii) of this AD, as applicable.
  - NOTE 2: In case of two inoperative channels from the same loop, the

airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.

- (iv) In case of any sensor replacement, repeat the DET required by the paragraphs (b)(1)(ii) and (b)(1)(iii) of this AD to make sure that the channels are operational.
- **NOTE 3:** For the purposes of this AD, a Detailed Inspection (DET) is defined as follows.

**Detailed Inspection (DET):** An intensive examination of a specific item, installation or assembly to detect damage, failure or irregularity. This could include tactile assessment in which a component or assembly can be checked for tightness/security. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors and magnifying lenses may be necessary. Surface cleaning and elaborate access procedures may be required.

# (c) Inspection and replacement of the ODS sensing elements of Left-Hand (LH) and Right-Hand (RH) wing anti-ice supply ducts.

- (1) Within 7,500 FH or 36 months after the effective date of this AD, whichever occurs first, inspect the ODS sensing elements of LH and RH wing anti-ice supply ducts near slat 2 and pylon areas.
- (i) If there is any TRUE condition of OVERHEAT, SHORT or OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, or there is no 0.00 (ZERO) "EVENT LOCATION" indication for the loops of LH and RH wing anti-ice supply ducts, then:
- (i)-a Do the applicable troubleshooting according to the airplane FIM and accomplish the paragraph (c)(1)(ii) and (c)(1)(iii) of this AD, as applicable.
- (i)-b If there is no sensor element available, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (c)(1)(ii) and (c)(1)(iii) of this AD, as applicable.
- **NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.
- (ii) Make sure that there is a FALSE condition of OVERHEAT, SHORT and OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, and there is 0.00 (ZERO) "EVENT LOCATION" indication for the loops of LH and RH wing antice supply ducts, or in case of any channel deactivation according to the paragraph (c)(1)(i)-b of this AD, and accomplish the paragraph (c)(1)(iii) of this AD.
- (iii) Make sure that the A-I WING 1 LEAK and A-I WING 2 LEAK message is not active on EICAS display and perform a DET of sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (iii)-a If the A-I WING 1 LEAK or A-I WING 2 LEAK messages come into view on EICAS display, no action is required.
- (iii)-b If the A-I WING 1 LEAK or A-I WING 2 LEAK message does not come into view on EICAS display at any of tested positions, identify in CMC the channel with TRUE condition of SHORT. Replace the sensor associated to the other channel, ie, the sensor with FALSE condition of SHORT and in case of both channels

presenting FALSE condition of SHORT, then replace both sensors by new ones with the same P/N or with a P/N presented in the AIPC, according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.

(iii)-c If there is no sensor element for replacement, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (c)(1)(ii) and (c)(1)(iii) of this AD, as applicable.

**NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.

(iv) In case of any sensor replacement, repeat the DET required by the paragraphs (c)(1)(ii) and (c)(1)(iii) of this AD to make sure that the channels are operational.

# (d) Inspection and replacement of the ODS sensing elements of LH and RH wing bleed system (slat 1 area).

- (1) Within 7,500 FH or 36 months after the effective date of this AD, whichever occurs first, inspect the ODS sensing elements of LH and RH wing bleed system, installed at slat 1 area.
- (i) If there is any TRUE condition of OVERHEAT, SHORT or OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, or there is no 0.00 (ZERO) "EVENT LOCATION" indication for the loops of LH and RH wing bleed system, installed at slat 1 area, then:
- (i)-a Do the applicable troubleshooting according to the airplane FIM and accomplish the paragraph (d)(1)(ii) and (d)(1)(iii) of this AD, as applicable.
- (i)-b If there is no sensor element available, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (d)(1)(ii) and (d)(1)(iii) of this AD, as applicable.

**NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.

- (ii) Make sure that there is a FALSE condition of OVERHEAT, SHORT and OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, and there is 0.00 (ZERO) "EVENT LOCATION" indication for the loops of LH and RH wing bleed system, installed at slat 1 area, or in case of any channel deactivation according to the paragraph (d)(1)(i)-b of this AD, and accomplish the paragraph (d)(1)(iii) of this AD.
- (iii) Make sure that the BLEED 1 LEAK or BLEED 2 LEAK message, as applicable, is not active on EICAS display and perform a DET of sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (iii)-a If the BLEED 1 LEAK or BLEED 2 LEAK message, as applicable, comes into view on EICAS display, no action is required.
  - (iii)-b If the BLEED 1 LEAK or BLEED 2 LEAK message, as applicable,

does not come into view on EICAS display at any of tested positions, identify in CMC the channel with TRUE condition of SHORT. Replace the sensor associated to the other channel, ie, the sensor with FALSE condition of SHORT and in case of both channels presenting FALSE condition of SHORT, then replace both sensors by new ones with the same P/N or with a P/N presented in the AIPC, according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.

(iii)-c If there is no sensor element for replacement, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (d)(1)(ii) and (d)(1)(iii) of this AD, as applicable.

**NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.

- (iv) In case of any sensor replacement, repeat the DET required by the paragraphs (d)(1)(ii) and (d)(1)(iii) of this AD to make sure that the channels are operational.
- (e) Inspection and replacement of the ODS sensing elements of LH wing bleed system (except slat 1 area).
- (1) Within 7,500 FH or 36 months after the effective date of this AD, whichever occurs first, inspect the ODS sensing elements of LH wing bleed system installed at central fuselage II and pylon areas.
- (i) If there is any TRUE condition of OVERHEAT, SHORT or OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, or there is no 0.00 (ZERO) "EVENT LOCATION" indication for the loops of LH wing bleed system, then:
- (i)-a Do the applicable troubleshooting according to the airplane FIM and accomplish the paragraph (e)(1)(ii) and (e)(1)(iii) of this AD, as applicable.
- (i)-b If there is no sensor element available, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (e)(1)(ii) and (e)(1)(iii) of this AD, as applicable.

**NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.

- (ii) Make sure that there is a FALSE condition of OVERHEAT, SHORT and OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, and there is 0.00 (ZERO) "EVENT LOCATION" indication for the loops of LH bleed system, or in case of any channel deactivation according to the paragraph (e)(1)(i)-b of this AD, and accomplish the paragraph (e)(1)(iii) of this AD.
- (iii) Make sure that the BLEED 1 LEAK message is not active on EICAS display and perform a DET of sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (iii)-a If the BLEED 1 LEAK message comes into view on EICAS display, no action is required.

- (iii)-b If the BLEED 1 LEAK message does not come into view on EICAS display at any of tested positions, identify in CMC the channel with TRUE condition of SHORT. Replace the sensor associated to the other channel, ie, the sensor with FALSE condition of SHORT and in case of both channels presenting FALSE condition of SHORT, then replace both sensors by new ones with the same P/N or with a P/N presented in the AIPC, according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (iii)-c If there is no sensor element for replacement, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (e)(1)(ii) and (e)(1)(iii) of this AD, as applicable.
- **NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.
- (iv) In case of any sensor replacement, repeat the DET required by the paragraphs (e)(1)(ii) and (e)(1)(iii) of this AD to make sure that the channels are operational.
- (f) Inspection and replacement of the ODS sensing elements of RH wing bleed system (except slat 1 area) and trim pressure ducts (if applicable).
- (1) Within 7,500 FH or 36 months after the effective date of this AD, whichever occurs first, inspect the ODS sensing elements of RH wing bleed system installed at central fuselage II and pylon and trim pressure ducts areas.
- (i) If there is any TRUE condition of OVERHEAT, SHORT or OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, or there is no 0.00 (ZERO) "EVENT LOCATION" indication for the loops of RH wing bleed system and trim pressure ducts (if applicable), then:
- (i)-a Do the applicable troubleshooting according to the airplane FIM and accomplish the paragraph (f)(1)(ii) and (f)(1)(iii) of this AD, as applicable.
- (i)-b If there is no sensor element available, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (f)(1)(ii) and (f)(1)(iii) of this AD, as applicable.
- **NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.
- (ii) Make sure that there is a FALSE condition of OVERHEAT, SHORT and OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, and there is 0.00 (ZERO) "EVENT LOCATION" indication for the loops of RH bleed system and trim pressure ducts (if applicable), or in case of any channel deactivation according to the paragraph (f)(1)(i)-b of this AD, and accomplish the paragraph (f)(1)(iii) of this AD.
- (iii) Make sure that the BLEED 2 LEAK and PACK 2 LEAK messages are not active on EICAS display and perform a DET of sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-

0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.

- (iii)-a If the BLEED 2 LEAK or PACK 2 LEAK messages come into view on EICAS display, no action is required.
- (iii)-b If the BLEED 2 LEAK or PACK 2 LEAK message does not come into view on EICAS display at any of tested positions, identify in CMC the channel with TRUE condition of SHORT. Replace the sensor associated to the other channel, ie, the sensor with FALSE condition of SHORT and in case of both channels presenting FALSE condition of SHORT, then replace both sensors by new ones with the same P/N or with a P/N presented in the AIPC, according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (iii)-c If there is no sensor element for replacement, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (f)(1)(ii) and (f)(1)(iii) of this AD, as applicable.
- **NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.
- (iv) In case of any sensor replacement, repeat the DET required by the paragraphs (f)(1)(ii) and (f)(1)(iii) of this AD to make sure that the channels are operational.
- (g) Inspection and replacement of the APU bleed line ODS sensing elements located at non-pressurized areas and cargo compartment.
- (1) Within 7,500 FH or 36 months after the effective date of this AD, whichever occurs first, inspect the ODS sensing elements of APU bleed line located at non-pressurized areas and cargo compartment.
- (i) If there is any TRUE condition of OVERHEAT, SHORT or OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, or there is no 0.00 (ZERO) "EVENT LOCATION" indication for the loops of APU, then:
- (i)-a Do the applicable troubleshooting according to the airplane FIM and accomplish the paragraph (g)(1)(ii) and (g)(1)(iii) of this AD, as applicable.
- (i)-b If there is no sensor element available, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (g)(1)(ii) and (g)(1)(iii) of this AD, as applicable.
- **NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.
- (ii) Make sure that there is a FALSE condition of OVERHEAT, SHORT and OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, and there is 0.00 (ZERO) "EVENT LOCATION" indication for the loops of APU, or in case of any channel deactivation according to the paragraph (g)(1)(i)-b of this AD, and accomplish the paragraph (g)(1)(iii) of this AD.
  - (iii) Make sure that the BLEED APU LEAK message is not active on EICAS

display and perform a DET of sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.

