



European Aviation Safety Agency

EASA

**TYPE-CERTIFICATE
DATA SHEET**

EASA.A.378

TB Series

Type Certificate Holder:

**SOCATA
65921 Tarbes Cedex 9
France**

For models: TB 10
TB 9
TB 20
TB 21
TB 200

Issue 03: 6 October 2010

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SECTION A **MODEL TB 10****A.I. General**

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1. a) Type: TB
b) Model: TB 10
2. Airworthiness Category:
a) FAR 23 Normal Category
b) FAR 23 Utility Category
3. Type Certificate Holder: SOCATA
65921 TARBES Cedex 9
FRANCE
4. Manufacturer: SOCATA
65921 TARBES Cedex 9
FRANCE
5. DGAC Certification Date: April 26, 1979
6. JAA Recommendation Date: N/A
7. EASA Certification Date: 11 June 2010
8. The EASA Type Certificate replaces DGAC-France Type Certificate No.165.

A.II. Certification Basis

1. Reference Date for determining the applicable requirements: November 1975
2. (Reserved)
3. (Reserved)
4. Certification Basis: FAR-23, Amendments 1 to 16
5. Airworthiness Requirements: FAR-23, Amendments 1 to 16 dated February 14, 1975
6. Requirements elected to comply: None
7. Special Conditions: None
8. EASA Exemptions:
 - a) Derogation granted by DGAC for FAR 23-177-a-2:
Existence of a slight roll instability in aircraft configuration corresponding to go-around at landing.
Substantiation: Taking into account the attention brought by a pilot to aileron control in such a flight phase, the derogation has been granted.
 - b) Derogation granted by DGAC for FAR 23-1401-f:
LABINAL 37-72-11 anti-collision light intensity with red glass optic lens is inferior to that required by regulation.

9. (Reserved)

10. Equivalent Safety Findings: None

11. Environmental Standards: French Decree dated April 15, 1977 *
ICAO, Chapter X, Appendix 6, Annex 16 *
(* See Note 1 a)

A.III. Technical Characteristics and Operational Limitations (see Note 6)

1. Type Design Definition: List of main drawings BE/ED No. 73/79 Edit 2 and up
Type Design Definition BE/EG No. 66/79 Issue 8 and up
2. Description: Single engine, four/five-seated cantilever low wing airplane, all-metal construction, fixed tricycle landing gear, conventional tail
3. Equipment: Equipment list, AFM, Section 6 and Section 9 (See Note 6)
4. Dimensions:

Span	9.89 m (32 ft 5.2 in)
Length	7.75 m (25 ft 5.1 in)
Height	3.02 m (9 ft 10.9 in)
Wing Area	11.9 m ² (128.09 sqft)
5. Engines: 1 Textron Lycoming O-360-A1AD
(FAA TCDS E-286 rev 20 and later revision)
Carburettor MARVEL SCHEBLER MA 4-5
 - 5.1 Engine Limits: Max. take-off and continuous power*: 2700 RPM (135 kW)
Max. Cylinder Head Temperature: 260°C (500°F)
(* See Note 2)

Oil:	Normal pressure: From 4.2 to 6.2 bars (61 to 90 psi) Minimum pressure: 1.7 bar (115 psi) Max. Temperature: 118°C (244°F)
Fuel:	Min. fuel pressure: 0.035 bar (0.51 psi)
6. (Reserved)
7. Propellers and propeller limits: 1 HARTZELL HC-C2YK-1BF/F 7666 A-2
(FAA TCDS P-920 rev30 and later revision)

Governor	HARTZELL Type F4-4A or F4-26 or F4-4AZ or F4-18 (See Note 3)
Setting at 0.762 m (30 inches)	Low pitch setting: 13.5° High pitch setting: 31°
Diameter	Maximum diameter: 1.88 m (74 inches) Minimum diameter: 1.83 m (72 inches)
8. Fluids:
 - 8.1 Fuel: 100 minimum aviation grade gasoline or AVGAS 100 LL
 - 8.2 Oil: Oils conforming to spec. SAE J1899 / MIL-L-6082 / MIL-L-22851

For more details see AFM, Section 1

9. Fluid capacities:

9.1 Fuel:

Gal]]

Gal]]

Two structural wing Tanks:

Total: 210 liters (55.4 US Gal) [2 x 105 l (27.7 US

Usable: 204 liters (53.8 US Gal) [2 x 102 l (26.9 US

Unusable: 6 liters (1.6 US Gal)

9.2 Oil:

(Engine built-in tank)

Maximum: 7.6 liters (8 qts) [at – 0.605 m (- 23.8 inches)]

Usable: 5.5 liters (5.8 qts) [at – 0.605m (-23.8 inches)]

Minimum: 3.8 liters (4 qts)

10. Air Speeds (True airspeed):

V_D (Design Diving Speed): 345 km/h (186 KTAS)

V_{NE} (Never exceed speed): 306 km/h (165 KTAS)

V_C (Design Cruising Speed): 238 km/h (128 KTAS)

V_{NO} (Maximum structural cruising speed): 238 km/h (128 KTAS)

V_A (Design Manoeuvring Speed): 227 km/h (122 KTAS)

V_{FE} (Flap Extended Speed): 176 km/h (95 KTAS)

11. Maximum Operating Altitude:

Refer to Aircraft Flight Manual

12. Operational Capability:

Day VFR

Day & Night IFR: see AFM, Section 9

Night VFR: optional equipment: see AFM, Section 9

Flight into known icing conditions is prohibited

13. Maximum Masses:

13.1 Normal Category

(a) Up to aircraft S/N 822, except S/N 804, 807, 808 and 816 to 819

Take-off: 1150 kg (2535 lbs)

Landing: 1092 kg (2407 lbs)

(b) From aircraft S/N 823, plus S/N 804, 807, 808 and 816 to 819

Take-off: 1150 kg (2535 lbs)

Landing: 1150 kg (2535 lbs)

13.2 Utility Category

Take-off and landing: 1070 kg (2359 lbs)

13.3 Fuel

Maximum fuel weight: 147 kg (324 lbs) at 1.075 m (42.3 inches)
(without unusable fuel)

13.4 Empty weight

(see Note 5)

14. Centre of Gravity Range:

14.1 Normal Category

Forward limit

1.144 m (45 inches)* aft of datum at 1150 kg (2535 lbs)

1.083 m (42.6 inches)* aft of datum at 1150 kg (2535 lbs)

1.010 m (39.8 inches) aft of datum at 1070 kg (2359 lbs)

0.949 m (37.3 inches) aft of datum at 970 kg (2138 lbs) or less

Straight line variation between points given.
 (*) See Note 7

- 14.2 Utility Category
 Forward limit
 1.035 m (40.7 inches) aft of datum at 1070 kg (2359 lbs)
 0.974 m (38.3 inches) aft of datum at 1020 kg (2249 lbs)
 0.949 m (37.3 inches) aft of datum at 970 kg (2138 lbs) or less.
 Straight line variation between points given.
- 14.3 Rear limit: 1.205 m (47.4 inches) aft of datum at all weights and for both categories
15. Datum: Front face of firewall
16. (reserved)
17. Levelling Means: Upper fuselage spar
18. Minimum Flight Crew: 1 (Pilot) at station 1.165 m (45.9 inches)
19. Maximum Passenger Seating Capacity: 4
 - one seat at R.H. station 1.165 m (45.9 inches)
 - two or three seats according to commercial arrangement at station 2.095 m (82.5 inches) (see Note 4)
20. Limit load factors at maximum permissible weight
- 20.1 Normal Category
 Flaps retracted: $n = + 3.8 - 1.5$
 Flaps extended: $n = + 2 - 0$
- 20.2 Utility Category
 Flaps retracted: $n = + 4.4 - 1.8$
 Flaps extended: $n = + 2 - 0$
21. Baggage / Cargo Compartments
- 21.1 Behind Rear Bench
 (a) Up to aircraft S/N 399, plus S/N 413
 Area 1: maximum weight: 30 kg (66.14 lbs) at 2.465 m (97 inches)
 Area 2: maximum weight: 10 kg (22 lbs) at 2.965 m (117 inches)
- (b) From aircraft S/N 400, except S/N 413
 Maximum weight: 65 kg (143 lbs) at 2.600 m (102 inches)
- 21.2 Cargo version (without rear bench)
 Maximum weight: 260 kg (573 lbs) at 1.900 m (74.8 inches)
22. Wheels and Tyres
 Nose Wheel Size: 5.00-5
 Nose Wheel Tyre Size: 5.00-5 6PR
- Main landing gear track: 2.33 m (7 ft 7.7 in)
 or 2.30 m (7 ft 6.5 in) (see Note 8)
- Main Wheel Size: 6.00-6
 Main Wheel Tyre Size: 6.00-6 6PR

