



**TYPE CERTIFICATE DATA SHEET Nº EA-2006T01**

Type Certificate Holder:

**ASI AVIATION**

**Aerodrome de Reims Prunay  
51360 Prunay  
France**

(former REIMS AVIATION INDUSTRIES)

EA-2006T01

Sheet 01

ASI

F406

15 March 2016

This data sheet, which is part of Type Certificate No. 2006T01, 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 Reims/Cessna F406, (Normal Category), approved 10 May 2006.**

**ENGINE**

Two Pratt & Whitney Canada Inc., turboprops model PT6A-112.  
(Brazilian Engine Type Certificate EM-8005-05)

**FUEL**

Jet A, Jet A-1, Jet B, JP1, JP4, JP5, JP8, JP8. Anti-icing additive per MIL-I-27686E, MIL-DTL-85470B in concentrations not less than 0.060% or more than 0.15% by volume.

**ENGINE LIMITS**

	Shaft horsepower Hp (Kw)	Ng Gas generator speed % (rpm)	Indicated torque m.daN (ft-lb)	Propeller shaft speed (rpm)	Maximum permissible inter-turbine temp. (°C)
Takeoff static and maximum continuous	500 (373)	101.6 (38 100)	187.4 (1 382)	1 900	725
Starting (2 sec.)	-	-	-	-	1 090
Maximum reverse	480 (358)	101.6 (38 100)	187.4 (1 382)	1 815	725

**PROPELLER**

Two McCauley three-bladed, full-feathering reversible.  
(Brazilian Propeller Type Certificate EH-8804)

Hub	Blade	Diameter m (in)		Reverse*	Low pitch*	Feathered*
		Min.	Max			
3GFR34C701	93 KB-0	2.30 (90-5/8 in)	2.36 (93 in)	-13.5°	18.5°	85.5°

\*Pitch measured at 0.76 m (30 in) station.

<b>AIRSPPEED LIMITS</b>	Maximum operating ( $V_{MO}$ )	230 kt
	Sea level to 6 553 m (21 500 ft)	
<b>(CAS)</b>	$M_{MO}$ above 6 553 m (21 500 ft)	0.52 mach
	Maneuvering ( $V_A$ )	163 kt
	Flaps extended ( $V_{FE}$ )	
	30° flap (landing)	180 kt
	20° flap (approach)	200 kt
	10° flap (takeoff)	200 kt
	Minimum Control air speed ( $V_{MCA}$ )	90 kt
	Landing Gear Operation ( $V_{LO}$ )	180 kt
	Landing Gear Extended ( $V_{LE}$ )	180 kt
<b>C. G. RANGE</b>	4 242 mm (+166.99 in) to 4 579 mm (+180.28 in) at 2 948 kg (6 500 lb) or less (11% to 32% MAC).	
<a href="#">Standard maximum gross weight</a>	4 379 mm (+172.42 in) to 4 579 mm (+180.28 in) at 4 246 kg (9 360 lb) (19.6% to 32% MAC).	
Landing gear extended	Variation is linear between points. Landing gear retracting moment (+1 346 in-lb).	
<b>C. G. RANGE</b>	<a href="#">4 242 mm (+166.99 in) to 4 579 mm (+180.27 in) at 2 948 kg (6 500 lb) or less (11% to 32% MAC).</a>	
<a href="#">Increased maximum gross weight (see note 6)</a>	<a href="#">4 398 mm (+173.13 in) to 4 579 mm (+180.27 in) at 4 417 kg (9 737 lb) (20.7% to 32% MAC).</a>	
<a href="#">Landing gear extended</a>	<a href="#">4 407 mm (+173.49 in) to 4 563 mm (+179.64 in) at 4 502 kg (9 925 lb) (21.28% to 31% MAC).</a> <a href="#">Variation is linear between points.</a> <a href="#">Landing gear retracting moment (+1 346 in-lb).</a>	
<b>C. G. RANGE</b>	None.	
Empty weight		
<b>DATUM</b>	2 540 mm (100 in) forward of the front face of forward bulkhead which is station +100.00.	
<b>LEVELING MEANS</b>	Two screws located on W.L. 238.25 cm (93.80 in) at station 248.25 and station 272.65.	
<b><u>STANDARD</u> MAXIMUM WEIGHT</b>	Takeoff and Landing:	4 246 kg (9 360 lb)
	Zero Fuel (with zero wing locker payload):	3 856 kg (8 500 lb)
	Ramp:	4 280 kg (9 435 lb)
<b><u>INCREASED</u> MAXIMUM WEIGHT (SEE NOTE 6)</b>	<a href="#">Takeoff:</a>	<a href="#">4 468 kg (9 850 lb)</a>
	<a href="#">Landing:</a>	<a href="#">4 246 kg (9 360 lb)</a>
	<a href="#">Zero Fuel</a>	<a href="#">3 856 kg (8 500 lb)</a>
	<a href="#">(with zero wing locker payload):</a>	
	<a href="#">Ramp:</a>	<a href="#">4 502 kg (9 925 lb)</a>
<b>MINIMUM CREW</b>	One pilot.	
<b>NUMBER OF SEATS</b>	One through eleven ( <a href="#">RBAC/14 CFR PART 23</a> )	One through <a href="#">fourteen</a> (SFAR 41c)
	2 seats at + 3 480 mm (+137.0 in)	2 seats at + 3 480 mm (+137.0 in)
	2 seats at + 4 270 mm (+168.0 in)	2 seats at + 4 220 mm (+166.0 in)
	2 seats at + 4 990 mm (+196.0 in)	2 seats at + 4 880 mm (+192.0 in)