- (iii)-a If the BLEED APU LEAK message comes into view on EICAS display, no action is required.
- (iii)-b If the BLEED APU LEAK message does not come into view on EICAS display at any of tested positions, identify in CMC the channel with TRUE condition of SHORT. Replace the sensor associated to the other channel, ie, the sensor with FALSE condition of SHORT and in case of both channels presenting FALSE condition of SHORT, then replace both sensors by new ones with the same P/N or with a P/N presented in the AIPC, according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (iii)-c If there is no sensor element for replacement, deactivate the sensing elements according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and make sure that the active loop is operational. Accomplish the paragraph (g)(1)(ii) and (g)(1)(iii) of this AD, as applicable.
- **NOTE:** In case of two inoperative channels from the same loop, the airplane must be dispatched according to the applicable restrictions of the Operator's approved MEL.
- (iv) In case of any sensor replacement, repeat the DET required by the paragraphs (g)(1)(ii) and (g)(1)(iii) of this AD to make sure that the channels are operational.

# (h) Re-activation of deactivated ODS sensing elements.

- **(1)** According to the applicable restrictions of the Operator's approved MEL, it shall be required to activate the applicable ODS sensing elements deactivated during the accomplishment of the required paragraphs **(b)** thru **(g)** of this AD, according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (i) If there is any TRUE condition of OVERHEAT, SHORT or OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, or there is no 0.00 (ZERO) "EVENT LOCATION" indication for the applicable loops, then perform the applicable troubleshooting of the sensing element according to the airplane FIM and perform a DET on it according to the paragraphs (b) thru (g) of this AD, as applicable, to make sure that the loops are operational.
- (ii) If there is a FALSE condition of OVERHEAT, SHORT and OPEN CONDITION on "BLEED ODS NVM READ/RESET TEST" page of CMC, and there is 0.00 (ZERO) "EVENT LOCATION" indication for the applicable loops, perform a DET on the sensing element replacing any failed one by a new one with the same P/N or with a P/N presented in the AIPC, according to the detailed instructions and procedures described in Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC.
- (iii) In case of any sensor replacement, repeat the DET required by the paragraphs (b) thru (g) of this AD, as applicable, to make sure that the loops are operational.

#### (i) Parts installation prohibition.

From the effective date of this AD, do not install an affected part at any position of the airplane as described in the paragraphs **(b)** thru **(g)** of this AD, except it is an airworthy part.

**NOTE 1:** For the purpose of this AD, an affected part is an overheat detection system (OHDS) sensing elements, also identified as "Embraer - Continuous Fire Detector (CFD)", having a Part Number (P/N) and corresponding date code as listed in Section 1.A of the Kidde Aerospace & Defense Service Bulletin (SB) CFD-26-4, dated February 28, 2022, except those that passed an inspection (no discrepancies found; one face of the connector hex nut is marked) in accordance with the detailed instructions and procedures of the of Section 3 of the Kidde Aerospace & Defense SB CFD-26-4, dated February 28, 2022.

**NOTE 2:** For the purpose of this AD, an airworthy part is one that is not an affected part.

## (j) Credit for previous actions.

This paragraph provides credit for the actions specified in paragraph **(b)** thru **(h)** of this AD, if those actions were performed before the effective date of this AD according to Embraer SB N. 190-36-0027, original issue, dated April 30, 2021 or Embraer SB N. 190-36-0027, revision 01, dated December 16, 2022.

## (k) Alternative methods of compliance (AMOCs).

A different method or a different compliance time, with the requirements of this AD, may be used if approved by the Manager of the Continuing Airworthiness Technical Branch (GTAC) of ANAC.

## (I) Material incorporated by reference.

You must use the Embraer Service Bulletin N. 190-36-0027, revision 02, dated September 05, 2023; or further revisions approved by ANAC, and Kidde Aerospace & Defense Service Bulletin CFD-26-4, dated February 28, 2022; to do the actions required by this AD, unless this AD specifies otherwise.

Record compliance with this AD in the applicable maintenance log book.

#### **CONTACT:**

For additional technical information, contact:

National Civil Aviation Agency (ANAC)
Continuing Airworthiness Technical Branch (GTAC)
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## **APPROVAL:**

MARCO AURÉLIO BONILAURI SANTIN Head of Department, Deputy Department of Airworthiness (SAR) ANAC

**NOTA:** Original in Portuguese language signed and available in the files of the Continuing Airworthiness Technical Branch (GTAC) of the National Civil Aviation

**Referência:** Processo nº 00066.008357/2023-76

SEI nº 8841292