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23. Special equipment
Stall warning device
Option No. A887 "Low noise exhaust" [see Note 1 b)]
24. Control surface deflections
- a) Stabilizer (angles reference: fuselage upper spar)
- | | | |
|----------------------|-------|------|
| - nose-up attitude | - 17° | ± 1° |
| - nose-down attitude | + 2° | ± 1° |
- b) Stabilizer tab (Angles reference: stabilizer chord)
With stabilizer in full nose-up attitude
- | | | |
|-------------------------------|--------|--------|
| - nose-up attitude tab stop | - 2.5° | ± 0.5° |
| - nose-down attitude tab stop | - 17° | ± 1.5° |
- c) Ailerons (Angles reference: wing chord)
- | | | |
|------------|-----|--------|
| - upward | 15° | ± 1.5° |
| - downward | 15° | ± 1.5° |
- d) Rudder (angles reference: fin chord)
- | | | |
|------------------|-----|------|
| - left and right | 25° | ± 2° |
|------------------|-----|------|
- e) Flaps (Angles reference: wing chord)
- | | | |
|--------------|-------|----------------|
| - full flaps | 25.5° | - 1°
+ 0.5° |
|--------------|-------|----------------|

A.IV. Operating and Service Instructions

Aircraft Flight Manual (AFM):

- a) Up to aircraft S/N 730: AFM Edition 0 must be at Revision 2 or later revision
- b) From aircraft S/N 731 to 822, except S/N 804, 807, 808 and S/N 816 to 819: AFM Edition 1 must be at Revision 2 or later revision
- c) From aircraft S/N 823 to 947, plus S/N 804, 807, 808 and S/N 816 to 819: AFM Edition 2 must be at Revision 2 or later revision
- d) From aircraft S/N 948: AFM Edition 3 must be at Revision 7 or later revision
- e) From aircraft S/N 948 equipped with option D852: AFM Edition 3B (LBA approved German version) must be at Revision 0 or later revision (see Section 6,VI.2 - Note 1)

Aircraft Maintenance Manual (AMM) must be at Revision 18 or later revision (incl. Chapter 4 Airworthiness Limitations), plus temporary revisions pending the next updated version.

Service Information and Service Bulletins

A.V. Notes

1. Approved Noise Levels in accordance with:
- a) for TB10 aircraft at a maximum takeoff weight of 1150 kg (2535 lbs) and a maximum continuous power of 2700 RPM:
- | | |
|---------------------------------------|---|
| French Decree dated April 15, 1977 | 71.5 d B (A) for a limit of 75.3 d B (A), |
| ICAO, Chapter X, Appendix 6, Annex 16 | 81.0 d B (A) for a limit of 85.2 d B (A). |
- b) for TB10 aircraft equipped with optional equipment A887 "Low noise exhaust" – see AFM, Section 9, Supplement 28 - at a maximum takeoff weight of 1150 kg (2535 lbs) and a maximum continuous power of 2700 RPM:
- | | |
|---------------------------------------|---|
| ICAO, Chapter X, Appendix 6, Annex 16 | 77.9 d B (A) for a limit of 85.2 d B (A). |
|---------------------------------------|---|
2. For TB10 aircraft equipped with option D852 "Noise reduction for Germany: label Blue Angel"

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- Takeoff 2700 RPM (135 kW)
 - Max continuous 2450 RPM
3. Avoid continuous operation when RPM between 2000 and 2250.
 4. Maximum weight of the 3 rear passengers: 206 kg (454 lbs).
 5. The empty weight must include unusable fuel weight of 4.3 kg (9.48 lbs) at 1.075 m (42.3 inches) and oil full quantity [7.2 kg (15.9 lbs) at – 0.605 m (- 23.8 inches)].
 6. All optional equipment requiring an AFM Supplement are contained in AFM, Section 9.
 7. Forward limit: 1.144 m (45 inches) up to S/N 947
1.083 m (42.6 inches) from S/N 948
 8. TB10 aircraft equipped with modification MOD.118 or MOD.120 (Trailing arm main landing gear).
 9. Smokers authorized (ashtrays on board).

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SECTION B MODEL TB 9**B.I. General**

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1. a) Type: TB
b) Model: TB 9
2. Airworthiness Category:
a) FAR 23 Normal Category
b) FAR 23 Utility Category
3. Type Certificate Holder: SOCATA
65921 TARBES Cedex 9
FRANCE
4. Manufacturer: SOCATA
65921 TARBES Cedex 9
FRANCE
5. DGAC Certification Date: September 27, 1979
6. JAA Recommendation Date: N/A
7. EASA Certification Date: 11 June 2010
8. The EASA Type Certificate replaces DGAC-France Type Certificate No.165.

B.II. Certification Basis

1. Reference Date for determining the applicable requirements: June 1979
2. (Reserved)
3. (Reserved)
4. Certification Basis: FAR-23, Amendments 1 to 16
5. Airworthiness Requirements: FAR-23, Amendments 1 to 16 dated February 14, 1975
6. Requirements elected to comply: None
7. Special Conditions: None
8. EASA Exemptions:
 - a) Derogation granted by DGAC for FAR 23-177-a-2:
Existence of a slight roll instability in aircraft configuration corresponding to go-around at landing.
Substantiation: Taking into account the attention brought by a pilot to aileron control in such a flight phase, the derogation has been granted.
 - b) Derogation granted by DGAC for FAR 23-1401-f:
LABINAL 37-72-11 anti-collision light intensity with red glass optic lens is inferior to that required by regulation.

9. (Reserved)
10. Equivalent Safety Findings: None
11. Environmental Standards: French Decree dated April 15, 1977 *
 French Decree dated February 19, 1987 *
 Swiss Edict, Appendice, Chapter 241b dated May 25, 1990
 *
 ICAO, Chapter X, Appendix 6, Annex 16 *
 FAR PART 36 Appendix G *
 (*) See Note 1

