



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

TYPE CERTIFICATE DATA SHEET Nº EA-9706

Type Certificate Holder:

CESSNA AIRCRAFT CO.
P.O. Box 7704
Wichita, Kansas 67277
USA

EA-9706-04
Sheet 01

CESSNA
182S
182T
T182T

May 2007

This data sheet, which is part of Type Certificate No. 9706, 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 182S, Skylane (Normal Category), approved 18 June 1998.

ENGINE	Lycoming IO-540-AB1A5, rated 230 hp.
ENGINE LIMITS	For all operations, 2 400 rpm.
PROPELLER AND PROPELLER LIMITS	McCauley Constant Speed Propeller: <u>B2D34C235/90DKB-8 (2 blades)</u> Diameter: not over 208.3 cm (82 in) not under 204.5 cm (80.5 in) Pitch settings at 76.2 cm (30 in) sta.: Low 17.0°; High 31.8° McCauley Spinner: D-7267-2 McCauley Governor: DC290D1/T8 Propeller: <u>B3D36C431/80VSA-1 (3 blades)</u> Diameter: not over 201 cm (79 in) not under 196.9 cm (77.5 in) Pitch settings at 76.2 cm (30 in) sta.: Low 14.9° High 31.7° McCauley Spinner: D-7261-2 McCauley Governor: DC290D1/T8 Static RPM at full throttle: not over 2 400; not under 2 300
AIRSPPEED LIMITS	Never exceed (V_{NE}): 170 kcas (175 kias) Maneuvering (V_A): 108 kcas (110 kias) Max. structural cruise (V_{NO}): 138 kcas (140 kias) Flaps extended (V_{FE}): 99 kcas (100 kias)
C. G. RANGE	Aft Limits: 116.8 cm (46.0 in) aft of datum at 1 406 kg (3 100 lb) or less. Forward Limits: Linear variation from 103.9 cm (40.9 in) aft of datum at 1 406 kg (3 100 lb) to 83.8 cm (33.0 in) aft of datum at 1 021 kg (2 250 lb); 83.8 cm (33.0 in) aft of datum at 1 021 kg (2 250 lb) or less.

Pawor

FUEL CAPACITY 348 liters (92 US gal) total; 333 liters (88 US gal) usable. Two 174 liters (46 US gal) tanks in wings at 118.1 cm (46.5 in) aft of datum. See Note 1 for data on usable fuel.

SERIAL NUMBERS ELIGIBLE 18280001 through 18280944.

II - Model 182T, Skylane (Normal Category), approved 27 November 2001.

ENGINE Lycoming IO-540-AB1A5, rated 230 hp.

ENGINE LIMITS For all operations, 2 400 rpm.

PROPELLER AND PROPELLER LIMITS McCauley Constant Speed Propeller: B3D36C431/80VSA-1 (3 blades)
 Diameter: not over 201 cm (79 in)
 not under 196.9 cm (77.5 in)
 Pitch settings at 76.2 cm (30 in) sta.: low 14.9° high 31.7°
 McCauley Spinner: D-7261-2
 McCauley Governor: DC290D1/T8
 Static RPM at full throttle: not over 2 400; not under 2 300

AIRSPEED LIMITS Never exceed (V_{NE}): 171 kcas (175 kias)
 Maneuvering (V_A): 108 kcas (110 kias)
 Max. structural cruise (V_{NO}): 136 kcas (140 kias)
 Flaps extended (V_{FE}): 99 kcas (100 kias)

CG RANGE Aft Limits: 116.8 cm (46.0 in) aft of datum at 1 406 kg (3 100 lb) or less.
 Forward Limits: Linear variation from 103.9 cm (40.9 in) aft of datum at 1 406 kg (3 100 lb), to 90.2 cm (35.5 in) aft of datum at 1 225 kg (2 700 lb), to 83.8 cm (33.0 in) aft of datum at 1 021 kg (2 250 lb); 83.8 cm (33.0 in) aft of datum at 1 021 kg (2 250 lb) or less.