2 seats at + 5 690 mm (+224.0 in)	2 seats at + 5 540 mm (+218.0 in)
1 seat at + 6 401 mm (+252.0 in)	2 seats at + 6 200 mm (+244.0 in)
2 seats at + 7 110 mm (+280.0 in)	2 seats at + 6 860 mm (+270.0 in)
	2 seats at + 7 520 mm (+296.0 in)

See aircraft weight and balance data sheet and the AFM for other seating arrangements in the cabin.

**MAXIMUM BAGGAGE**

In the nose:

113 kg (250 lb) at + 810 mm (+ 32.0 in)  
159 kg (350 lb) at +1 800 mm (+71.0 in)

**MAXIMUM BAGGAGE  
(Cont.)**

In the aft cabin:

181 kg (400 lb) at + 5 360 mm (+211.0 in)  
181 kg (400 lb) at + 7 650 mm (+301.0 in)  
45 kg (100 lb) at + 8 050 mm (+317.0 in)

In the wings:

91 kg (201 lb) at + 5 360 mm (+211.0 in)

**FUEL CAPACITY**

Total capacity: 1 458 kg (3 227 lb) or 1822 l (481.5 gal) in two standard wing tanks at 4 620 mm (+181.9 in);  
Usable total capacity: 1 439 kg (3 183 lb) or 1798 l (475 gal). See Note 7.

**OIL CAPACITY**

17.4 l (4.6 gal)

**MAX. OPERATING  
ALTITUDE**

9 144 m (30 000 ft)

**CONTROL SURFACE**

Elevator (horn faired)	Up 14° +1°/-0°	Down 17° +1°/-0°	
Elevator trim tabs	Up 8° +1°/-0°	Down 10° +2°/-0°	
Rudder (perpendicular to hinge 0° faired with fin)		Right 32° +1°/-0°	Left 32° 1°/-0°
Rudder trim tab (perpendicular to hinge)		Right 11° +1°/-0°	Left 16° +1°/-0°
Aileron		Up 25° +1°/-0°	Down 14° +1°/-0°
Aileron trim tab		Up 19° +1°/-0°	Down 19° +1°/-0°
Wing flaps:		Inboard:	Down: 30° +1°/-0°
		Outboard:	Down: 20° +1°/-0°

**SERIAL NUMBERS  
ELIGIBLE**

A Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for a Brazilian Standard Airworthiness Certificate.