B.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: List of main drawings BE/ED No. 307/79 Edit 0 and up
 Type Design Definition BE/EG No. 136/79 Issue 5 and up
2. Description: Single engine, four/five-seated cantilever low wing airplane, all-metal construction, fixed tricycle landing gear, conventional tail
3. Equipment: Equipment list, AFM, Section 6 and Section 9 (See Note 5)
4. Dimensions:
- | | |
|-----------|-----------------------------------|
| Span | 9.89 m (32 ft 5 in) |
| Length | 7.72 m (25 ft 40 in) |
| Height | 3.02 m (9 ft 10 in) |
| Wing Area | 11.9 m ² (128.09 sqft) |
5. Engines: 1 Textron Lycoming O-320-D2A (constant speed propeller)
 or 1 Textron Lycoming O-320-D1A (variable pitch propeller)
 [see Note 1 e])
 (FAA TCDS E-274 rev20 and later revision)
- 5.1 Engine Limits: Max. take-off and continuous power*: 2700 RPM (120 kW)
 Max. Cylinder Head Temperature: 260°C (500°F)
 (*) See Note 2
- | | |
|-------|--|
| Oil: | Normal pressure: From 4.2 to 6.2 bars (61 to 90 psi)
Minimum pressure: 1.7 bar (115 psi)
Max. Temperature: 118°C (244°F) |
| Fuel: | Min. fuel pressure: 0.035 bar (0.51 psi) |
6. (Reserved)
7. Propellers and propeller limits:
- 7.1 Up to aircraft S/N 878, except S/N 765:
- | | |
|---|--|
| Propeller: | 1 SENSENICH 74DM6 S8 061
(FAA TCDS P886 rev18 and later revision) |
| Diameter: | Maximum: 1.88 m (74 inches)
Minimum: 1.83 m (72 inches) |
| Rating during ground run,
full throttle, at sea level: | Minimum: 2200 RPM |

Maximum: 2400 RPM

Or

Propeller (optional equipment 0575)*: 1 HARTZELL HC-C2YL-1BF/F 7663 A-4
(* see Note 1 e) (FAA TCDS P-920 rev30 and later revision)

Diameter: Maximum: 1.83 m (72 inches)
Minimum: 1.78 m (70 inches)

Setting of propeller blades at
0.686 m (27 inches): Low pitch setting: 11°
High pitch setting: 26°06'

Governor: HARTZELL Type F4-27

7.2 From aircraft S/N 879, plus S/N 765 (modification No. 72):

Propeller: 1 SENSENICH 74DM6 S8 054
(FAA TCDS P886 rev18 and later revision)

Diameter: Maximum: 1.88 m (74 inches)
Minimum: 1.83 m (72 inches)

Rating during ground run,
full throttle, at sea level: Minimum: 2200 RPM
Maximum: 2400 RPM

7.3 From aircraft S/N 1851 and as a retrofit from S/N 948, plus S/N 828 and 849 (modification No. 139) – see Note 1 f):

Propeller: 1 SENSENICH 74DM6 S8 058
(FAA TCDS P886 rev18 and later revision)

Diameter: Maximum: 1.88 m (74 inches)
Minimum: 1.83 m (72 inches)

Rating during ground run,
full throttle, at sea level: Minimum: 2300 RPM
Maximum: 2500 RPM

8. Fluids:

8.1 Fuel: 100 minimum aviation grade gasoline or AVGAS 100 LL

8.2 Oil: Oils conforming to spec. SAE J1899 / MIL-L-6082 /
MIL-L-22851
For more details see AFM, Section 1

9. Fluid capacities:

9.1 Fuel: Two structural wing Tanks:
Total: 158 liters (41.7 US Gal) [2 x 79 l (20.9 US Gal)]
Usable: 152 liters (40.2 US Gal) [2 x 76 l (20.1 US Gal)]
Unusable: 6 liters (1.6 US Gal)

Or

Fuel (optional equipment 558): Total: 210 liters (55.4 US Gal) [2 x 105 l (27.7 US Gal)]
Usable: 204 liters (53.8 US Gal) [2 x 102 l (26.9 US Gal)]
Unusable: 6 liters (1.6 US Gal)

9.2 Oil: (Engine built-in tank)
Maximum: 7.6 liters (8 qts) [at – 0.605 m (- 23.8 inches)]

Usable: 5.5 liters (5.8 qts) [at – 0.605 m (- 23.8 inches)]
 Minimum: 3.8 liters (4 qts)

10. Air Speeds (True airspeed):

V_D (Design Diving Speed):	340 km/h (184 KTAS)
V_{NE} (Never exceed speed):	306 km/h (165 KTAS)
V_C (Design Cruising Speed):	238 km/h (128 KTAS)
V_{NO} (Maximum structural cruising speed):	238 km/h (128 KTAS)
V_A (Design Manoeuvring Speed):	227 km/h (122 KTAS)
V_{FE} (Flap Extended Speed):	176 km/h (95 KTAS)

11. Maximum Operating Altitude: Refer to Aircraft Flight Manual

12. Operational Capability: Day VFR
 Day & Night IFR: optional equipment: see AFM, Section 9
 Night VFR: optional equipment: see AFM, Section 9
 Flight into known icing conditions is prohibited

13. Maximum Masses:

13.1 In Normal and Utility Categories: 1060 kg (2337 lbs)
 or 955 kg (2105 lbs) (See Note 6)

13.2 Fuel
 Maximum fuel weight: 109 kg (240 lbs) at 1.075 m (42.3 inches)
 (without unusable fuel)
 or with option 558: 147 kg (324 lbs) at 1.075 m (42.3 inches)
 (without unusable fuel)

13.3 Empty weight (see Note 4)

14. Centre of Gravity Range: Normal and Utility categories

14.1 Forward limit 1.050 m (41.3 inches) aft of datum at 1060 kg (2337 lbs)
 0.974 m (38.3 inches) aft of datum at 970 kg (2138 lbs) or
 less
 Straight line variation between points given.

14.2 Rear limit: 1.205 m (47.4 inches) aft of datum at all weights and
 for both categories

15. Datum: Front face of firewall

16. (reserved)

17. Levelling Means: Upper fuselage spar

18. Minimum Flight Crew: 1 (Pilot) at station 1.155 m (45.5 inches)

19. Maximum Passenger Seating Capacity: 4
 - Front station:
 ▪ one seat at R.H. station 1.155 m (45.5 inches)
 - Rear seating:
 ▪ normal loading: two seats at station 2.035 m (80.1 inches)
 ▪ exceptional loading: three seats at station 2.035 m (80.1 inches) (see Notes 3 and 6)

20. Limit load factors at maximum permissible weight

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20.1 Normal Category

Flaps retracted:	n = + 3.8 - 1.5
Flaps extended:	n = + 2 - 0

20.2 Utility Category

Flaps retracted:	n = + 4.4 - 1.8
Flaps extended:	n = + 2 - 0

21. Baggage / Cargo Compartments

21.1 Behind Rear Bench

(a) Up to aircraft S/N 399, plus S/N 413

Maximum weight: 40 kg (88 lbs) at 2.600 m (102 inches)

(b) From aircraft S/N 400, except S/N 413

Maximum weight: 65 kg (143 lbs) at 2.600 m (102 inches)

21.2 Cargo version (without rear bench)

Maximum weight: 200 kg (441 lbs) at 2.000 m (78.7 inches) (see Note 6)

22. Wheels and Tyres

Nose Wheel Size:	5.00-5
Nose Wheel Tyre Size:	5.00-5 6PR

Main landing gear track:	2.33 m (7 ft 7.7 in)
	or 2.30 m (7 ft 6.5 in) (see Note 7)

Main Wheel Size:	6.00-6
Main Wheel Tyre Size:	15 x 6.00-6 4PR

23. Wheel fairings:

Wheel fairing equipment for the 3 landing gears are mandatory with propellers:

- SENSENICH 74 DM6 S8 061
- HARTZELL HC-C2YL-1BF/F 7663 A-4
- SENSENICH 74 DM6 S8 058.

