



TYPE CERTIFICATE DATA SHEET Nº EA-2012T10-00

Type Certificate Holder:

ECLIPSE AEROSPACE INC
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USA

EA-2012T10-00
 Sheet 01

**ECLIPSE
 AEROSPACE**

EA 500

20 July 2012

This data sheet, which is part of Type Certificate No. 2012T10, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

I - Model EA 500 (Normal Category), approved 20 July 2012.

ENGINE	Two Pratt & Whitney Canada PW610F-A (EM 2011T07)				
FUEL	JET A and Jet A-1 per ASTM D 1655; JP-8 per MIL-T-83133 Fuels not containing icing inhibitors must have MIL-I-27686, MIL-I-85470, or Phillips PFA-55MB fuel system icing inhibitors blended into the aircraft fuel at concentrations not less than 0.10% but no more than 0.15% by volume. The minimum fuel icing inhibitor content during refueling is 0.10% by volume.				
ENGINE LIMITS		N1(%)	N2(%)	MAX ITT (°C)	Time Limit
	Maximum Take-off	102	100	795	5 minutes
	Max. Continuous	102	100	795	Continuous
	APR	102	100	795	10 minutes
	Transient	103	102	850	20 seconds
OIL	See AFM				
AIRSPEED LIMITS (EAS)	Maximum operating (V_{MO}):	285 keas			
	Maximum operating (M_{MO}):	0.64 M			
	Maximum operating Maneuvering (V_o):	180 keas			
	Flaps extended (V_{FE})				
	(landing):	140 keas			
	(takeoff):	200 keas			
	Maximum tire ground speed:	139 knots			
	Maximum L. G. operation speed (V_{LO}):	200 keas			
	Maximum L. G. extended speed (V_{LE}):	285 keas			
	Minimum Airspeed in Icing Conditions	165 keas			
CG RANGE	Forward limits: 4.07 m (195.65 in) aft of datum up to 2232.58 kg (4922 lbs) with a straight line taper to 5.03 m (197.91 in) at				

	2721.55 kg (6000 lbs).		
	Aft Limits: 5.19 m (204.37 in) aft of datum up to 2477.07 kg (5461 lbs) with a straight line taper to 5.08 (199.70 in) at 2721.55 Kg (6,000 lbs).		
CG RANGE (Empty weight)	None		
DATUM	Is located 59.06 cm (23.25 in) forward the nose radome.		
LEVELING MEANS	Laterally: Forward edge of the baggage compartment floor Longitudinally: Left hand out board seat track in front of the main cabin door		
MAXIMUM WEIGHT	Takeoff:	2721.55 kg (6000 lb)	
	Landing:	2540.12 kg (5600 lb)	
	Zero Fuel:	2232.58 kg (4922 lb)	
	Ramp:	2736.98 kg (6034 lb)	
MINIMUM CREW	1 pilot plus required equipment as specified in the approved AFM		
NUMBER OF SEATS	6 Max (Includes pilot and crew); Refer to the Airplane Flight Manual (AFM), Document No. 06-122204, latest approved revision, reference Section 6 for seat configurations and moment arms.		
MAXIMUM BAGGAGE	117.94 kg (260 lbs); 1 compartment, moment arm 5.54 m (217.92 in) aft of datum Baggage Compartment floor loading is 488.24 kg/m ² (100 lb/ft ²) Cabin floor loading is 390.59 kg/m ² (80 lb/ft ²)		
FUEL CAPACITY	963.01 l (254.4 gallons) total; 949.76 l (250.9 gallons) usable; 13.25 l (3.5 gallons) unusable Moment arm 502.92 cm (198 in) aft of datum		
OIL CAPACITY	5.76 l (6.088 quarts) total per engine; 0.79 l (0.832 quarts) usable per engine		
MAXIMUM OPERATING ALTITUDE	Takeoff 3048 m (10000 ft) MSL Operating 12497 m (41000 ft) MSL		
CONTROL SURFACE MOVEMENTS	Elevator:	Up 25° ±0.5°	Down 15° ±0.5°
	Elevator trim tab:	Up 4.1° ±0.5°	Down 20° ±0.5°
	Rudder:	Right 30° ±0.5°	Left 30° ±0.5°
	Rudder trim tab:	Right 20° ±1°	Left 20° ±1°
	Aileron:	Up 15.5° +0.5°, -0.2°	Down 11.6° +0.5°, -0.2°
	Aileron trim tab:	Up 5.4° ± 0.3°	Down 4.8° ± 0.3°
	Wing flaps:	Cruise 0° ± 0.5°	
		Takeoff 16.8° ±0.5°	
		Landing 33.8° ±1°	
SERIAL NUMBER ELIGIBLE	001 to 260 and 266 to 267 with SB 500-04-002 "Brazilian ANAC Configuration Definition" Service Bulletin embodied.		

IMPORT ELIGIBILITY

A Brazilian Certificate of Airworthiness may be issued on the basis of on an FAA Export Certificate on Airworthiness (or a third country Export Certificate on Airworthiness, in case of used aircraft imported from such country), including the following statement:

“The aircraft covered by this certificate has been inspected, tested, and found to be in conformity with the Brazilian approved type design as defined by the Brazilian Type Certificate no. 2012T10 and in condition of safe operation”.

CERTIFICATION BASIS

Brazilian Type Certificate No. 2012T10 issued on 20 July 2012 based on the RBAC 21.29 and RBAC 23, which endorses the 14 CFR Part 23 as amended by 23-1 through 23-55.