**IMPORT ELEGIBILITY**

A Brazilian Standard Airworthiness Certificate may be issued on the basis of on a DGAC (France) Export Certificate of 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 N° 2006T01 and in condition for safe operation".

**CERTIFICATION BASIS**

The certification basis for the aircraft model is [RBAC 21.29 and RBAC 23](#) “Aviões Categoria Normal, Utilidade, Acrobática e Transporte Regional”, which endorses the [14 CFR part 23](#) effective 01 February 1965, as amended by 23-1 through 23-13, except as follows:

[RBAC/14 CFR part 23.23](#) thru 23.31, 23.51 thru 23.63, 23.66, 23.71 thru 23.75, 23.141 thru 23157, 23.171 thru 23.253, 23.427, through [amendment 23-14](#);

- [RBAC/14 CFR part 23.45](#), 23.49, 23.65, 23.67, 23.77, 23.161, 23.901, 23.905 thru 23.1017, 23.929, 23.933, 23.951, 23.971, 23.979, 23.997, 23.999, 23.1013, 23.1015, 23.1019(a)(1), 23.1019 (a)(2), 23.1019 (a)(4), 23.1019 (a)(5), 23.1019(b), 23.1021 thru 23.1203, 23.1303 (a through d), 23.1305 (a thru u and w), 23.1323, 23.1325, 23.1329, 23.1331, 23.1337, 23.1351 thru 23.1357, 23.1521, 23.1549, 23.1551, 23.1553 through Amendment 23-21;
- [RBAC/14 CFR part 23.1545](#) through Amendment 23-23;
- [RBAC/14 CFR part 23.903](#), 23.1529 through Amendment 23-26; and
- Annex 16 of ICAO Volume I, Chapter 6, Amendment 1, effective 24 November 1983.

In addition to the above certification basis, compliance with ice protection has been demonstrated in accordance with [RBAC/14 CFR PART 23.773](#) and 23.1419 of Amendment 23-14, [RBAC/14 CFR PART 23.1309](#) of Amendment 23-17, and [RBAC/14 CFR PART 23.1416](#) of Amendment 23-23 when ice protection equipment is installed in accordance with CESSNA drawing N° 6015 006, Factory Kit (FK) N° 194, and POH/AFM supplement N° 5, EASA approved.

In addition to the above certification basis, SFAR 41c adopted at 21 July 1982 and effective at 13 September 1982.

[In addition of the above certification basis, these additional requirements are applicable with GARMIN Avionic Suite System G600 Installation \(ASI Aviation FAM468\); CS23.771, CS23.773, CS23.867, CS23.1301, CS23.1309, CS23.1311, CS23.1321 thru CS23.1323, CS23.1325, CS23.1327, CS23.1329, CS23.1331, CS23.1335, CS23.1351, CS23.1357, CS23.1359, CS23.1365, CS23.1367, CS23.1381, CS23.1431, CS23.1501, CS23.1525, CS23.1529, CS23.1541, CS23.1543, CS23.1545, CS23.1547 as amended thru Amdt. 2.](#)

Equivalent Level of Safety Items (ELOS):

- Equivalent Levels of Safety finding made per the provisions of [RBAC/ 14 CFR PART 23.1189\(a\)](#) of Amendment 23-23.