24. Special equipment

Stall warning device

Option No. A890 "Low noise exhaust" [see Note 1 d)]

25. Control surface deflections

a) Stabilizer (angles reference: fuselage upper spar)

- nose-up attitude	- 17° ± 1°
- nose-down attitude	+ 2° ± 1°

b) Stabilizer tab (Angles reference: stabilizer chord)

With stabilizer in full nose-up attitude

- nose-up attitude tab stop	- 2.5° ± 0.5°
- nose-down attitude tab stop	- 17° ± 1.5°

c) Ailerons (Angles reference: wing chord)

- upward	15° ± 1.5°
- downward	15° ± 1.5°

d) Rudder (angles reference: fin chord)

- left and right	25° ± 2°
------------------	----------

e) Flaps (Angles reference: wing chord)

- Aircraft up to S/N 878, except S/N 765:	
▪ full flaps	32° - 1° + 0.5°

- Aircraft from S/N 879, plus S/N 765:
 - full flaps 25.5° - 1°
+ 0.5°

B.IV. Operating and Service Instructions

Aircraft Flight Manual (AFM):

- a) Up to aircraft S/N 730: AFM Edition 0 Revision 1 and following revisions [see Note 1 a)]
- b) From aircraft S/N 731 to 878, except S/N 765: AFM Edition 1 must be at Revision 1 or later revision [see Note 1 a)]
- c) From aircraft S/N 879 to 947, plus S/N 765: AFM Edition 2 must be at Revision 1 or later revision [see Note 1 a)]
- d) From aircraft S/N 948, aircraft not equipped with option D840 or D856 (nor equipped with option D851): AFM Edition 3 must be at Revision 2 or later revision [see Note 1 a)]
- e) From aircraft S/N 948 equipped with option D840: AFM Edition 3A (DGAC approved French and German versions and LBA approved German version) must be at Revision 4 or later revision [see Notes 1 b) and 2)]
- f) From aircraft S/N 948 equipped with option D851: AFM Edition 3B (LBA approved German version) must be at Revision 0 or later revision (see Note 2 and Section 6, VI.2 - Note 1)
- g) From aircraft S/N 948 equipped with option D856: AFM Edition 3C (DGAC approved French and German versions) must be at Revision 0 or later revision [see Notes 1 c) and 6)]
- h) From aircraft S/N 948 equipped with modification No. 139: AFM Edition 4 (DGAC approved French and English versions) must be at Revision 1 or later revision [see Note 1 f)]

Aircraft Maintenance Manual (AMM) must be at Revision 18 or later revision (incl. Chapter 4 Airworthiness Limitations), plus temporary revisions pending the next updated version.

Service Information and Service Bulletins

B.V. Notes

1. Approved Noise Levels in accordance with:
 - a) for TB9 aircraft at a maximum takeoff weight of 1060 kg (2337 lbs) and a maximum continuous power of 2700 RPM:
 French Decrees dated April 15, 1977 and February 19, 1987 72.5 d B (A) for a limit of 74.1 d B (A).
 Propellers: SENSENICH 74 DM6 S8 061
 SENSENICH 74 DM6 S8 054
 - b) for TB9 aircraft equipped with optional equipment D840 (From S/N 948) at a maximum takeoff weight of 1060 kg (2337 lbs) and a maximum continuous power of 2600 RPM:
 French Decree dated February 19, 1987 68.8 d B (A) for a limit of 74.1 d B (A).
 NOTE: These values are also valid for TB9 aircraft from S/N 897 to 947, plus S/N 765 equipped with optional equipment D840 and are given in the AFM Supplement 19 (DGAC approved French and German versions).
 - c) for TB9 aircraft equipped with optional equipment D856 (From S/N 948) at a maximum takeoff weight of 955 kg (2105 lbs) and a maximum continuous power of 2700 RPM:
 ICAO, Chapter X, Appendix 6, Annex 16 74.9 d B (A) for a limit of 82.6 d B (A).

 NOTE: The associated AFM is also valid for Swiss registered TB9 aircraft with the following values referring to the Swiss Edict dated May 25, 1990, Appendice, Chapter 241b 71.9 d B (A)
 - d) for TB9 aircraft equipped with optional equipment A890 "Low noise exhaust" – see AFM, Section 9,

- Supplement 27 - at a maximum takeoff weight of 1060 kg (2337 lbs) and a maximum continuous power of 2645 RPM:
ICAO, Chapter X, Appendix 6, Annex 16 78.5 d B (A) for a limit of 84.0 d B (A).
- e) for TB9 aircraft equipped with optional equipment 0575 "HARTZELL Constant Speed Propeller" – see AFM, Section 9, Supplement 6 - at a maximum continuous power of 2700 RPM:
French Decree dated April 15, 1977 70.8 d B (A) for a limit of 74.1 d B (A).
Propeller: HARTZELL HC-C2YL-1BF/F 7663 A-4
- f) for TB9 aircraft equipped with modification No. 139 (trade name TB9 "SPRINT") at a maximum continuous power of 2700 RPM:
ICAO, Chapter X, Appendix 6, Annex 16 78.9 d B (A) for a limit of 84.0 d B (A),
FAR PART 36 Appendix G 75.8 d B (A) for a limit of 79.1 d B (A).
Propeller: SENSENICH 74 DM6 S8 058
2. For TB9 aircraft equipped with option D840 "Noise special limitations" [AFM Paragraph B.IV e])
- Takeoff and max. continuous 2600 RPM (116 kW)
For TB9 aircraft equipped with option D851 "Noise reduction for Germany: label Blue Angel"
[AFM Paragraph B.IV f])
- Takeoff 2600 RPM (116 kW)
- Max. continuous 2550 RPM
3. Maximum weight of the 3 rear passengers: 175 kg (386 lbs).
4. The empty weight must include unusable fuel weight of 4.3 kg (9.48 lbs) at 1.075 m (42.3 inches) and oil full quantity [7.2 kg (15.9 lbs) at – 0.605 m (- 23.8 inches)].
5. All optional equipment requiring an AFM Supplement are contained in AFM, Section 9
6. For TB9 aircraft equipped with option D856 "Noise special limitations" [AFM Paragraph B.IV g])
- Max. weight 955 kg (2105 lbs)
- Maximum Rear Passenger Seating Capacity: 2 seats at 2.035 m (80.1 inches) with a maximum weight of:
▪ Normal category: 120 kg (265 lbs)
▪ Utility category: 100 kg (220 lbs)
- Cargo version (without rear bench):
▪ Max. weight 120 kg (265 lbs) at station 2.000 m (78.7 inches)
7. TB9 aircraft equipped with modification MOD.119 or MOD.121 (Trailing arm main landing gear).
8. Smokers authorized (ashtrays on board).

SECTION C MODEL TB 20**C.I. General**

Data Sheet No.: EASA.A.378

1. a) Type: TB
b) Model: TB 20
2. Airworthiness Category: FAR 23 Normal Category
3. Type Certificate Holder: SOCATA
65921 TARBES Cedex 9
FRANCE
4. Manufacturer: SOCATA
65921 TARBES Cedex 9
FRANCE
5. DGAC Certification Date: December 18, 1981
6. JAA Recommendation Date: N/A
7. EASA Certification Date: 11 June 2010
8. The EASA Type Certificate replaces DGAC-France Type Certificate No.165.