FUEL CAPACITY 348 liters (92 US gal) total; 329 liters (87 US gal) usable. Two 174 liters (46 US gal) tanks in wings at 118.1 cm (46.5 in) aft of datum. See Note 1 for data on usable fuel.

SERIAL NUMBERS ELIGIBLE 18280945 and on.(182T)

III - Model T182T, Skylane (Normal Category), approved 27 November 2001.

ENGINE Lycoming TIO-540-AK1A, rated 235 hp.

ENGINE LIMITS For all operations, 2 400 rpm.

**PROPELLER AND
PROPELLER LIMITS**

McCauley Constant Speed
Propeller: B3D36C442/80VSB-1 (3 blades)
Diameter: not over 201 cm (79 in)
not under 196.9 cm (77.5 in)
Pitch settings at 76.2 cm (30 in) sta.: Low 15.3° High 35.4°
McCauley Spinner: D-7261-2
McCauley Governor: DC290D1/T8
Static RPM at full throttle: not over 2 400; not under 2
300

AIRSPEED LIMITS

Never exceed (V_{NE}): 170 kcas (175 kias)
Maneuvering (V_A): 110 kcas (110 kias)
Max. structural cruise (V_{NO}): 137 kcas (140 kias)
Flaps extended (V_{FE}): 100 kcas (100 kias)

CG RANGE

Aft Limits: 116.8 cm (46.0 in) aft of datum at 1 406 kg (3 100 lb) or less.
Forward Limits: Linear variation from 103.9 cm (40.9 in) aft of datum at 1
406 kg (3 100 lb), to 90.2 cm (35.5 in) aft of datum at 1 225 kg (2 700 lb),
to 83.8 cm (33.0 in) aft of datum at 1 021 kg (2 250 lb); 83.8 cm (33.0 in)
aft of datum at 1 021 kg (2 250 lb) or less.

FUEL CAPACITY

348 liters (92 US gal) total; 329 liters (87 US gal) usable. Two 174
liters (46 US gal) tanks in wings at 118.1 cm (46.5 in) aft of datum.
See Note 1 for data on usable fuel.

SERIAL NUMBERS ELIGIBLE

T18208001 and on.

DATA PERTINENT TO ALL MODELS:**FUEL**

100/100LL minimum grade aviation gasoline

OIL

MIL-L-6082 aviation grade straight mineral oil.
MIL-L-22851 ashless dispersant oil.

EMPTY WEIGHT C. G. RANGE

None

DATUM

Lower portion of front face of firewall.

LEVELING MEANS

Left side of tailcone at 354.7 cm (139.65 in) and 436.0 cm
(171.65 in) aft of datum.

MEAN AERODYNAMIC CHORD

149 cm (58.8 in); leading edge of MAC 65.99 cm (25.98 in) aft of
datum.

MAXIMUM WEIGHT

Maximum Ramp 1 411 kg (3 110 lb)
Maximum Takeoff 1 406 kg (3 100 lb)
Maximum Landing 1 338 kg (2 950 lb)

NUMBER OF SEATS

4 [2 at 81.3 cm to 127.0 cm (32.0 to 50.0 in) aft of datum; 2 at
188.0 cm (74.0 in) aft of datum].

