State Aviation Administration of Ukraine

SAAU

TYPE CERTIFICATE DATA SHEET № TJI 0051

Embraer EMB-500

Manufacturer: Embraer
Empresa Brasileira de Aeronáutica SA
Av. Brig. Faria Lima. 2170
12227-901 São Jose dos Campos SP
Brasil

Model: EMB-500

Issue 1, 26 August 2011

This Data Sheet which is integral part of Type Certificate № TJI 0051 prescribes the conditions and limitations under which the product(s) for which the Type Certificate was granted meet(s) the airworthiness requirements and environmental protection requirements, stated in Certification basis mentioned in this Data Sheet Chapter II of the Section 2.

List of effective Pages:

<table>
<thead>
<tr>
<th>Page:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue:</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENT

## SECTION 1: GENERAL EMB-500

1. Data Sheet Number .................................................................................. 3
2. Type Certificate Holder ........................................................................... 3
3. Certifying Authority .................................................................................. 3
4. Airworthiness Category ........................................................................... 3

## SECTION 2:

I. General ......................................................................................................... 4

II. Certification Basis ........................................................................................ 4

   1. Reference Application Date for ANAC Certification .............................. 4
   2. ANAC Certification Date ........................................................................ 4
   3. ANAC Certification Basis ....................................................................... 4
   4. Application Date for SAAU Certification ............................................. 4
   5. SAAU Certification Date ....................................................................... 4
   6. SAAU Certification Basis ....................................................................... 4

III. Technical Characteristics and Operational Limitations ............................... 5

   1. Type Design Definition ......................................................................... 5
   2. Maximum Certified Weights .................................................................. 5
   3. Centre of Gravity Range ....................................................................... 5
   4. Minimum Flight Crew .......................................................................... 5
   5. Maximum Passenger Capacity ............................................................. 5
   6. Airspeeds ............................................................................................... 5
   7. Maximum Operating Altitude ............................................................... 5
   8. Engines .................................................................................................. 5
   9. Fuels ..................................................................................................... 5
  10. Oils ......................................................................................................... 5
  11. Baggage/Cargo Compartment ............................................................... 5
  12. Required Equipment ............................................................................ 6
  13. Operational Capabilities ...................................................................... 6
  14. Other Limitations ................................................................................ 6

IV. Operating and Maintenance Instructions ...................................................... 6

   1. Airplane Flight Manual ......................................................................... 6
   2. Mandatory Maintenance Instruction .................................................... 6

V. Notes ........................................................................................................... 6
SECTION 1: GENERAL EMB-500

1. Data Sheet No: TJ 0051
2. Type Certificate Holder: Embraer S.A.
   Av. Brig. Faria Lima. 2170
   12227-901 São Jose dos Campos SP
   Brasil
3. Certifying Authority: ANAC Agência Nacional de Aviação Civil
   Gerência General de Certificação de Produtos Aeronáuticos
   P.O. Box 6001
   12228-901 - São Jose dos Campos SP,
   Brasil
4. Airworthiness Category: Normal Category
SECTION 2:

I. General
   Model: EMB-500 (see Note 6)

II. Certification Basis:
1. Reference Application Date for ANAC Certification: 30 June 2006
2. ANAC Certification Date: 09 December 2008
3. ANAC Certification Basis:
   RBHA 23 (Airworthiness Standards – Normal, Utility, Acrobatic, and Commuter Category Airplanes),
   corresponding to 14 CFR Part 23 including amendments 23-1 through 22-55, as applicable to
   Normal Category Certification; and additional requirements as per ANAC FCAR HT-01.
4. Application Date for SAAU Certification: 09 November 2010
5. SAAU Certification Date: 26 August 2011
6. SAAU Certification Basis:
   AR-23 “Airworthiness Standards – Normal, Utility, Acrobatic, and Commuter Category
   Airplanes”

   Equivalent Safety Findings:
   CRI A-5: Equipment of Radio Communication - 23F.8.4.2.3
   CRI A-8: Equipment of Radio Communication - 23F.8.4.3.2.
   CRI A-9: Composition of Equipment - 23F.8.2.2.4, 23F.8.2.2.5, 23F.8.2.2.6, 23F.8.4.2.1.
   CRI E-4: Exceeding of permissible vibration level for each engine - 23F.8.8.3.1.7.
   CRI E-5: Digital only Display of Turbine Engine High/Intermediate Pressure Rotor Speed
   (N2) - 23.1305, 23.1309, 23.1321, 23.1549
   CRI E-6: Control Markings – Usable Fuel Capacity - 23.1337(b)(1), 23.1555(d)(1)
   CRI E-7: Digital Fuel Quantity Indication - 23.959, 23.1337(b)(1), 23.1553

   Environmental Standards:
   ICAO Annex 16:
   Volume I : Noise (third edition, July 1993),
III. Technical Characteristics and Operational Limitations

Low wing jet with a T-tail configuration, powered by two high bypass turbofan engines mounted on aft fuselage pylons.
The structure is conventional, with a predominant aluminum-allow fuselage, wing, tail-plane and fin. The landing gear is retractable tricycle type, and both main and nose landing gear are single wheeled.