C.II. Certification Basis

1. Reference Date for determining the applicable requirements: June 1980
2. (Reserved)
3. (Reserved)
4. Certification Basis: FAR-23, Amendments 1 to 16
5. Airworthiness Requirements: FAR-23, Amendments 1 to 16 dated February 14, 1975
6. Requirements elected to comply: None
7. Special Conditions:
 - a) FAR-23 Amendment 21, Section 23.1581
 - b) The landing gear being held up by hydraulic pressure only, requirements 23-143 and 23-729 are modified as follows:
 - Airspeed "1.6 VSI" is replaced by "VNO" in 23.729 (a)
 - Condition 23-143 concerning landing gear extension is checked up to VNO.
8. EASA Exemptions: None
9. Equivalent Safety Findings: None

10. Environmental Standards: French Decree dated April 3rd, 1980 *
Swiss Edict, Appendice, Chapter 241b, dated May 25, 1990
- *
- ICAO, Chapter X, Appendix 6, Annex 16 *
FAR PART 36, Appendix G *
(*) See Note 1

C.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Main drawings BE/ED No. 269/81 dated 12/16/1981 and up
Type Design Definition BE/EG No. 203/80 Issue 1 and up
2. Description: Single engine, four/five-seated cantilever low wing airplane,
all-metal construction, retractable tricycle landing gear,
conventional tail
3. Equipment: Equipment list, AFM, Section 6 and Section 9 (See Note 6)
4. Dimensions:

Span	9.85 m (32 ft 3.8 in)
Length	7.75 m (25 ft 5.1 in)
Height	2.85 m (9 ft 4.2 in)
Wing Area	11.9 m ² (128.09 sqft)
5. Engines:
 - 5.1 Engine: 1 Textron Lycoming IO-540-C4 D5D
or 1 Textron Lycoming IO-540-C4 B5D (option A865) *
(FAA TCDS IE4 rev20 and later revision)
(*) See Note 7
 - 5.2 Engine Limits: Max. take-off and continuous power*: 2575 RPM (184 kW)
Max. Cylinder Head Temperature: 260°C (500°F)
(*) See Notes 1 d) and 2

Oil:	Normal pressure: From 4.1 to 6.2 bars (59.5 to 90 psi) Minimum pressure: 1.7 bar (115 psi) Max. Temperature: 118°C (244°F)
Fuel:	Min. fuel pressure: 0.1 psi (7 hPa)
6. (Reserved)
7. Propellers and propeller limits:
 - 7.1 Two-blade propeller: 1 HARTZELL HC-C2YK-1BF/F 8477 - 4
(FAA TCDS P-920 rev30 and later revision)

Governor	WOODWARD Type E 210681 or M 210681 or C 210761 or F 210761
Setting at 0.762 m (30 inches)	Low pitch setting: 15° High pitch setting: 31°
Diameter	Maximum diameter: 2.03 m (80 inches) Minimum diameter: 1.98 m (78 inches)

- 10.3 From S/N 879, plus S/N 823 thru S/N 849 - Maximum takeoff and landing weight: 1400 kg (3086 lbs):

V_D (Design Diving Speed):	390 km/h (211 KCAS) (conventional speed)
V_{NE} (Never exceed speed):	347 km/h (187 KIAS)
V_C (Design Cruising Speed):	280 km/h (151 KCAS) (conventional speed)
V_{NO} (Maximum structural cruising speed):	278 km/h (150 KIAS)
V_A (Design Manoeuvring Speed):	240 km/h (130 KIAS)
V_{FE} (Flap Extended Speed):	
- takeoff position	240 km/h (130 KIAS)
- landing position	191 km/h (103 KIAS)
V_{LE} (Maximum Landing Gear Extended Speed):	258 km/h (139 KIAS)
V_{LO} (Maximum Landing Gear Operating Speed):	239 km/h (129 KIAS)

11. Maximum Operating Altitude: Refer to Aircraft Flight Manual
12. Operational Capability: Day and Night VFR: see AFM, Section 9
Day & Night IFR: see AFM, Section 9
Flight into known icing conditions is prohibited

13. Maximum Masses:

- 13.1 Aircraft not equipped with modification No. 50:
- Takeoff and landing weight: 1335 kg (2943 lbs)
- 13.2 From S/N 588, as well as aircraft equipped with modification No. 50, up to S/N 878, except S/N 823 thru S/N 849:
- Take-off weight: 1400 kg (3086 lbs)
- Landing weight: 1335 kg (2943 lbs)
- 13.3 From S/N 879, plus S/N 823 thru S/N 849:
- Takeoff and landing weight: 1400 kg (3086 lbs)
- 13.4 Fuel
Maximum fuel weight: 235 kg (518 lbs) at 1.085 m (42.7 inches)
(without unusable fuel)
- 13.5 Empty weight (see Note 5)

14. Centre of Gravity Range:

- 14.1 Up to S/N 587 not equipped with modification No. 50 - Maximum takeoff and landing weight: 1335 kg (2943 lbs):
Forward limit: 1.080 m (42.6 inches) aft of datum at 1335 kg (2943 lbs)
0.961 m (38 inches) aft of datum at 1200 kg (2646 lbs)
0.937 m (37 inches) aft of datum at 900 kg (1984 lbs) or less
Straight line variation between points given.
- 14.2 Aircraft equipped with modification No. 50 from S/N 1 thru 587 included:
Forward limit: 1.080 m (42.6 inches) aft of datum from 1335 kg (2943 lbs) to 1400 kg (3086 lbs)
0.961 m (38 inches) aft of datum at 1200 kg (2646 lbs)
0.937 m (37 inches) aft of datum at 900 kg (1984 lbs) or less
Straight line variation between points given.

- 14.3 From S/N 588 included:
- Forward limit: 1.071 m (42 inches) aft of datum at 1400 kg (3086 lbs)
 0.949 m (37 inches) aft of datum at 1250 kg (2756 lbs)
 0.913 m (36 inches) aft of datum at 1000 kg (2205 lbs) or less
 Straight line variation between points given.
- 14.4 Rear limit: 1.205 m (47 inches) aft of datum at all weights
15. Datum: Front face of firewall
16. (reserved)
17. Levelling Means: Upper fuselage spar
18. Minimum Flight Crew: 1 (Pilot) at station 1.155 m (45 inches)
19. Maximum Passenger Seating Capacity: 4
 - One seat at R.H. station 1.155 m (45 inches)
 - two or three seats according to commercial arrangement at station 2.035 m (80 inches) (see Note 4)
20. Limit load factors at maximum permissible weight
 Flaps retracted: $n = + 3.8 - 1.5$
 Flaps extended: $n = + 2 - 0$
21. Baggage / Cargo Compartments
- 21.1 Behind Rear Bench
 (a) Up to aircraft S/N 399, plus S/N 413
 Maximum weight: 50 kg (110 lbs) at 2.600 m (102 inches)
 (b) From aircraft S/N 400, except S/N 413
 Maximum weight: 65 kg (143 lbs) at 2.600 m (102 inches)
- 21.2 Cargo version (without rear bench)
 Maximum weight: 260 kg (573 lbs) at 1.900 m (74.8 inches)
22. Wheels and Tyres
 Nose Wheel Size: 5.00-5
 Nose Wheel Tyre Size: 5.00-5 6PR
 Main landing gear track: 2.17 m (85 inches)
 Main Wheel Size: 6.00-6
 Main Wheel Tyre Size: 15 x 6.00-6 6PR
23. Special equipment
 Stall warning device
 Option No. A888 "Low noise exhaust" [see Note 1 d)]
24. Control surface deflections
 a) Stabilizer (angles reference: fuselage upper spar)
 - nose-up attitude - $16^\circ \pm 1^\circ$
 - nose-down attitude + $3^\circ \pm 1^\circ$

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- b) Stabilizer tab (Angles reference: stabilizer chord)
With stabilizer in full nose-up attitude
- 1 – Aircraft not equipped with modification No. 50
- nose-up attitude tab stop - 2.5° ± 0.5°
 - nose-down attitude tab stop - 17.5° ± 1.5°
- 2 – From aircraft S/N 588, plus those equipped with modification No. 50
- nose-up attitude tab stop 0° ± 0.5°
 - nose-down attitude tab stop - 15° ± 1.5°
- c) Ailerons (Angles reference: wing chord)
- upward 15° ± 1.5°
 - downward 15° ± 1.5°
- d) Rudder (angles reference: fin chord)
- left and right 25° ± 2°
- e) Rudder trim (angles reference: control surface chord)
- turn to the left - 10° ± 2°
 - turn to the right + 25° ± 2°
- f) Flaps (Angles reference: wing chord)
- full flaps 40° - 1°
+ 0.5°

C.IV. Operating and Service Instructions

Aircraft Flight Manual (AFM):

- a) From S/N 1 to S/N 587 if aircraft not equipped with kit No. 9118: AFM Edition 3 must be at Revision 0 or later revision [see Note 1 a)]
- b) From S/N 588 to S/N 730 and from S/N 1 to S/N 587 if aircraft equipped with kit No. 9118: AFM Edition 4 must be at Revision 0 or later revision [see Note 1 b)]
- c) From S/N 731 to S/N 878, except from S/N 823 to S/N 849: AFM Edition 0 must be at Revision 2 or later revision [see Note 1 b)]
- d) From S/N 879 to S/N 947, except S/N 888: AFM Edition 1 must be at Revision 1 or later revision [see Note 1 b)]
- e) From S/N 948, plus from S/N 823 to S/N 849 and S/N 888: AFM Edition 2 must be at Revision 11 or later revision [see Note 1 c)]

Aircraft Maintenance Manual (AMM) must be at Revision 17 or later revision (incl. Chapter 4 Airworthiness Limitations), plus temporary revisions pending the next updated version.

