



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

TYPE CERTIFICATE DATA SHEET Nº EA-2007T06

Type Certificate Holder:

M7 AEROSPACE LP
10823 N.E. Entrance
San Antonio, Texas, 78216
USA

EA-2007T06
Sheet 01
M7
SA227-CC
SA227-DC
November 2007

This data sheet, which is part of Type Certificate No. 2007T06, 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 SA227-CC (Commuter Category), approved 19 November 2007 (See Note 9).

ENGINE 2 Garrett (AirReaserach) TPE331-11U-612G

FUEL Aviation Turbine fuels Garret Specifications
Type A EMS53111
Type A-1 EMS53112
Class A-JP4 and Class B-Type B EMS53113
Type JP-5 EMS53116
Type JP-8 EMS53112
(See Note 3)

ENGINE LIMITS Static Sea Level Ratings:
Table with 5 columns: Shaft Horse Power (shp), Gas Gen. Speed (rpm), Prop. Shaft Speed, Exhaust Gas Temp. (EGT) (Single Red Line) (°C)
Rows: Take-off (5-min) Dry, Take-off (5-min) Wet, Max. Continuous - Dry, Starting Limit (1-sec)

*See Note 4

OIL MIL-L-23699B
Conforming to Garrett Engine Division Specification EMS53110 TYPE II

PROPELLER AND PROPELLER LIMITS
Number 2
Make McCauley
Model 4HFR34C652() () - L106LA-0
Diameter 269.24 cm (106 in)
Pitch At 0.76 m (30 in) station

McCauley Propeller Assembly Number:
D-5928 D-6933

Feathered 88.9° ± 0.5° 88.5° ± 0.5°
Flight Idle 15.0° ± 0.2° 15.0° ± 0.2°

Handwritten signature

| AIRSPEED LIMITS | <u>Altitude m (ft)</u> | <u>Speed Knots CAS</u> |
|-------------------------------------|--|------------------------------------|
| Maximum | 5 425.5 (17 800) | 248 |
| Operating | 5 486.4 (18 000) | 247 |
| Speed | 6 096 (20 000) | 237 |
| | 7 010.4 (23 000) | 223 |
| | 7 620 (25 000) | 214 |
| Maneuvering at | | |
| 7 257.5 kg (16 000 lb) | All | 183 |
| Flaps Full Extended | | 166 |
| ½ Extended | | 180 |
| ¼ Extended | | 215 |
| L. G. Extended | | 176 |
| L. G. Operation | | 176 |
| Full Reverse | -05.0° ± 0.5 | -05.0° ± 0.5° |
| Start Locks | 09.0° ± 0.5° | 06.0° ± 0.5° |
| Full Reverse | -05.0° ± 0.5° | -05.0° ± 0.5° |
| CG RANGE (after of Datum) | 6.66 m (262.8 in)(16.41% MAC) to 7.04 m (277.0 in) (36% MAC) at 7 484.3 kg (16 500 lb) | |
| | 6.5 m (257.0 in)(8.40% MAC) to 7.04 m (277.0 in) (36% MAC) at 4 989.5 kg (11 000 lb) and bellow. Straight line variation between points given. | |
| | Note: Gear Retraction will not move the C.G. beyond approved limits if the airplane is loaded within the gear-down envelope. | |
| CG RANGE (Empty weight) | None. | |
| DATUM | Located 6.96 m (274.1 in) forward of wing main (forward) spar centerline. | |
| LEVELING MEANS | Lateral: | Nose baggage Compartment Door Sill |
| | Longitudinal: | Nose baggage Compartment Floor |
| MAXIMUM WEIGHT | Takeoff: | 7 484 kg (16 500 lb) |
| | Landing: | 7 110 kg (15 675 lb) |
| | Max. Zero Fuel: | 6 577 kg (14 500 lb) |
| | Ramp: | 7 530 kg (16 600 lb) |
| | (See Note 6) | |
| MINIMUM CREW | One pilot except as otherwise required by the Airplane Flight Manual (See Note 8) | |
| MAXIMUM PASSENGERS | 19 See AFM for loading instructions for crew and passenger loading. | |
| MAXIMUM BAGGAGE | Rear Compartment: 385.5 kg (850 lb) at 120 cm (+ 473.4 in) Nose Compartment: 363 kg (800 lb) at 118.6 cm (+ 46.7 in) | |
| AND/OR EQUIPMENT | Local Loading on Cargo and Passenger Compartment Floor: 732 kg/m ² (150 lb/sq.ft) | |

