



Type Certificate

Number: VA502
Issue 6

Pursuant to regulations 21.013A of the *Civil Aviation Safety Regulations 1998* this type certificate is issued in respect of the model SB7L-360A and SB7L-360A2 aircraft, manufactured by:

Seeker Aviation Australia Pty Ltd
Don Adams Drive, Hervey Bay
PO Box 7618 Urangan, QLD 4655
Australia

This certificate is valid until it is suspended or cancelled by the Civil Aviation Safety Authority. The basis of certification is as described in Type Certificate Data Sheet number VA502.



Richard Stocker
Delegate of the Authority
10 May 2018

safe skies for all

No	VA502
Revision	9
Aircraft	SB7L-360A SB7L-360A2
Date	10 May 2018

TYPE CERTIFICATE DATA SHEET

This data sheet, which is part of Type Certificate No. VA502, Issue 6, lists the conditions and operational limitations under which the aircraft for which the Type Certificate was issued meets the airworthiness requirements of the Civil Aviation Safety Authority.

Certificate Holder Seeker Aviation Australia Pty Ltd
Don Adams Drive, Hervey Bay
PO Box 7618 Urangan, QLD 4655
Australia

Model SB7L-360A (Seeker) Normal Category - approved 24 January 1994.

Engine	Textron Lycoming O-360-B2C.
Maximum take-off power	Serial Numbers: 070010, 070011, 070012 and 070014 2500 rpm (No time limit). Serial Numbers: 070009, and SA01100 and subsequent 2700 rpm (No time limit).
Fuel	80/87 minimum grade aviation gasoline. Unleaded automotive gasoline.
Oil	As specified in the latest revision of Textron Lycoming Service Instruction No. 1014.
Propeller	Seabird Aviation, wooden 2 blade fixed pitch, pusher. Model: BB177. Diameter: 1770 mm. Pitch: 1350 mm at 750 mm radius. or Hoffman GmbH, wooden 2 blade fixed pitch pusher. Model: HO44HM-177 138LD. Diameter: 1770 mm. Pitch: 1380 mm. Static rpm at full throttle (both propellers): Maximum: 2300 rpm. Minimum: 2200 rpm.

Air Speed Limits		(KIAS)	(KCAS)
	Never exceed (V_{NE})	134	133
	Manoeuvring (V_A)	107	105
	Max structural cruise (V_{NO})	107	105
	Max flaps extended (V_{FE})	95	93
Centre of Gravity	Forward Limit:	2251 mm aft of datum at all weights.	
	Aft Limit:	2384 aft of datum at 800 kg or less. 2362 aft of datum at 925 kg. Variation is linear between 800 kg and 925 kg	
	Datum	2043 mm forward of the wing leading edge at butt line 2122 mm.	
	Levelling Means	Plumb bob from drilled bolt in cockpit overhead bow to centre mark on the forward undercarriage bay cross member.	
Maximum Weight	Take Off	925 kg.	
	Landing	925 kg.	
Minimum Crew	One pilot.		
Number of Seats	Two.		
	Pilot seat arms	seat forward:	1286 mm aft of datum.
		seat aft:	1446 mm aft of datum.
	Passenger seat arms	seat forward:	1286 mm aft of datum.
		seat aft:	1646 mm aft of datum.
Maximum Cargo	45 kg at 2090 mm aft of datum.		
Fuel Capacity	Serial Numbers: 070010, 070011, 070012, 070014		
	Total	184 litres (2 x 92 litre tanks at 2312 mean fuel arm).	
	Usable	172 litres.	
	Aircraft Serial Numbers: 070009, and SA01100 and subsequent.		
	Total	184 litres (2 x 92 litre tanks at 2312 mean fuel arm).	
Usable	182 litres.		
Refer to flight manual for fuel distribution weight and balance data.			
Oil Capacity	7.5 litres.		