Service Information and Service Bulletins

C.V. Notes

1. Approved Noise Levels in accordance with:
 - a) for TB20 aircraft at a maximum takeoff weight of 1335 kg (2943 lbs) and a maximum continuous power of 2575 RPM:
French Decree dated April 3rd, 1980 72.9 d B (A) for a limit of 77.8 d B (A)
 - b) for TB20 aircraft at a maximum takeoff weight of 1400 kg (3086 lbs) and a maximum continuous power of 2575 RPM:
French Decree dated April 3rd, 1980 74 d B (A) for a limit of 78.7 d B (A)
ICAO, Chapter X, Appendix 6, Annex 16 83.6 d B (A) for a limit of 88 d B (A).

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- c) for TB20 aircraft equipped with optional equipment A888 "Low noise exhaust" – see AFM, Section 9, Supplement 29 - at a maximum takeoff weight of 1400 kg (3086 lbs) and a maximum continuous power of 2575 RPM:
ICAO, Chapter X, Appendix 6, Annex 16 83.5 d B (A) for a limit of 88 d B (A).
- d) for TB20 aircraft equipped with optional equipment OPT10 77001A "Réduction de bruit (2500 tr/mn)" – see AFM, Section 9, Supplement 42 - at a maximum takeoff weight of 1400 kg (3086 lbs) and a maximum continuous power of 2500 RPM:
ICAO, Chapter X, Appendix 6, Annex 16 82.8 d B (A) for a limit of 88 d B (A).
NOTE: The Supplement 42 is also valid for Swiss registered TB20 aircraft with the following values referring to the Swiss Edict dated May 25, 1990, Appendice, Chapter 241b 79.8 d B (A) for a limit of 80.3 d B (A).
- e) for TB20 aircraft equipped with optional equipment OPT10 61001 "Three-blade Propeller" – see AFM, Section 9, Supplement 45 - at a maximum takeoff weight of 1400 kg (3086 lbs) and a maximum continuous power of 2575 RPM:
ICAO, Chapter X, Appendix 6, Annex 16 82.5 d B (A) for a limit of 88 d B (A),
FAR PART 36, Appendix G 78.6 d B (A) for a limit of 83.7 d B (A).
2. For TB20 aircraft equipped with option OPT10 77001A "Réduction de bruit (2500 tr/mn)":
- Takeoff and max continuous 2500 RPM (174 kW)
 3. For TB20 aircraft equipped with option OPT10 61001 "Three-blade Propeller", a new propeller cone is installed [Model A-2295-3(P)] – see AFM, Section 9, Supplement 45.
 4. Maximum weight of the 3 rear passengers: 231 kg (509 lbs).
 5. The empty weight must include unusable fuel weight of 7.2 kg (15.9 lbs) at 1.085 m (42.7 inches) and oil full quantity [11.3 kg (24.9 lbs) at – 0.600 m (- 23.6 inches)].
 6. All optional equipment requiring an AFM Supplement are contained in AFM, Section 9
 7. This engine can only be installed on 28 VDC TB20 aircraft that is to say from S/N 948, plus S/N 823 to S/N 849 and S/N 888.
 8. Smokers authorized (ashtrays on board).

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SECTION D MODEL TB 21**D.I. General**

Data Sheet No.: EASA.A.378

1. a) Type: TB
b) Model: TB 21
2. Airworthiness Category: FAR 23 Normal Category
3. Type Certificate Holder: Socata
65921 TARBES Cedex 9
FRANCE
4. Manufacturer: Socata
65921 TARBES Cedex 9
FRANCE
5. DGAC Certification Date: May 23, 1985
6. JAA Recommendation Date: N/A
7. EASA Certification Date: 11 June 2010
8. The EASA Type Certificate replaces DGAC-France Type Certificate No.165.

D.II. Certification Basis

1. Reference Date for determining the applicable requirements: December 1983
2. (Reserved)
3. (Reserved)
4. Certification Basis: FAR-23, Amendments 1 to 16
5. Airworthiness Requirements: FAR-23, Amendments 1 to 16 dated February 14, 1975
6. Requirements elected to comply: None
7. Special Conditions:
 - a) FAR-23 Amendment 21, Section 23.1581
 - b) The landing gear being held up by hydraulic pressure only, requirements 23-143 and 23-729 are modified as follows:
 - Airspeed "1.6 VSI" is replaced by "VNO" in 23.729 (a)
 - Condition 23-143 concerning landing gear extension is checked up to VNO.
8. EASA Exemptions: None
9. Equivalent Safety Findings: None

10. Environmental Standards: French Decree dated April 3rd, 1980 *
 ICAO, Chapter X, Appendix 6, Annex 16 *
 FAR PART 36, Appendix G *
 (*) See Note 1

D.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Main drawings ED No. 184/85 Ed.1 and up
 Type Design Definition EG No. 329/84 Ed.2 and up
 Model Description Note EG No. 101/85 Ed.6 and up
2. Description: Single engine (turbocharged), four/five-seated cantilever low wing airplane, all-metal construction, retractable tricycle landing gear, conventional tail
3. Equipment: Equipment list, AFM, Section 6 and Section 9 (See Note 5)
4. Dimensions:
- | | |
|-----------|-----------------------------------|
| Span | 9.85 m (32 ft 3.8 in) |
| Length | 7.75 m (25 ft 5.1 in) |
| Height | 2.85 m (9 ft 4.2 in) |
| Wing Area | 11.9 m ² (128.09 sqft) |
5. Engines:
- 5.1 Engine: 1 Textron Lycoming TIO-540-AB1AD
 (FAA TCDS E14EA rev21 and later revision)
- 5.2 Engine Limits: Max. take-off and continuous power: 2575 RPM (184 kW)
 Max. Cylinder Head Temperature: 260°C (500°F)
- | | | |
|-------|--------------------------------------|--------------------------------------|
| Oil: | Normal pressure: | From 3.8 to 6.55 bars (55 to 95 psi) |
| | Minimum pressure: | 1.7 bar (115 psi) |
| | Max. Temperature: | 118°C (244°F) |
| Fuel: | Min. fuel pressure: | 0.1 psi (7 hPa) |
| | Max Manifold Pressure: | 1290 mbar (38 in.Hg) |
| | Max exhaust gas temperature (T.I.T): | 1650°F (899° C) |
6. (Reserved)
7. Propellers and propeller limits:
- 7.1 Two-blade propeller: 1 HARTZELL HC-C2YK-1BF/F 8477 - 4
 (FAA TCDS P-920 rev30 and later revision)
- | | |
|--------------------------------|--------------------------------------|
| Governor | WOODWARD Type E 210681 |
| | Or M 210681 |
| | Or C 210761 |
| | Or F 210761 |
| Setting at 0.762 m (30 inches) | Low pitch setting: 15° |
| | High pitch setting: 31° |
| Diameter | Maximum diameter: 2.03 m (80 inches) |
| | Minimum diameter: 1.98 m (78 inches) |