Special Conditions:

23-128-SC for Engine Fire Extinguishing System

23-121-SC for Electronic Engine Control System

23-112A-SC for High Intensity Radiated Fields (HIRF) Protection

Equivalent levels of safety findings:

ACE-02-19: RBAC/14 CFR §§ 23.777(d) and 23.781 Fuel Cutoff Control

ACE-05-32: RBAC/14 CFR §§ 23.1545(a) and 23.1581(d) for Indicated Airspeeds

ACE-05-34: RBAC/14 CFR §23.181(b), Dynamic Stability

ACE-05-35: RBAC/14 CFR §23.1353(h), Storage Battery Design and Installation

ACE-05-36: RBAC/14 CFR §23.1323(c), Airspeed Indicating System

ACE-06-01: RBAC/14 CFR § 23.1545(b)(4), Airspeed Indicator

ACE-06-05: RBAC/14 CFR 23, Appendix H, § H23.5, Installation of an Automatic Power Reserve System

ACE-07-04: RBAC/14 CFR § 23.1545(b)(4), Airspeed Indicator

ACE-08-12: RBAC/14 CFR §§ 23.201(b)(2) Wings Level Stall, and 23.203(a), Turning Flight and Accelerated Turning Stalls for flight into known icing (FIKI)

Exemptions:

Brazilian Temporary Exemption ANAC Decision No- 58, dated 26 June 2012 published on 03 July 2012 in “Diário Oficial da União”.

Temporary Exemption Related To Fuel Quantity indicator o RBHA / 14 CFR 23.1553, amendment 23-55.

This exemption is effective until 03 July 2014.

Noise requirements:

Part 36 through Amendment 36-26.

Emission requirements:

Part 34 through Amendment 34-3

Icing Approval: Icing Approval: Serial numbers 000266 through 000267 and Serial Numbers 000001 through 0000260 which incorporate Eclipse FAA approved Service Bulletin, SB 500-99-004, are approved for flight into known, or forecast icing.

Compliance with ditching provisions has not been met for issuance of a Type Certificate.

Model EA500 is defined by Eclipse drawing 06-102100-1002, Revision D, dated November 19, 2008 or later FAA approved revision.

REQUIRED EQUIPMENT

The basic required equipment, as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane.

DATA PERTINENT TO ALL MODELS:**NOTES:**

- NOTE 1** Weight and balance. A current weight and balance report, including a list of equipment included in the certificated empty weight, and loading instructions when necessary must be provided for each aircraft at the time of original certification.
- NOTE 2** Markings and placards. The aircraft must be operated according to the Brazilian Approved Flight Manual and associated checklist. Required placards are listed in Eclipse Service Bulletin SB 500-11-005 revision C, dated 23 November 2011, or later revisions.
- NOTE 3** Continuing Airworthiness. FAA approved Airworthiness Limitations for inspection time limits and maintenance checks are included in Chapter 4 of the Aircraft Maintenance Manual (AMM) Document No. 06-117751, revision 19, dated 01 August 2011, or later FAA approved revision.
- NOTE 4** The differences of the Brazilian airplanes in relation to the basic FAA type design are summarized below:
1. The Brazilian Airplane Flight Manual Supplement 06-122953-BR-01 and Brazilian cover page.
 2. Markings and placards as listed in Eclipse Service Bulletin SB 500-11-005 revision C, dated 23 November 2011, or later revisions.
- NOTE 5** The Eclipse EA500 is Aircraft Group approved for Reduced Vertical Separation Minimum (RVSM). All airplanes are equipped with RVSM capable dual air data system, pilot and copilot Primary Flight Displays, and Autopilot. Each operator must obtain RVSM operating approval.
- NOTE 6** The Eclipse EA500 incorporates highly integrated avionics and electrical power generation/distribution systems using software-based line replaceable units (LRU's) which share common digital signal transmission buses. The avionics and electrical power generation/distribution configuration of the Eclipse EA500 as delivered from production is critical to the proper operation of the avionics and electrical power generation/distribution system. Modification to the LRU software supplied with the Eclipse EA500, replacement of an LRU with a different LRU, addition of new LRU, or alteration of an LRU interface, or changes to the electrical power generation/distribution system could adversely affect the airworthiness of the certified product. Accordingly, no changes to the integrated avionics or electrical power generation/distribution system may be made without coordination with the Certificate Management Aircraft Certification Office.
- NOTE 7** The Eclipse EA500 shall be maintained according to:
- Aircraft Maintenance Manual (AMM), No. 06-117751, revision 19, dated 01 August 2011 or later FAA accepted revision.
- Structural Repair Manual (SRM), No. 06-117755, revision 3, dated January 2009 or later FAA approved revision.
- Wiring Diagram Manual (WDM), No. 06-117753, revision 6, dated December 2008 or later FAA approved revision.
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Fault Isolation Manual, No. 06-117754, revision 3, dated August 2008, or later FAA approved revision

- NOTA 8** Any modification or changes in cockpit configuration which may affect aircrew workload, cockpit noise level or day/night operational capabilities must be evaluated by an ANAC Aircraft Certification Flight Test Pilot.
- NOTA 9** All pilots operating a Brazilian registered Eclipse EA500 must be trained and qualified in accordance with the ANAC Accepted/Approved Eclipse training program or equivalent ANAC Accepted/Approved training program.



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