

State Aviation Administration of Ukraine

SAAU

TYPE CERTIFICATE DATA SHEET № TL 0061

Embraer EMB-505

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

Model: EMB-505

Issue 1, 18 July 2013

This Data Sheet which is integral part of Type Certificate № TL 0061 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.

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SECTION 1: GENERAL EMB-505

1. **Data Sheet No:** **TL 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:** Commuter Category

SECTION 2:**I. General**

Model: EMB-505 (see Note 6)

II. Certification Basis:

1. **Application Date for SAAU Certification:** 24 December 2012
2. **SAAU Certification Date:** 18 July 2013
3. **SAAU Certification Basis:**
AR-23 "Airworthiness Standards for civil light airplanes"

Equivalent Level of Safety:

- CRI F-1: Landing distance – 23.75 (B);
- CRI ST-1: Ground gust conditions - 23.415(A);
- CRI SM-3: Hydraulic system - 23.1435(a)(4);
- CRI E-4: Powerplant parameters Indication and Warning Means - D23F.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: Digital Fuel Quantity Indication - 23.1553;
- CRI E-7: Control Markings – Usable Fuel Capacity - 23.1555(d)(1)
- CRI E-8: ATR-Automatic Thrust Reserve Function Deactivation - Appendix H 23.5(b)(4);
- CRI SL-3: Emergency exits – 23.807(e);
- CRI SL-4: Width of aisle – 23.815(b);
- CRI SL-5: Cargo and baggage compartment fire protection – 23.855;
- CRI SL-6: Passenger and crew compartment interiors – 23.853(d)(2);
- CRI SL-7: Pressurized cabins – 23.841(b)(6);
- CRI A-2: Flight and Navigation Instruments – D23F.8.2.2.5, D23F.8.2.2.6;
- CRI A-4: The equipment of radio communication – D23F.8.4.2.3.

Environmental Standards:

- ICAO Annex 16:
 - Volume I : Noise (fourth edition, July 2005),
 - Volume II : Aircraft Engine Emissions (second 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-alloy 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: 505TDSD002.
2. **Dimensions (m):**

MODEL	EMB-505
Length	15.64
Span	15.91
Height	5.10
Wing Area	28.5 (m ²)

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

MODEL	EMB-505
Ramp and Taxi	8200
Take-Off	8150
Landing	7650
Zero Fuel	6350

4. **Centre of Gravity Range:** See Airplane Flight Manual
5. **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)
6. **Maximum Passenger Capacity:** Seven
7. **Airspeeds:** $V_{MO} = 320$ KIAS, $M_{MO} = 0.78$ (see Airplane Flight Manual)
8. **Maximum Operating Altitude:** 13716 m (45000 ft)
9. **Engines:** Two Pratt & Whitney Canada PW535E turbofans (TCDS No. TD 0058)
10. **Fuels:** Refer to applicable approved Manuals

11. **Oils:** Refer to applicable approved Manuals
12. **Baggage/Cargo Compartment:**

Forward Baggage Compartment	50 kg
Aft Baggage Compartment	210 kg
Wardrobe	40 kg
Lavatory Cabinet	15 kg

13. **Operational Capabilities:** One Pilot / Two Pilots
VRF Day and Night
IFR Day and Night
RVSM
Flight into known Icing

IV. Operating and Maintenance Instructions

1. **Airplane Flight Manual:**
- Airplane Flight Manual, Document No. AFM-2666.
 - General Publication "Operation in Ukraine", Document No. GP-4979.
2. **Mandatory Maintenance Instruction:**
- Airplane Maintenance Manual, part number AMM-2757.

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: 22.8 kg (50.26 lb) at + 6.508 m (256.22 in.) aft of datum

Full oil: 16 kg (35.27 lb) at + 9.826 m (386.85 in.) aft of datum

Hydraulic Fluid: 8.8 kg (19.40 lb) at + 7.954 m (313.15 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.

Note 3 – Continuing Airworthiness.

See Maintenance Manual, Chapter Four (4), "Airworthiness Limitations" for Systems Airworthiness Limitations, Structure Airworthiness Limitations (ALI) and Life-Limited Items (LLI). The life limit for rotating parts on the PW535E engine is in the Airworthiness Limitations Section of the Pratt & Whitney Canada Engine Maintenance Manual P/N 3072702, latest revision.

Note 4 – All replacement seats (crew and passenger) must be approved SAAU.

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-505 is often referred to in marketing literature as the “PHENOM 300”. This name is strictly marketing designation and is not part of the official model designation.

Note 7 – Extended overwater operation without installed ditching equipment is prohibited.

Note 8 – On airplanes that operate in Ukraine Protective Breathing Equipment MR- PN 10022NEMB must be installed.

Note 9 - HF radio station must be installed when operating in cases or areas where the communication by VHF radio stations cannot be carried out.

The End

Head of Aeronautical Products Type
Certification Department



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