12. Operational Capability: Day and Night VFR: see AFM, Section 9
Day & Night IFR: see AFM, Section 9
Flight into known icing conditions is prohibited
13. Maximum Masses:
- 13.1 Up to S/N 878 included:
- Take-off weight: 1400 kg (3086 lbs)
- Landing weight: 1335 kg (2943 lbs)
- 13.2 From S/N 879:
- Takeoff and landing weight: 1400 kg (3086 lbs)
- 13.3 Fuel
Maximum fuel weight: 235 kg (518 lbs) at 1.085 m (42.7 inches)
(without unusable fuel)
- 13.4 Empty weight (see Note 4)
14. Centre of Gravity Range:
- Forward limit: 1.071 m (42 inches) aft of datum at 1400 kg (3086 lbs)
0.949 m (37 inches) aft of datum at 1250 kg (2756 lbs)
0.913 m (36 inches) aft of datum at 1000 kg (2205 lbs) or less
Straight line variation between points given.
- Rear limit: 1.205 m (47 inches) aft of datum at all weights
15. Datum: Front face of firewall
16. (reserved)
17. Levelling Means: Upper fuselage spar
18. Minimum Flight Crew: 1 (Pilot) at station 1.155 m (45 inches)
19. Maximum Passenger Seating Capacity: 4
- one seat at R.H. station 1.155 m (45 inches)
- two or three seats according to commercial arrangement at station 2.035 m (80 inches) (see Note 3)
20. Limit load factors at maximum permissible weight
Flaps retracted: $n = + 3.8 - 1.5$
Flaps extended: $n = + 2 - 0$
21. Baggage / Cargo Compartments
- 21.1 Behind Rear Bench
Maximum weight: 65 kg (143 lbs) at 2.600 m (102 inches)
- 21.2 Cargo version (without rear bench)
Maximum weight: 260 kg (573 lbs) at 1.900 m (74.8 inches)
22. Wheels and Tyres
Nose Wheel Size: 5.00-5
Nose Wheel Tyre Size: 5.00-5 6PR

Main landing gear track:	2.17 m (85 inches)
Main Wheel Size:	6.00-6
Main Wheel Tyre Size:	15 x 6.00-6 6PR

23. Special equipment
Stall warning device

24. Control surface deflections

- a) Stabilizer (angles reference: fuselage upper spar)
 - nose-up attitude $- 16^{\circ} \pm 1^{\circ}$
 - nose-down attitude $+ 3^{\circ} \pm 1^{\circ}$
- b) Stabilizer tab (Angles reference: stabilizer chord)
With stabilizer in full nose-up attitude
 - nose-up attitude tab stop $0^{\circ} \pm 0.5^{\circ}$
 - nose-down attitude tab stop $- 15^{\circ} \pm 1.5^{\circ}$
- c) Ailerons (Angles reference: wing chord)
 - upward $15^{\circ} \pm 1.5^{\circ}$
 - downward $15^{\circ} \pm 1.5^{\circ}$
- d) Rudder (angles reference: fin chord)
 - left and right $25^{\circ} \pm 2^{\circ}$
- e) Rudder trim (angles reference: control surface chord)
 - turn to the left $- 10^{\circ} \pm 2^{\circ}$
 - turn to the right $+ 25^{\circ} \pm 2^{\circ}$
- f) Flaps (Angles reference: wing chord)
 - full flaps $40^{\circ} - 1^{\circ}$
 $+ 0.5^{\circ}$

D.IV. Operating and Service Instructions

Aircraft Flight Manual (AFM):

- a) From S/N 1 to S/N 730: AFM Edition 3 must be at Revision 0 or later revision
- b) From S/N 731 to S/N 878: AFM Edition 0 must be at Revision 2 or later revision
- c) From S/N 879 to S/N 947: AFM Edition 1 must be at Revision 1 or later revision
- d) From S/N 948: AFM Edition 2 must be at Revision 6 or later revision

Aircraft Maintenance Manual (AMM) must be at Revision 17 or later revision (incl. Chapter 4 Airworthiness Limitations), plus temporary revisions pending the next updated version.

Service Information and Service Bulletins

D.V. Notes

1. Approved Noise Levels in accordance with:

- a) for TB21 aircraft at a maximum takeoff weight of 1400 kg (3086 lbs) and a maximum continuous power of 2575 RPM:
French Decree dated April 3rd, 1980 76.1 d B (A) for a limit of 78.7 d B (A)

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- b) for TB21 aircraft equipped with optional equipment OPT10 61001 "Three-blade Propeller" – see AFM, Section 9, Supplement 45 - at a maximum takeoff weight of 1400 kg (3086 lbs) and a maximum continuous power of 2575 RPM:
- | | |
|---------------------------------------|---|
| ICAO, Chapter X, Appendix 6, Annex 16 | 81.8 d B (A) for a limit of 88 d B (A), |
| FAR PART 36, Appendix G | 78.0 d B (A) for a limit of 83.7 d B (A). |
2. For TB21 aircraft equipped with option OPT10 61001 "Three-blade Propeller", a new propeller cone is installed [Model A-2295-3(P)] – see AFM, Section 9, Supplement 45.
 3. Maximum weight of the 3 rear passengers: 231 kg (509 lbs).
 4. The empty weight must include unusable fuel weight of 7.2 kg (15.9 lbs) at 1.085 m (42.7 inches) and oil full quantity [11.3 kg (24.9 lbs) at – 0.600 m (- 23.6 inches)].
 5. All optional equipment requiring an AFM Supplement are contained in AFM, Section 9
 6. Smokers authorized (ashtrays on board).

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SECTION E MODEL TB 200**E.I. General**

Data Sheet No.: EASA.A.378

1. a) Type: TB
b) Model: TB 200
2. Airworthiness Category: FAR 23 Normal Category
3. Type Certificate Holder: Socata
65921 TARBES Cedex 9
FRANCE
4. Manufacturer: Socata
65921 TARBES Cedex 9
FRANCE
5. DGAC Certification Date: October 30, 1991
6. JAA Recommendation Date: N/A
7. EASA Certification Date: 11 June 2010
8. The EASA Type Certificate replaces DGAC-France Type Certificate No.165.

E.II. Certification Basis

1. Reference Date for determining the applicable requirements: February 1991
2. (Reserved)
3. (Reserved)
4. Certification Basis: FAR-23, Amendments 1 to 16
5. Airworthiness Requirements: FAR-23, Amendments 1 to 16 dated February 14, 1975
6. Requirements elected to comply: None
7. Special Conditions: None
8. EASA Exemptions: None
9. Equivalent Safety Findings: None
10. Environmental Standards: ICAO, Chapter X, Appendix 6, Annex 16 *
(*) See Note 1

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E.III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Main drawings BE No. 417/91 Ed.1 and up
Model Description Note NAV No. 20/91 Ed.1 and up
2. Description: Single engine, four/five-seated cantilever low wing airplane, all-metal construction, retractable tricycle landing gear, conventional tail
3. Equipment: Equipment list, AFM, Section 6 and Section 9 (See Note 6)
4. Dimensions:

Span	9.89 m (32 ft 5.2 in)
Length	7.75 m (25 ft 5.1 in)
Height	3.02 m (9 ft 10.9 in)
Wing Area	11.9 m ² (128.09 sqft)
5. Engines:
 - 5.1 Engine: 1 Textron Lycoming IO-360-A1B6
(FAA TCDS 1E10 rev23 and later revision)
 - 5.2 Engine Limits: Max. take-off and continuous power: 2700 RPM (149 kW) *
(engine rated at 200 HP)
Max. Cylinder Head Temperature: 260°C (500°F)
(* See Notes 2 and 3)