FUEL CAPACITY 2 468.1 ℓ Total (652 gal total)
1 226.5 ℓ (324 gal) usable in each of 2 wing tanks

See Note 1 for data on unusable fuel

OIL CAPACITY 13.3 ℓ Total (14.1 quarts total)
3.6 ℓ (3.8 quarts) usable in each engine oil tank

See Note 1 for data on unusable oil

MAXIMUM OPERATING ALTITUDE 7 620 m (25 000 ft)

| | | | |
|----------------------------------|--------------------------------|------------------------|--------------------------|
| CONTROL SURFACE MOVEMENTS | Elevator: | Up 30° +1°, -1° | Down 15° +1°, -1° |
| | Rudder: | Right 25° +1°, -1° | Left 25° +1°, -1° |
| | Aileron: | Up 18.5° ± 1° | Down 21.5° ± 1° |
| | Wing flaps: | Down 36° ± 1° | |
| | Stabilizer | | |
| | (Mechanical Stops): | Up 2.40 ° +0.2°, -0.2° | Down 7.80 ° +0.2°, -0.2° |
| | | L.E. | L.E. |
| | Tabs (Main Surface in Neutral) | | |
| | Aileron: | Up 20° + 2°, -1° | Down 20° + 2°, -1° |
| | Rudder: | Right 25° +1.5°, -1.5° | Left 25° +1.5°, -1.5° |

II - Model SA227- DC (C-26B) (Commuter Category), approved 19 November 2007 (Note 6 and 10).

ENGINE 2 Garrett (AirReaserach)TPE331-12UA-701G or TPE331-12UAR-701G or TPE331-12UHR-701G

| | | |
|-------------|--------------------------------|-----------------------|
| FUEL | Aviation Turbine fuels | Garret Specifications |
| | Type A | EMS53111 |
| | Type A-1 | EMS53112 |
| | Class A-JP4 and Class B-Type B | EMS53113 |
| | Type JP-5 | EMS53116 |
| | Type JP-8 | EMS53112 |

(Fuel shall conform to the specification as listed or subsequent revisions thereof) (See Note 3)

| | | | | | |
|----------------------|--------------------------|-------------------------|----------------------|-------------------|--|
| ENGINE LIMITS | Static Sea Level Ratings | | | | |
| | | Shaft Horse Power (shp) | Gas Gen. Speed (rpm) | Prop. Shaft Speed | Exhaust Gas Temp. (EGT) (Single Red Line) (°C) |
| | Take-off (5-min) Dry | 1 100 | 41 730* | 1 591* | 650 |
| | Take-off (5-min) Wet | 1 100 | 41 730* | 1 591* | 650 |
| | Max. Continuous-Dry | 1 000 | 41 730* | 1 591* | 650 |
| | Starting Limit (1-sec) | - | - | - | 770 |

See Note 4

afu

OIL

MIL-L-23699B
Garrett Engine Division Specification EMS531100 TYPE II

PROPELLER AND PROPELLER LIMITS

| | | |
|----------|---------------------------------|---------------------------------|
| Number | 2 | 2 |
| Make | McCauley | McCauley |
| Model | 4HFR34C663() () - L106KA-0 | 4HFR34C652() () - L106LA-0 |
| Diameter | 269.2 cm (106 in) | 269.2 cm(106 in) |
| Pitch At | 0.76 m (30 in) station | 0.76 m (30 in) station |

