European Aviation Safety Agency

EASA

TYPE-CERTIFICATE
DATA SHEET

TBM700

Type Certificate Holder:

SOCATA
65921 TARBES Cedex 9
FRANCE

Manufacturer:

SOCATA
65921 TARBES Cedex 9
FRANCE

For variants: TBM700 A
TBM700 B
TBM700 C1
TBM700 C2
TBM700 N

Issue 1: 14 July 2004
Issue 2: 26 November 2004
Issue 3: 10 February 2005
Issue 4: 12 January 2006
Issue 5: 21 April 2006
Issue 6: 21 December 2007
Issue 7: 25 March 2009

List of effective Pages:
CONTENT

SECTION 1: GENERAL, Basic TBM700 Type Design

I. General
II. Certification Basis
III. Technical Characteristics and Operational Limitations
IV. Operating and Service Instructions
V. Notes

SECTION 2: Change Record

SECTION 1: GENERAL, TBM700 Type Design

1. General

Data Sheet No.: EASA.A.010
Issue: 07 Date: 25 March 2009

1. a) Type: TBM700
   b) Variant: A, B, C1, C2, N (see Note 2)

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. Certification Application Date:
   a. To DGAC : 31-Oct-1986
   b. To FAA : 22-Jan-1988
   c. To EASA for TBM700 C2 variant: 05-Jan-2004

6. EASA Type Certification Date: 14-July-2004

7. JAA recommendation Date: TBD

8. The EASA Type Certificate replaces DGAC-France Type Certificate No.181
II. Certification Basis

1. Reference Application Date for
   a. DGAC certification (TBM700 A, B, C1) : 31-Oct-1986
   b. EASA certification (TBM700 C2, N) : 05-Jan-2004

2. (Reserved)

3. (Reserved)

4. Certification Basis:
   a. TBM700 A, B, C1 variants: FAR-23, Amendment 34, dated 01-Jan-1988
      and Sections 23.783, 23.807 and 23.811 of Amendment 36, dated 14-Sep-1988
   b. TBM700 C2 variant: As defined in CRI A-1, Issue 2
   c. TBM700 N variant:
      (i) airplane not equipped with MOD 70-176-00 As defined in CRI A-01 (TBM700C2), Issue 2
      (ii) airplane equipped with MOD 70-176-00 As defined in CRI A-01 (TBM700N Garmin G1000
       Cockpit) Issue 2

5. Airworthiness Requirements: FAR-23, Amendment 34, dated 01-Jan-1988
   FAR-23, Amendment 36, dated 14-Sep-1988
   FAR-23, Amendment 44, dated 18-Aug-1993
   For Modification 70-176-00, CS-23, Initial issue, dated 14-Nov-2003, with reversions to FAR 23 Am 34 in the area of change for the following paragraphs:-
   23.207, 23.677, 23.699, 23.777, 23.841, 23.843, 23.867, 23.903, 23.1301, 23.1303, 23.1305,
   23.1322, 23.1327, 23.1329, 23.1335, 23.1337, 23.1381, 23.1525, 23.1529, 23.1541, 23.1545,

6. Requirements elected to comply: None

7. EASA Special Conditions:
   a. TBM700 A, B, C1 variants: None
   b. TBM700 C2 variant: CRI B-1, Stalling speed exceeding 61 kts
   c. TBM700 N equipped with MOD 70-176-00 CRI B-01, Human Factors in Integrated avionics
      systems, issue 2
      CRI F-01, Protection from the effect of HIRF, issue 2
      CRI F-02, Protection from the IEL strikes, issue 2
      CRI F-04, Equipment Systems and Installations, issue 3
      CRI F-05, Databases and configuration files, issue 2
      CRI F-06, Digital Devices Design Assurance, issue 2
      CRI F-07, Software aspect of certification, application of DO-178B, Field Loadable Software
      and user modifiable software, Issue 2

8. EASA Exemptions: None

9. EASA Equivalent Safety Findings: None
10. EASA Environmental Standards (see Note 1):
      FAR 36 Appendix G Amdt 17
   b. TBM700 C2 variant: ICAO Annex 16, Volume 1, 3rd edition, Amdt 6  
      Chapter X, App 6 (elected to comply to 3rd edition, Amdt 7)  
      FAR 36 Appendix G Amdt 22  
      FAR 34 Amdt 3, dated 03-Feb-1999
   c. TBM700 N variant: ICAO Annex 16, Volume 1, 2nd edition, Amdt 3  
      Chapter X, App 6 (elected to comply to 3rd edition, Amdt 8)  
      ICAO Annex 16, Volume 2, 2nd edition, Amdt 4  
      Part 2, Chap 2 and FAR 34 Amdt 3, dated 03-Feb-1999

III. Technical Characteristics and Operational Limitations

1. Type Design Definition:
   List of main drawings: T700 N°65/90 Ed.1 and up.

2. Description:
   Single-turbo-propeller engine, six to seven seats, low-wing airplane, aluminium and steel construction.