Control Surface Deflections	Aileron	Up	112 mm ± 5 mm at the trailing edge.
		Down	74 mm ± 5mm at the trailing edge.
	Elevator	Up	160 mm ± 5mm at the trailing edge.
		Down	83 mm ± at the trailing edge.
	Elevator fixed tabs		Trailing edge of tabs 40 to 50 mm below plane of elevator upper surface.
	Rudder Left and Right		170 mm ± 5 mm at the trailing edge.
	Wing flaps	Retracted	0° ± 1°
		First Notch	20° ± 1°
		Full	40° ± 1°
Operating Altitude	Maximum 15,000 feet AMSL.		
Crosswind Component	Maximum demonstrated for take-off and landing 12 knots.		
Types of Operation	VFR, day and night, or IFR (see serial number eligibility). Flight into known icing conditions is prohibited.		
Manoeuvres permitted	Non aerobatic manoeuvres as for normal flight including stalls (except whip stalls), chandelles, lazy eights and steep turns (angle of bank < 60°).		
	MANOEUVRE	ENTRY SPEED	
	Stalls	Slow deceleration	
	Chandelles	105 KIAS	
	Lazy eights	105 KIAS	
	Steep turns	75 – 80 KIAS.	
Required Placards	Refer to the approved flight manual.		
Certification Basis	Serial Numbers: 070011, 070012, 070014 Civil Aviation Order 101.22, Issue 4, up to and including Amendment 72 and FAR 23 up to and including Amendment 34. Serial Number: 070010 Civil Aviation Order 101.22, Issue 4, up to and including Amendment 72 and FAR 23 up to and including Amendment 34 except that FAR 23.1307, 23.1326 and 23.1353 are at Amendment 49, and 23.1557 is at Amdt 50.		

FARs

- 23.331, 23.445 and 23.1163 are at Amdt 42,
 - 23.993, 23.1103, 23.1147, 23.1193, 23.1322, 23.1385, 23.1387, 23.1389, 23.1391, 23.1393 and 23.1395 are at Amdt 43,
 - 23.251, 23.773, 23.1525, 23.1549 and 23.1557 are at Amdt 45,
 - 23.335, 23.371 and 23.572 are at Amdt 48,
 - 23.867, 23.1307, 23.1321, 23.1323, 23.1351, 23.1353, 23.1383 and 23.1401 are at Amdt 49,
 - 23.71, 23.145, 23.161, 23.201, 23.203, 23.1521, 23.1543, 23.1583, 23.1585, 23.1587 and 23.1589 are at Amdt 50,
 - 23.955, 23.1041, 23.1043, 23.1047, 23.1091, 23.1093, 23.1107, 23.1141, 23.1143, 23.1181, 23.1183, 23.1203 and 23.1337 are at Amdt 51,
 - 23.1305 is at Amdt 52,
 - 23.1308 is at Amdt 57,
 - 23.777, 23.853, 23.1301, 23.1303, 23.1309, 23.1310, 23.1311, 23.1331, 23.1431 and 23.1559 are at Amdt 62.
- 23.1326 is at CASA Special Condition A1326, and ELOS Seabird -1233/01 was determined for FAR 23.1337(b)(1). CASA document D16/112954 refers.

Type Design Data

Serial numbers 070011, 070012, 070014:

1. Master Drawing List SB7L-360A, SBR02/10, Issue 1, dated 8 September 2005, including later approved changes.
2. SB7L-360A Pilot's Operating Handbook and CASA approved Flight Manual Document SBR 02/96, Issue 3, dated 30 April 2008 including later approved changes.
3. Maintenance Manual SB7L-360A, SBR05/04 Issue 1, dated 13 December 2004 including later approved changes.

Serial number 070010 (IFR approval):

1. Master Drawing List, SBR07/14 Issue 0, dated 13 July 2012.
2. SB7L-360A Pilot's Operating Handbook and CASA approved Flight Manual Document SBR 03/13, Issue 1, dated 11 April 2013 including later approved changes,
3. Maintenance Manual SB7L-360A, SBR04/13 Issue 1, dated 3 April 2013 including later approved changes.

Serial numbers 070009, and SA01100 and subsequent:

1. Master Drawing List, SBR07/14 Issue 3, dated 1 April 2016, including later approved changes.
2. SB7L-360A Pilot's Operating Handbook and CASA approved
Flight Manual Document SBR 28/15, dated 5 May 2016 including later approved changes.



- including later approved changes.
3. Maintenance Manual SB7L-360A, SBR29/15 Issue 1, dated 1 April 2016 including later approved changes.

Serial Numbers Eligible 070009, 070010, 070011, 070012, 070014. SA01100 and subsequent.

Production Basis CASA Production Certificate No. 417197, dated 25 November 2003.

Noise Certification Compliance with ICAO Annex 16 Chapter 10 and FAR 36 Appendix G has been shown.

Model SB7L-360A2 (Seeker) Normal Category - approved 24 September 2013.