McCauley Propeller Assembly Number

| | | | |
|--------------|--------------|--------------|------------|
| | D-5928 | D-5928 | D-7274 |
| Feathered | 88.9° ± 0.5° | 88.9° ± 0.5° | 88° ± 0.2° |
| Flight Idle | 15° ± 0.2° | 15° ± 0.2° | 16° ± 1.0° |
| Start Locks | 09° ± 0.5 | 09° ± 0.5 | 06° ± 0.2° |
| Full Reverse | -5° ± 0.5 | -5° ± 0.5 | -4° ± 0.2° |

AIRSPEED LIMITS knots CAS

| | <u>Altitude m (ft)</u> | <u>Speed Knots CAS</u> |
|------------------------|------------------------|------------------------|
| Maximum | 5 425.5 (17 800) | 248 |
| Operating | 5 486.4 (18 000) | 247 |
| Speed | 6 096 (20 000) | 237 |
| | 7 010.4 (23 000) | 223 |
| | 7 620 (25 000) | 214 |
| Maneuvering at | | |
| 7 257.5 kg (16 000 lb) | all | 183 |
| Flaps Full Extended | | 166 |
| ½ Extended | | 180 |
| ¼ Extended | | 215 |
| L. G. Extended | | 176 |
| L. G. Operation | | 176 |

CG RANGE

Gear Down
(after of Datum)

6.7 m (262.8 in)(16.41% MAC) to 7 m (277.0 in) (36% MAC)
at 7 484.3 kg (16 500 lb)
6.5 m (257.0 in)(8.40% MAC) to 7 m (277.0 in) (36% MAC)
At 4 989.5 kg (11 000 lb) and bellow.

Straight line variation between points given.

Note: Gear Retraction will not move the C.G. beyond approved limits if the airplane is loaded within the gear-down envelope.

CG RANGE

(Empty weight)

None.

DATUM

Located 7 m (274.1 in) forward of wing main (forward) spar centerline

LEVELING MEANS

Lateral: Nose baggage Compartment Door Sill
Longitudinal: Nose baggage Compartment Floor

MAXIMUM WEIGHT

(See Note 5)

Takeoff: 7 484.3 kg (16 500 lb)
Landing: 7 110.1 kg (15 675 lb)
Max. Zero 6 577.1 kg (14 500 lb)
Fuel:
Ramp: 7 529.6 kg (16 600 lb)

| | | | |
|--|---|--|-----------------------------------|
| MINIMUM CREW | One pilot except as otherwise required by the Airplane Flight Manual Crew at + 2.8 m (111.0 in) (See Note 8) | | |
| MAXIMUM PASSENGERS | 19 | See AFM for loading instructions for crew and passenger loading. | |
| MAXIMUM BAGGAGE AND /OR EQUIPMENT | Rear Compartment: 385.5 kg (850 lb) at 120 cm (+ 473.4 in) Nose Compartment: 362.9 kg (800 lb) at 118.6 cm (+ 46.7 in) Local Loading on Cargo Floor: 732.4 kg/m ² (150 lb/sq.ft) | | |
| FUEL CAPACITY | 2 468.1 ℓ Total (652 gal total) 1 226.5 ℓ (324 gal) usable in each of 2 wing tanks See Note 1 for data on unusable fuel | | |
| OIL CAPACITY | 13.4 ℓ Total (14.1 quarts total) 3.6 ℓ (3.8 quarts) usable in each engine oil tank See Note1 for data on unusable oil | | |
| MAXIMUM OPERATING ALTITUDE | 7 620 m (25 000 ft) | | |
| CONTROL SURFACE MOVEMENTS | Elevator: | Up 30° +1°, -1° | Down 15° +1°, -1° |
| | Rudder: | Right 25° +1°, -1° | Left 25° +1°, -1° |
| | Aileron: | Up 18.5° ± 1° | Down 21.5° ± 1° |
| | Wing flaps: | Down 36° ± 1° | |
| | Stabilizer | | |
| | (Mechanical Stops): | Up 2.40° +0.2°, - 0.2° L. E. | Down 7.80° +0.2°, - 0.2° L. E. |
| | Tabs (Main Surface in Neutral) | | |
| | Aileron: | Up 20° + 2°, -1° | Down 20° + 2°, -1° |
| | Rudder: | Right 25° +1.5°, -1.5° | Left 25° +1.5°, -1.5° |