Pawor

MAXIMUM BAGGAGE	90.7 kg (200 lb): 54.4 kg (120 lb) at 233.7 to 274.3 cm (92.0 to 108.0 in) aft of datum; 36 kg (80 lb) at 276.9 to 340.4 cm (109.0 to 134.0 in) aft of datum.		
OIL CAPACITY	8.6 liters (9.0 quarts) at 37.6 cm (14.8 in) forward of datum. 4.7 liters (5 quarts) usable.		
CONTROL SURFACE MOVEMENTS:	Elevator:	Up 28° ±1°	Down 21° ±0°
	(relative to stabilizer)		
	Elevator tab:	Up 24° ±2°	Down 15° ±1°
	Rudder:	Right	Left
	(parallel to 0.00 W.L.):	24° +0°/-1°	24° +0°/-1°
	(perpendicular to hinge line)	27° 13' +0°/-1°	27° 13' +0°/-1°
	Aileron:	Up 20° ±2°	Down 15° ±2°
	Wing flaps:	Down 38° +0°/-1°	
IMPORT ELIGIBILITY	<p>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:</p> <p>“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 ANAC Type Certificate no. 9706 and in condition of safe operation”.</p> <p>The ANAC Report H.10-0838-02 (for 182S), dated 17 June 1998, and H.10-2081-00 (for 182T and T182T), dated 10 June 2002, or further revisions, contain the Brazilian requirements for the acceptance of these airplanes. (See note 4)</p>		
CERTIFICATION BASIS	<p>RBHA 23, corresponding to FAA FAR Part 23 effective 01 February 1965, as amended by 23-1 through 23-6, except as follows:</p> <ul style="list-style-type: none"> - RBHA/FAR 23.423; 23.611; 23.619; 23.623; 23.689; 23.775; 23.871; 23.1323; and 23.1563 as amended by Amdt. 23-7. - RBHA/FAR 23.807 and 23.1524 as amended by Amdt. 23-10. - RBHA/FAR 23.507; 23.771; 23.853(a),(b) and (c); and 23.1365 as amended by Amdt. 23-14. - RBHA/FAR 23.951 as amended by Amdt. 23-15. - RBHA/FAR 23.607; 23.675; 23.685; 23.733; 23.787; 23.1309 and 23.1322 as amended by Amdt. 23-17. - RBHA/FAR 23.1301 as amended by Amdt. 23-20. - RBHA/FAR 23.1353; and 23.1559 as amended by Amdt. 23-21. - RBHA/FAR 23.603; 23.605; 23.613; 23.1329 and 23.1545 as amended by Amdt. 23-23. - RBHA/FAR 23.441 and 23.1549 as amended by Amdt. 23-28. - RBHA/FAR 23.779 and 23.781 as amended by Amdt. 23-33. - RBHA/FAR 23.1; 23.51 and 23.561 as amended by Amdt. 23-34. - RBHA/FAR 23.301; 23.331; 23.351; 23.427; 23.677; 23.701; 23.735; and 23.831 as amended by Amdt. 23-42. 		

CERTIFICATION BASIS (Cont.)

- RBHA/FAR 23.961, 23.1093; 23.1143(g); 23.1147(b); 23.1303; 23.1357; 23.1361 and 23.1385 as amended by Amdt. 23-43.
- RBHA/FAR 23.562(a), 23.562(b)2, 23.562(c)1, 23.562(c)2, 23.562(c)3, and 23.562(c)4 as amended by Amdt. 23-44.
- RBHA/FAR 23.33; 23.53; 23.305; 23.321; 23.485; 23.621; 23.655 and 23.731 as amended by Amdt. 23-45.

RBHA 36, corresponding to FAR 36 dated 01 December 1969, as amended by Amdt. 36-1 through Amdt. 36-21 (for models 182S and 182T) and Amdt. 36-22 (for model T182T).

Equivalent Safety Items:

- Induction System Icing Protection: RBHA/FAR 23.1093 (182S and 182T only);
- Throttle Control: RBHA/FAR 23.1143(g);
- Mixture Control: RBHA/FAR 23.1147(b); and

Anti-collision Lights: RBHA/FAR 23.1401(d) (182T and T182T only).

In addition to the previous certification basis above mentioned, the following RBHA/FAR 23 paragraphs, specific to the Garmin G1000 Integrated Cockpit System (ICS) NAV III optional installation are applicable: (182T and T182T only)