Special Conditions (SC):

- In addition to the requirements of [RBAC/14 CFR PART 23.677](#), it must be demonstrated that, at critical weights and center of gravity positions, the airplane is safely controllable and that a pilot can perform all the maneuvers and operations necessary to affect a safe landing following any probable electric trim tab runaway which might be reasonably expected in service allowing for appropriate time delay after pilot recognition of the runaway;
- In addition to the requirements of [RBAC/14 CFR PART 23.629\(f\)](#) of Amendment 23-23, it must be shown by analysis or test, or by a combination of analysis and tests, that the airplane is free from flutter, control reversal, and divergence up to  $V_D/M_D$  after the failure, malfunction, or disconnection of any single element in the elevator tabs control system; and

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- In addition to the above certification basis, SFAR 27 as amended thru SFAR 27-4.

## Exemption:

- FAA exemption N° 4661 from exact compliance with the requirements [RBAC/14 CFR PART 23.207\(c\)](#).

**DESIGN DATA**

The airplane shall be manufactured in accordance with the latest EASA approved revision of "Master Drawing List", Document No. MEDB 1485, Rev. 01 dated 26 February 2001, or other EASA approved data.

**REQUIRED EQUIPMENT**

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

In addition to the above required equipment, the following equipment are also required:

- The latest ANAC Approved Brazilian Airplane Flight Manual (ANAC POH/AFM) No. N° D1624-E2R2-13BRPH; and
- Stall Warning Indicator – Cessna DWG 57180030.

**NOTES:****NOTE 1****Weight and balance:**

A current weight and balance report including 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. The certificated empty weight and loading corresponding center of gravity location must include unusable fuel of 19 kg (44 lb) or 24 l (6.5 gal) at 4 620 mm (+181.9 in).

**NOTE 2****Markings and placards:**

All placards specified in the approved Brazilian Airplane Flight Manual ANAC POH/AFM N° D1624-E2R2-13BRPH (AFM) must be displayed in the airplane in the appropriate locations. In addition, all markings and placards for passenger information, external markings for emergency, load limits in cargo/baggage compartments must be presented in Portuguese or bilingual.

**NOTE 3****Continuing Airworthiness:**

Approved Airworthiness Limitations for inspection time limits, maintenance checks, mandatory retirement life information and other requirements for continued airworthiness, are included in the latest approved revision of the Maintenance Manuals (with Maintenance Planning Manual, Structural Repair Manual and Weight and Balance) N° D2536-54-13, Rev. 45, dated [05 October 2011](#).

**NOTE 4**

The differences of the Brazilian airplanes in relation to the basic EASA type design are summarized below:

- 1 - The Brazilian Airplane Flight Manual (ANAC POH/AFM);
- 2 - Markings and placards.

**NOTE 5****CTA POH/AFM:**

ANAC approved Brazilian Airplane Flight Manual (ANAC POH/AFM) No. N° D1624-E2R2-13BRPH, dated 24 April 2006 (or later approved revision), which corresponds to the EASA approved Flight Manual No. D1624-E2R2-13PH, Issue 2, Revision 2, dated January 2005 with Supplements 1 to 38 dated May 2004 (or later EASA approved revisions). The airplane must be operated according to the appropriate ANAC approved Brazilian Airplane Flight Manual.

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- NOTE 6** The maximum takeoff gross weight of F406 is increased from 4 246 kg (9 360 lb) to 4 468 kg (9 850 lb) when modified in accordance with Cessna Kit N° 406-0011. (See Supplement A10 of the section 9 of the POH/AFM.)
- NOTE 7** Fuel weight 4.5 kg/l (6.70 lb/gal) (Density = 0.8).
- NOTE 8** Model F406 airplanes which have the factory option of a camera hole in the aft fuselage, requires compliance with Reims Aviation Industries Service Bulletin, SB-F406-58, as mandated by DGAC (France), Emergency Airworthiness Directive (EAD) N UF 02005-080. The effected F406 airplane serial numbers are: 0002, 0003, 0004, 0006, 0008, 0009, 0010, 0012, 0013, 0017, 0024, 0025, 0039, 0042, 0044, 0045, 0066, 0070, 0073, 0074, 0075, 0077, from 0080 through 0090 and 0092.

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