DATA PERTINENT TO ALL MODELS:

| | |
|----------------------------|---|
| CERTIFICATION BASIS | <p>Brazilian Type Certificate No. 2007T06 issued on 19 November 2007 based on the RBHA 23, which endorses the FAR 23 effective 01 February 1965, as amended by 23-34 through 23-39.</p> <p>RBHA/FAR 36, Amendment 16, effective 22 December 1988;</p> <p>SFAR 27 through Amendment 5. "Fuel Venting and Exhaust Emissions Requirements for Turbine Engine Powered Airplanes" is equivalent to Compliance with RBHA/FAR 34, effective 10 September 1990;</p> <p>RBHA/FAR 23.1419, for flight into known icing;</p> <p>Equivalent Safety finding per letter FAA dated 20 September 1990 (Stall Avoidance System);</p> <p>Exemption: An exemption from 23.201(e), (f)(4), and (f)(5); paragraph 23.203 (c)(4) and (c)(5); and 23.1545(b)(5) and (b)(6) of the Federal Aviation Regulations has been granted by the FAA (FAA Exemption No 5573, FAA letter dated 09 December 1992).</p> |
|----------------------------|---|

-
- SERIAL NUMBER 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 Certificate of Airworthiness is made.
- 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. 2007T06 and in condition of safe operation".
The ANAC Report H.10-2181-00, dated 19 November 2007 or any further revisions, contains the Brazilian requirements for the acceptance of these airplanes. (See Note 4)
- 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. Current weight and balance report including list of equipment in 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 corresponding center of gravity location must include:
- | | |
|---------------|---|
| Unusable fuel | 12.3 kg (27 lb) at + 7.2 m (+ 282.0 in) |
| Unusable Oil | 5.4 kg (12 lb) at + 5.2 m (+ 205 in) |
| Unusable AWI | 7.3 kg (16 lb) at +7.6 m(+ 298 in) |
- NOTE 2** Markings and placards. The airplane must be operated according to the appropriate FAA approved Brazilian Airplane Flight Manual and in the chapter XI of the Airplane Maintenance Manual.
- NOTE 3** Continuing Airworthiness. See Maintenance Manual, Chapter 4, "Airworthiness Limitations" for inspections, mandatory retirement life information, and other requirements for continued airworthiness
- NOTE 4** The maximum propeller shaft overspeed limit is 1 686 rpm (106%) for 5 seconds and 1 615 rpm (101.5% for 5 minutes). 100% is defined as 1 591 rpm.
- NOTE 5** Compliance with SFAR 27-5. "Fuel Venting and Exhaust Emissions Requirements for Turbine Engine Powered Airplanes is equivalent to compliance with FAR 34, effective 10 September 1990.
- NOTE 6** The C-26B is an SA227-DC airplane manufactured in accordance with Fairchild drawing 27-10048. These airplanes are identified by letter "M" at the end of the serial number.
- NOTE 7** The manufacturer has elected to end the serial numbers of airplanes not affected by Note 6 with the letter "B".
-

- NOTE 8** Approval for single-pilot operation is based on the instrument/avionics arrangement shown by Fairchild Drawing 27-86081 or Drawing 27-88025 (C-26B). Any significant deviation from that arrangement must be evaluated for single pilot suitability.
- NOTE 9** The SA227-CC airplane may be converted to a model SA227-DC in accordance with FAI drawing 27-14167 initial release.
- NOTE 10** The SA227-DC airplane may be converted to a model SA227-CC in accordance with FAI drawing 27-14140 initial release plus EOS A-1 and A-2.


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