Oil:	Normal pressure: From 3.8 to 6.6 bars (55 to 95.7 psi)
	Minimum pressure: 1.7 bar (115 psi)
	Max. Temperature: 118°C (244°F)
Fuel:	Min. fuel pressure: - 2 psi (- 0.14 bar)
6. (Reserved)
7. Propellers and propeller limits: 1 HARTZELL HC-C2YK-1BF/F 7666 A-2
(FAA TCDS P-920 rev30 and later revision)

Governor	WOODWARD Type A 210776
Setting at 0.762 m (30 inches)	Low pitch setting: 13.5° High pitch setting: 31°
Diameter	Maximum diameter: 1.88 m (74 inches) Minimum diameter: 1.83 m (72 inches)
8. Fluids:
 - 8.1 Fuel: 100 minimum aviation grade gasoline or AVGAS 100 LL
 - 8.2 Oil: Oils conforming to spec. MIL-L-6082 / MIL-L-22851
For more details see AFM, Section 1
9. Fluid capacities:
 - 9.1 Fuel: Two structural wing Tanks:
Total: 210 liters (55.4 US Gal) [2 x 105 l (27.7 US Gal)]
Usable: 204 liters (53.8 US Gal) [2 x 102 l (27 US Gal)]
Unusable: 6 liters (1.6 US Gal)

- 9.2 Oil: (Engine built-in tank)
 Maximum: 7.6 liters (8 qts) [at – 0.605 m (- 23.8 inches)]
 Usable: 5.5 liters (5.8 qts) [at – 0.605 m (- 23.8 inches)]
 Minimum: 3.8 liters (4 qts)
10. Air Speeds (True Airspeed):
- | | |
|---|---------------------|
| V_D (Design Diving Speed): | 345 km/h (186 KTAS) |
| V_{NE} (Never exceed speed): | 306 km/h (165 KTAS) |
| V_C (Design Cruising Speed): | 238 km/h (128 KTAS) |
| V_{NO} (Maximum structural cruising speed): | 238 km/h (128 KTAS) |
| V_A (Design Manoeuvring Speed): | 227 km/h (122 KTAS) |
| V_{FE} (Flap Extended Speed): | 176 km/h (95 KTAS) |
11. Maximum Operating Altitude: Refer to Aircraft Flight Manual
12. Operational Capability: Day VFR
 Day & Night IFR: see AFM, Section 9
 Night VFR: optional equipment: see AFM, Section 9
 Flight into known icing conditions is prohibited
13. Maximum Masses:
- 13.1 - Take-off weight: 1150 kg (2535 lbs)
 - Landing weight: 1150 kg (2535 lbs)
- 13.2 Fuel
 Maximum fuel weight: 147 kg (324 lbs) at 1.075 m (42.3 inches)
 (without unusable fuel)
- 13.3 Empty weight: (see Note 5)
14. Centre of Gravity Range:
- Forward limit: 1.083 m (42.6 inches) aft of datum at 1150 kg (2535 lbs)
 1.010 m (39.8 inches) aft of datum at 1070 kg (2359 lbs)
 0.949 m (37 inches) aft of datum at 970 kg (2138 lbs) or less
 Straight line variation between points given.
- Rear limit: 1.205 m (47 inches) aft of datum at all weights
15. Datum: Front face of firewall
16. (reserved)
17. Levelling Means: Upper fuselage spar
18. Minimum Flight Crew: 1 (Pilot) at station 1.165 m (45.9 inches)
19. Maximum Passenger Seating Capacity: 4
 - one seat at R.H. station 1.165 m (45.9 inches)
 - two or three seats according to commercial arrangement at station 2.095 m (82.5 inches) (see Note 4)
20. Limit load factors at maximum permissible weight
- | | |
|------------------|-------------------|
| Flaps retracted: | $n = + 3.8 - 1.5$ |
| Flaps extended: | $n = + 2 - 0$ |

21. Baggage / Cargo Compartments

21.1 Behind Rear Bench

Maximum weight: 65 kg (143 lbs) at 2.600 m (102 inches)

21.2 Cargo version (without rear bench)

Maximum weight: 260 kg (573 lbs) at 1.900 m (74.8 inches)

22. Wheels and Tyres

Nose Wheel Size: 5.00-5
Nose Wheel Tyre Size: 5.00-5 6PR

Main landing gear track: 2.33 m (7 ft 7.7 in)
or 2.30 m (7 ft 6.5 in) (see Note 7)

Main Wheel Size: 6.00-6
Main Wheel Tyre Size: 6.00-6 6PR

23. Special equipment

Stall warning device

24. Control surface deflections

a) Stabilizer (angles reference: fuselage upper spar)

- nose-up attitude - 17° ± 1°
- nose-down attitude + 2° ± 1°

b) Stabilizer tab (Angles reference: stabilizer chord)

With stabilizer in full nose-up attitude

- nose-up attitude tab stop - 2.5° ± 0.5°
- nose-down attitude tab stop - 17° ± 1.5°

c) Ailerons (Angles reference: wing chord)

- upward 15° ± 1.5°
- downward 15° ± 1.5°

d) Rudder (angles reference: fin chord)

- left and right 25° ± 2°

f) Flaps (Angles reference: wing chord)

- full flaps 25.5° - 1°
+ 0.5°

E.IV. Operating and Service Instructions

Aircraft Flight Manual (AFM):

- From S/N 1: AFM Edition 0 must be at Revision 6 or later revision [see Note 1 a)]
- From aircraft S/N 1 equipped with option D849: AFM Edition 0 (LBA approved German version) must be at Revision 4 or later revision (see Section 6, Note 1)
- From aircraft S/N 1 equipped with option D853: AFM Edition 0A (LBA approved German version) must be at Revision 0 or later revision (see Section 6, VI.2 - Note 1)

Aircraft Maintenance Manual (AMM) must be at Revision 18 or later revision (incl. Chapter 4 Airworthiness Limitations), plus temporary revisions pending the next updated version.

Service Information and Service Bulletins

Issue 03: 6 October 2010

SECTION F GENERAL NOTES**F.I. Operating limitations**

1. TB airplanes are certified in the Normal category (and Utility category for TB10 and TB9). In all cases spins are prohibited.
2. The limitations of use, indicated limit airspeeds marked on airspeed indicator, loading instructions, instruction and limitation plates are given in the approved Flight Manual.
3. TB airplanes are approved for day and night operations in the following conditions when the appropriate equipments, instruments required by the airworthiness and operational regulations are approved, installed and operative:
 - instrument and visual flight,
 - flight into icing conditions prohibited,
 - flight into icing conditions only with option n° 687 for TB20 and TB21.

F.II. General

1. No noise limitations are mentioned in the TB LBA approved German versions AFM, as well as Supplements to AFM. Refer to rules in force in the German Federal Republic.

Issue 03: 6 October 2010

SECTION G ADMINISTRATIVE**G.I. Type Certificate Holder Record**

1979 to 2000:	Société de Construction d'Avions de Tourisme et d'Affaires "S.O.C.A.T.A." - Groupe AEROSPATIALE Boîte Postale n°930 65009 TARBES FRANCE
2000 to 2009:	EADS SOCATA 65921 TARBES Cedex 9 FRANCE
since 2009:	SOCATA 65921 TARBES Cedex 9 FRANCE

G.II. Change Record

- Issue 01: 11 June 2010. Transfer from the DGAC TCDS issue 20 dated October 2001 to the EASA TCDS form.
- Issue 02: 14 June 2010. Correction of DGAC certification date for models TB9, TB20, TB21 and TB200.
- Issue 03: 6 October 2010. Correction to propeller type for TB10 from HARTZELL HC-C2YK-1BF/F 7663 A-4 to 1 HARTZELL HC-C2YL-1BF/F 7663 A-4.
Revision to new EASA TC Format.