- RBHA/FAR 23.303; 23.307; 23.601; 23.1163(a)(1)(2); 23.1367 and 23.1381 as amended by Amendment 23-N/C.
- RBHA/FAR 23.1589 as amended by Amendment 23-13.
- RBHA/FAR 23.771(a) as amended by Amendment 23-14.
- RBHA/FAR 23.607 and 23.1309(a)(1)(2), (c) as amended by Amendment 23-17.
- RBHA/FAR 23.1301; 23.1327 and 23.1547(e) as amended by Amendment 23-20.
- RBHA/FAR 23.1501 and 23.1541(a)(1), (a)(2), (b)(1), (b)(2) as amended by Amendment 23-21.
- RBHA/FAR 23.603 and 23.605 as amended by Amendment 23-23.
- RBHA/FAR 23.1529 as amended by Amendment 23-26.
- RBHA/FAR 23.561(e); 23.1523; 23.1581(a)(2); 23.1583(a)(1), (a)(2), (b)(h) and 23.1585(a)(b)(d) as amended by Amendment 23-34.
- RBHA/FAR 23.301 as amended by Amendment 23-42.
- RBHA/FAR 23.1322; 23.1331 and 23.1357(a)(b)(c)(d) as amended by Amendment 23-43.
- RBHA/FAR 23.305; 23.773(a)(1), (a)(2); 23.1525 and 23.1549 as amended by Amendment 23-45.
- RBHA/FAR 23.1303(a)(b)(c)(f); 23.1309(a)(1)(i), (a)(1)(ii), (a)(2), (b)(1), (b)(2)(i), (b)(2)(ii), (b)(3), (b)(4)(i), (b)(4)(ii), (b)(4)(iii), (b)(4)(iv), (c)(1), (c)(2)(iii), (c)(3), (d), (e), (f)(1); 23.1311; 23.1321(a)(c)(d)(e); 23.1323(a), (b)(1), (b)(2), (c); 23.1329(g)(h); 23.1351(a)(1), (a)(2)(i), (b)(1)(iii), (b)(2), (b)(3), (c)(4), (d)(1); 23.1353(a)(b)(c)(d)(e); 23.1359(c); 23.1361; 23.1365(a)(b)(d)(e)(f) and 23.1431(a)(b)(d)(e) as amended by Amendment 23-49.
- RBHA/FAR 23.1325(a), (b)(1), (b)(2)(i), (b)(3), (c)(d)(e); 23.1543(b)(c); 23.1545(a), (b)(1), (b)(2), (b)(3), (b)(4); 23.1553; 23.1555(a)(b); 23.1563(a) and 23.1567(a) as amended by Amendment 23-50.
- RBHA/FAR 23.777(a)(b); 23.955(a)(2) and 23.1337(a)(1), (a)(2), (b)(1), (c) as amended by Amendment 23-51.
- RBHA/FAR 23.1305(a)(1), (a)(2), (a)(3), (b)(2), (b)(3)(i), (b)(4)(i), (b)(5), (b)(6)(i) as amended by Amendment 23-52.
- RBHA/FAR 23.901(a)(b) as amended by Amendment 23-53.

Pawel

CERTIFICATION BASIS (Cont.)

Additions for the Garmin GFC-700 Automatic Flight Control System (AFCS) Only:

- RBHA/FAR 23.1335 as amended by Amendment 23-20;
- RBHA/FAR 23.1309 (a)(3), (a)(4), (f)(2); 23.1329 (a)(c)(d)(e)(f); 23.1351(a)(2)(ii); 23.1431 (c) as amended by Amendment 23-49.

- Special Conditions as follows: (Doc. No. CE206) Special Condition 23-146-SC, "Cessna Aircraft Company; Cessna Model 182T/T182T Airplane; Installation of Electronic Flight Instrument System and the Protection of the System From High Intensity".

PRODUCTION BASIS

FAA Production Certificate No. 4 applies to airplane serial numbers 18280013, 18280016, 18280017, 18280019 and on, T18208001 and on. Airplanes serial numbers not listed were produced under Type Certificate only.

REQUIRED EQUIPMENT

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

NOTES:

NOTE 1 Weight and balance. The certificated basic empty weight and corresponding center of gravity location must include unusable fuel of 10.9 kg (24 lb) for Model 182S or 13.6 kg (30 lb) for Models 182T and T182T at 122 cm (48.0 in) aft of datum, and full oil of 7.3 kg (16.2 lb) at 37.6 cm (14.8 in) forward of datum.