3. Equipment:
   Equipment list: see POH Sec 6.5 and report ref. NAV No.34/90-RJ-App1

4. Dimensions:
   Span 12.680 m (41.6 ft)
   Length 10.645 m (34.9 ft)
   Height 4.355 m (14.3 ft)
   Wing Area 18.00 m² (193.7 ft²)

5. Engines:
   Transport Canada Type Certificate No. E-21 dated 16/08/2005
   EASA Type Certificate EASA.IM.E.008, dated 22/11/2005
   a. TBM700 A, B, C1, C2 variants: Turbo generator Pratt & Whitney type PT6A-64  
      Certification basis: FAR 33 Amendments 10
   b. TBM700 N variant: Turbo generator Pratt & Whitney type PT6A-66D  
      Certification basis: FAR 33 Amendments 10

5.1 Firmware: Not Applicable

5.2 Mapping: Not Applicable

5.3 Engine Limits:
   Gas generator rotation speed: 39000 RPM (104.1%)
   Propeller rotation speed: 2000 RPM
   a. TBM700 A, B, C1, C2 variants: Maximum take-off and continuous power: 700 shp  
      b. TBM700 N variant: Maximum take-off power: 700 shp  
      Maximum continuous power: 850 shp

   For power-plant limitations refer to POH, Section 2.3

7. Propellers:
   Hartzell Propeller Inc. Type HC-E4N-3/E9083 S(K)  
   FAA Type Certificate P10NE dated 2 august 2002  
   Maximum Diameter: 2311 mm / 91 in  
   Minimum Diameter: 2286 mm / 90 in  
   Number of Blades: 4  
   Low Pitch: 21°  
   Feather: 86°  
   Reverse: -11°
8. Fluids:

8.1 Fuel: Jet A, Jet A1, Jet B, JP4, JP5, JP8, anti-ice additive according to the specification MIL-I-27686 E in the following proportions:
Minimum content: 0.06% by volume
Maximum content: 0.15% by volume

8.2 Oil: Refer to POH, Section 2.3

8.3 Coolant: Not Applicable

9. Fluid capacities:

9.1 Fuel:

a. TBM700 A, B, C1, C2 variants:
   Two structural wing tanks
   Total capacity: 1100 liters / 290.6 gal
   Total usable capacity: 1066 liters / 281.6 gal
   Unusable quantity: 34 liters / 9 gal

b. TBM700 N variant:
   (i) Airplane not equipped with MOD 70-211-57
   Two structural wing tanks
   Total capacity: 1100 liters / 290.6 gal
   Total usable capacity: 1066 liters / 281.6 gal
   Unusable quantity: 34 liters / 9 gal

   (ii) Airplane equipped with MOD 70-211-57
   Two structural wing tanks
   Total capacity: 1140 liters / 301 gal
   Total usable capacity: 1106 liters / 292 gal
   Unusable quantity: 34 liters / 9 gal

9.2 Oil:

Maximum: 12 liters / 12.7 qt
Minimum: 5.7 liters / 6 qt

10. Air Speeds:

\[V_{MO}\] (Maximum operating speed) 270 KCAS
\[V_A\] (Manoeuvring speed) 160 KCAS
\[V_{FE}\] (Maximum flaps extended speed)
   Landing configuration 120 KCAS
   Take off configuration 180 KCAS
\[V_{LO}\] (Maximum landing gear operating speed)
   Retraction 130 KCAS
   Extension 180 KCAS
\[V_{LE}\] (Maximum landing gear extended speed) 180 KCAS
11. Maximum Operating Altitude:
   a. Airplane not equipped with OPT70-01-026: 30000 ft
   b. Airplane equipped with OPT70-01-026 plus TBM700 C1, C2 and N variants: 31000 ft