1. **Type Design Definition:** Type Design Standard Document: 500TDSD002. Also see Note 4.

2. **Maximum Certified Weights (kg):**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>EMB-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ramp and Taxi</td>
<td>4770</td>
</tr>
<tr>
<td>Take-Off</td>
<td>4750</td>
</tr>
<tr>
<td>Landing</td>
<td>4430</td>
</tr>
<tr>
<td>Zero Fuel</td>
<td>3830</td>
</tr>
</tbody>
</table>

3. **Centre of Gravity Range:** See Airplane Flight Manual

4. **Minimum Flight Crew:** One Pilot (in the left seat) plus additional equipment as specified in the Limitations Section of the Airplane Flight Manual or One Pilot and One Co-pilot (see Note 5 for cockpit equipment/arrangement restriction)

5. **Maximum Passenger Capacity:** Six

6. **Airspeeds:** $V_{MO} = 275$ KIAS, $M_{MO} = 0.7$ (see Airplane Flight Manual)

7. **Maximum Operating Altitude:** 12497 m (41000 ft)

8. **Engines:** Two Pratt & Whitney Canada PW617F-E turbofans (TC/TCDS No. TD 0052)

9. **Fuels:** Refer to applicable approved Manuals

10. **Oils:** Refer to applicable approved Manuals

11. **Baggage/Cargo Compartment:**

<table>
<thead>
<tr>
<th>Compartment</th>
<th>Capacity (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Baggage Compartment</td>
<td>30</td>
</tr>
<tr>
<td>Aft Baggage Compartment</td>
<td>160</td>
</tr>
<tr>
<td>Wardrobe</td>
<td>30</td>
</tr>
<tr>
<td>Lavatory Cabinet</td>
<td>15</td>
</tr>
</tbody>
</table>
12. **Required Equipment:**
   The approved equipment is listed in Airplane Flight Manual. Also see Note 4.

13. **Operational Capabilities:**
   One Pilot / Two Pilots
   VRF Day and Night
   IFR Day and Night
   RVSM
   Flight into known icing
   Extended Over-water Operation

14. **Other Limitations:**

### IV. Operating and Maintenance Instructions

1. **Airplane Flight Manual:**

2. **Mandatory Maintenance Instruction:**
   Airplane Maintenance Manual, part number AMM-2432.

### V. Notes

**Note 1** – Weight and balance.
Current weight and balance report, including the list of equipment that are part of the certificated basic empty weight and loading instructions, must be provided for each aircraft at the time of original certification. The certificated empty weight and corresponding center of gravity location must include:
- Unusable fuel: 20 kg (44 lb) at + 5.81 m (228.9 in.) aft of datum
- Full oil: 8 kg (17.64 lb) at + 7.68 m (302.52 in.) aft of datum
- Hydraulic Fluid: 1.4 kg (3.09 lb) at + 0.87 m (34.17 in.) aft of datum

**Note 2** – Markings and placards.
All markings and placard required by the applicable certification requirements (see certification basics) and by the operational requirements must be installed in the appropriated locations. Required placards and markings are listed in chapter Eleven of the Aircraft Illustrated Parts Catalog and Airplane Maintenance Manual.

**Note 3** – All replacement seats (crew and passenger) must be approved SAAU.

**Note 4** – Additional mandatory equipment:
- Protective Breathing Equipment PN MR-10022NEMB (see CRI CS-2).

**Note 5** – Approval for operation with a minimum crew of one pilot (in the left seat) is based upon the cockpit equipment installation and arrangement evaluated during ANAC certification testing. No significant changes may be made to the installed cockpit equipment or arrangement (EFIC, autopilot, avionics, etc.), except as permitted by the approved MMEL, without prior approval SAAU.
**Note 6** – The EMB-500 is often referred to in marketing literature as the “PHENOM 100”. This name is strictly marketing designation and is not part of the official model designation.

The End

Head of Aviation Products Type Certification Department

Sergiy Haydenko