NOTE 2 AFM, markings and placards:

FAA Approved Brazilian Airplane Flight Manual (POH/AFM) No. 182SPHBR-00, dated 01 September 1997 (or later approved revision), is applicable to Model 182S. The airplane must be operated according to the appropriate FAA Approved Brazilian Airplane Flight Manual

FAA Approved Brazilian Airplane Flight Manual (POH/AFM) No. 182TPHBR-01 (or later approved revision), which corresponds to the FAA approved Flight Manual No. 182TPHUS-01 (or later FAA approved revision) is applicable to Model 182T. The airplane must be operated according to the appropriate FAA Approved Brazilian Flight Manual.

FAA Approved Brazilian Airplane Flight Manual (POH/AFM) No. 182TPHABR-00 (or later approved revision), which corresponds to the FAA Approved Flight Manual No. 182TPHAUS-01 (or later FAA approved revisions) are applicable to the Model 182T equipped with Garmin G1000 Integrated Cockpit System (ICS) NAV III. The airplane must be operated according to the appropriate FAA approved Brazilian AFM.

FAA Approved Brazilian Airplane Flight Manual (POH/AFM) No. 182TPHBRR-00 (or later approved revision), which corresponds to the FAA Approved Flight Manual No. 182TPHBUS-00 (or later FAA approved revisions) are applicable to the Model 182T equipped with Garmin GFC 700 AFCS. The airplane must be operated according to the appropriate FAA approved Brazilian AFM.

**NOTE 2
(Cont.)**

FAA Approved Brazilian Airplane Flight Manual (POH/AFM) No. T182TPHBR-01 (or later approved revision), which corresponds to the FAA Approved Flight Manual No. T182TPHUS-01 (or later FAA approved revisions) is applicable to the Model T182T. The airplane must be operated according to the appropriate FAA approved Brazilian AFM.

FAA Approved Brazilian Airplane Flight Manual (POH/AFM) No. T182TPHABR-00 (or later approved revision), which corresponds to the FAA Approved Flight Manual No. T182TPHAUS-00 (or later FAA approved revisions) is applicable to the Model T182T equipped with Garmin G1000 Integrated Cockpit System (ICS) NAV III. The airplane must be operated according to the appropriate FAA approved Brazilian AFM.

FAA Approved Brazilian Airplane Flight Manual (POH/AFM) No. T182TPHBRR-00 (or later approved revision), which corresponds to the FAA Approved Flight Manual No. T182TPHBUS-00 (or later FAA approved revisions) are applicable to the Model T182T equipped with Garmin GFC 700 AFCS. The airplane must be operated according to the appropriate FAA approved Brazilian AFM.

NOTE 3

Continuing Airworthiness. See Maintenance Manual, chapter 5 "Time Limits/Maintenance Checks" for inspections, mandatory retirement life information, and other requirements for continued airworthiness.

NOTE 4

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

1. The Brazilian Airplane Flight Manuals approved by FAA, on behalf of ANAC, are required.
2. The following additional markings and placards (see also note 2):
 - Additional Cessna placard No. 0505087-XX (kinds of approved operation in Brazil); and
 - Cessna Placard No.0705020-3 only installed in the cargo compartment door (auxiliary passenger seat not approved).
3. Cessna Drawing No. 0701149 – "Certification Provisions – Brazil" must be incorporated.
4. An emergency locator transmitter (ELT) must be installed.
5. An altimeter with baroscale setting in millibars must be installed.

NOTE 5

The CHT probe must be installed on Head #1 (182S), #3 (182T) or #4 (T182T).

NOTE 6

The Garmin G1000 Integrated Cockpit System (ICS) NAV III is an optional installation for 182T and T182T models only and it is installed in the production line (not applicable to the used aircraft).



CLÁUDIO PASSOS SIMÃO
Gerente Geral, Certificação de Produtos Aeronáuticos
(Manager, Aeronautical Products Certification)