12. Operational Capability: Day & night VFR and day & night IFR operations when appropriate equipment is installed and operating correctly
    Refer to approved POH, Section 2.6

13. Maximum Masses:
   a. TBM700 A, B, C1 variants:
      Take-Off: 2984 kg (6579 lbs)
      Landing: 2835 kg (6250 lbs)
      Ramp: 3000 kg (6614 lbs)
   b. TBM700 C2, N variants:
      Take-Off: 3354 kg (7394 lbs)
      Landing: 3186 kg (7024 lbs)
      Ramp: 3370 kg (7430 lbs)

14. Centre of Gravity Range:
   a. TBM700 A, B, C1 variants:

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Weight up to</th>
</tr>
</thead>
<tbody>
<tr>
<td>4604 mm (181.3 in) 14% of MAC</td>
<td>4951 mm (194.9 in) 37% of MAC</td>
<td>2000 kg (4409 lbs) or less</td>
</tr>
<tr>
<td>4664 mm (183.6 in) 18% of MAC</td>
<td>4951 mm (194.9 in) 37% of MAC</td>
<td>2835 kg (6250 lbs) or less</td>
</tr>
<tr>
<td>4694 mm (184.8 in) 20% of MAC</td>
<td>4936 mm (194.3 in) 36% of MAC</td>
<td>2984 kg (6579 lbs) or less</td>
</tr>
</tbody>
</table>

   Straight line between points given.

   b. TBM700 C2, N variants:

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Weight up to</th>
</tr>
</thead>
<tbody>
<tr>
<td>4604 mm (181.3 in) 14% of Mean Aerodynamic Chord</td>
<td>4951 mm (194.9 in) 37% of MAC</td>
<td>2000 kg (4409 lbs) or less</td>
</tr>
<tr>
<td>4664 mm (183.6 in) 18% of MAC</td>
<td>4951 mm (194.9 in) 37% of MAC</td>
<td>2835 kg (6250 lbs)</td>
</tr>
<tr>
<td>4706 mm (185.3 in) 20% of MAC</td>
<td>4936 mm (194.3 in) 36% of MAC</td>
<td>2984 kg (6579 lbs)</td>
</tr>
<tr>
<td>4750 mm (187 in)</td>
<td>4918 mm (193.65 in)</td>
<td>3186 kg (7024 lbs)</td>
</tr>
<tr>
<td>4750 mm (187 in)</td>
<td>4918 mm (193.65 in)</td>
<td>3354 kg (7394 lbs)</td>
</tr>
</tbody>
</table>

   Straight line between points given.

   MAC: Mean Aerodynamic Chord

15. Datum: 3000 mm (118.11 in.) ahead of front firewall face

16. (Reserved)

17. Levelling Means: Cabin floor mounting rails
18. Minimum Flight Crew: 1 (Pilot)

19. Maximum Passenger Seating Capacity:
   a. Standard version: 5
   b. 7 places accommodation (optional modification OPT70-25-002): 6

20. (Reserved)

21. Baggage / Cargo Compartment
   Front baggage 50 kg (110 lbs) at 3250 mm (128.0 in)
   a. Airplanes from S/N 1 to 23, 25, 28, 33 and 35, except airplanes equipped as a retrofit with modification MOD70-019-25 “improved upholstery”:
      Rear baggage 100 kg (220 lbs) at 7560 mm (297.6 in)
   b. Airplanes S/N 24, 26, 27, 29 to 32, 34, 36 to 9999, plus airplanes equipped as a retrofit with modification MOD70-019-25 “improved upholstery”:
      Rear baggage 100 kg (220 lbs) at 7695 mm (303 in)
   c. TBM700 C1, C2 and N variants:
      Rear compartment 35 kg (77 lbs) at 8659 mm (340.9 in)

22. Wheels and Tires
   22.1 Nose landing gear
      Wheel base 2910 mm (115 in)
      Tire 5.00 x 5-6 PR
   22.2 Main landing gear
      Track 3880 mm (153 in)
      Tire 18 x 5.5-8 PR: Airplane not equipped with optional modification OPT70-01-029 “Provision for TBM700 C2”
      18 x 5.5-10 PR: TBM700C2 and N variants and airplane equipped with optional modification OPT70-01-029 “Provision for TBM700 C2”

IV. Operating and Service Instructions

DGAC/EASA approved Pilot Operating Handbook (POH):
   For TBM700 A and B variants, Pilot’s Operating Handbook must be at revision 10 or later revision.
   For TBM700 C1 variant the “C1 version” of the Pilot’s Operating Handbook at revision 2 or later revision is required.
   For TBM700 C2 variant the “C1 version” of the Pilot’s Operating Handbook at revision 2 or later revision is required and Pilot’s Operating Handbook Supplement 41 revision 2 or later revision must be utilised.
   For TBM700 N variant not equipped with MOD70-176-00 and MOD70-211-57, the “ TBM850 version ” of the Pilot’s Operating Handbook at edition 0 revision 0 or later revision is required.
   For TBM700 N variant equipped with MOD70-176-00 and MOD70-211-57 the “ TBM850 version ” of the Pilot’s Operating Handbook at edition 1 revision 0 or later revision is required.
   For airplane with optional modification OPT70-25-027 “Cargo Transportation Capability” installed, Pilot’s Operating Handbook Supplement 30 revision 2 or later revision must be utilised.

   For TBM700 A, B, C1, C2 variants and TBM700 N variant not equipped with MOD70-176-00 and MOD70-211-57, Maintenance Manual TBM700 with revision 31 of November 2005 EASA approved on 12 January 2006 and following revisions (including Airworthiness Limitations).
   For TBM700 N equipped with MOD70-176-00 and MOD70-221-57, Maintenance Manual TBM850 edition 0 with revision 0 EASA approved on 26 September 2007 for MOD70-176-00 and 6 July 2007 for MOD70-211-57 and following revisions (including Airworthiness Limitations).
V. Notes

1. Approved Noise Levels in accordance to:
   a. TBM700 A, B, C1 variants:
      FAR 36, Amendment 17, issued 14 August 1989: 77.4 dB(A) for a limit of 85dB(A)
   b. TBM700 C2 variant:
      ICAO Annex 16, Vol. 1, 3rd edition, Amdt 7, Chap. X, App. 6: 79.6 dB(A) for a limit of 85dB(A)
      FAR 36, Amendment 22, issued 13 December 1999: 79.6 dB(A) for a limit of 88dB(A)
   c. TBM700 N variant:
      ICAO Annex 16, Vol. 1, 3rd edition, Amdt 8, Chap. X, App. 6: 79.2 dB(A) for a limit of 85dB(A)

2. SOCATA modification MOD70-091-52 “TBM700 B - Wide Entrance Door” defines TBM700 B variant and integrates various modifications such as wider entrance door, increased maximum zero fuel weight, new upholstery…
   SOCATA modification MOD70-140-00 “Evolution TBM700 B to TBM700 C1” defines TBM700 C1 variant and integrates various modifications such as rear unpressurised cargo compartment, reinforced structure, new air conditioning system…
   SOCATA modification MOD70-139-00 “Increased of TBM700 maximum take off weight” defines TBM700 C2 variant and allows an extended MTOW compared to TBM700 A, B, C1 variants. It is a modification applicable to s/n 205, 240, 244-9999. The retrofit is possible only for airplanes within the above range of serial numbers already equipped with SOCATA modification MOD70-140-00.
   SOCATA modification MOD70-0188-00 “TBM700 N – Increased of maximum cruise/climb power to 850shp” defines TBM700 N variant. This modification allows a maximum continuous power of 850 shp for climb and cruise (flap retracted), and a maximum power of 700 shp identical to TBM700 A, B, C1, C2 variants when flaps are extended. “TBM850” is the trade name of TBM700 N variant.

SECTION 2: Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initial issue</td>
</tr>
<tr>
<td>2</td>
<td>Editorial changes</td>
</tr>
<tr>
<td>3</td>
<td>Editorial changes</td>
</tr>
<tr>
<td>4</td>
<td>Introduction of TBM700N (TBM850)</td>
</tr>
<tr>
<td>5</td>
<td>Correction to issue number of CRI A-1 in II.4(b) to issue 2. Introduction of Change Record</td>
</tr>
<tr>
<td>6</td>
<td>Introduction of MOD70-176-00 (G1000 Integrated Flight Deck) and MOD70-211-57 (Fuel Tank Extension) on TBM700N variant.</td>
</tr>
<tr>
<td>7</td>
<td>Editorial changes due to change of ownership from EADS Socata to SOCATA-Daher. TC Holder name formally reverts to SOCATA</td>
</tr>
</tbody>
</table>