Engine Textron Lycoming IO-390-A1A6. (S/N 070015)
Textron Lycoming IO-390-A1B6. (S/N SA02100 and subsequent)

Maximum take-off power 2700 rpm (No time limit).

Fuel Avgas 100LL (Blue)
Avgas 100 (Green)

Oil As specified in the latest revision of Textron Lycoming Service Instruction No. 1014.

Propeller Seabird Aviation, wooden, 2 blade fixed pitch, pusher.
Model: Bishton BB177-70-55.
Diameter: 1770 mm.
Pitch: 1400 mm at 750 mm radius.

Static rpm at full throttle:

Maximum: 2450 rpm.

Minimum: 2350 rpm.

Air Speed Limits

	(KIAS)	(KCAS)
Never exceed (V_{NE})	134	133
Manoeuvring (V_A)	107	105
Max structural cruise (V_{NO})	107	105
Max flaps extended (V_{FE})	95	93

Centre of Gravity Forward Limit: 2274 mm aft of datum at all weights.

Aft Limit: 2409 mm aft of datum at all weights.

Datum 2043 mm forward of the wing leading edge at butt line 2122

mm.
MAC is 1200mm.

Levelling Means	Plumb bob from drilled bolt in cockpit overhead bow to centre mark on the forward undercarriage bay cross member.		
Maximum Weight	Take Off 974 kg. Landing 925 kg.		
Minimum Crew	One pilot.		
Number of Seats	Two. Pilot seat arms seat forward: 1286 mm aft of datum. seat aft: 1446 mm aft of datum. Passenger seat arms seat forward 1286 mm aft of datum. seat aft: 1646 mm aft of datum.		
Maximum Cargo	45 kg at 2090 mm aft of datum.		
Fuel Capacity	Serial Number: 070015 Total 184 litres (2 x 92 litre tanks at 2312 mean fuel arm). Usable 172 litres. Serial Numbers: SA02100 and subsequent. Total 184 litres (2 x 92 litre tanks at 2312 mean fuel arm). Usable 182 litres.		
	Refer to flight manual for fuel distribution weight and balance data.		
Oil Capacity	7.6 litres.		
Control Surface Deflections	Aileron	Up Down	112 mm \pm 5 mm at the trailing edge. 74 mm \pm 5mm at the trailing edge.
	Elevator	Up Down	160 mm \pm 5mm at the trailing edge. 83 mm \pm at the trailing edge.
	Elevator fixed tabs		Trailing edge of tabs 40 to 50 mm below plane of elevator upper surface.
	Rudder	Left and Right	170 mm \pm 5 mm at the trailing edge.
	Wing flaps	Retracted First Notch Full	0° \pm 1° 20° \pm 1° 40° \pm 1°

Operating Altitude	Maximum 15,000 feet AMSL.										
Crosswind Component	Maximum demonstrated for take-off and landing- 12 knots.										
Types of Operation	VFR, day and night, or IFR. Flight into known icing conditions is prohibited.										
Manoeuvres permitted	Non aerobatic manoeuvres as for normal flight including stalls (except whip stalls), chandelles, lazy eights and steep turns (angle of bank less than 60°). <table> <tr> <th>MANOEUVRE</th><th>ENTRY SPEED</th></tr> <tr> <td>Stalls</td><td>Slow deceleration</td></tr> <tr> <td>Chandelles</td><td>105 KIAS</td></tr> <tr> <td>Lazy eights</td><td>105 KIAS</td></tr> <tr> <td>Steep turns</td><td>75 – 80 KIAS.</td></tr> </table>	MANOEUVRE	ENTRY SPEED	Stalls	Slow deceleration	Chandelles	105 KIAS	Lazy eights	105 KIAS	Steep turns	75 – 80 KIAS.
MANOEUVRE	ENTRY SPEED										
Stalls	Slow deceleration										
Chandelles	105 KIAS										
Lazy eights	105 KIAS										
Steep turns	75 – 80 KIAS.										
Required Placards	Refer to the approved flight manual.										
Certification Basis	Aircraft Serial Number: 070015 Civil Aviation Safety Regulations, Part 21, as in force on 2 February 2011, and FAR 23 up to and including Amendment 34, except that FARs 23.71, 23.145, 23.161, 23.201 and 23.203 are at Amdt 50; 23.251 is at Amdt 45; 23.331 is at Amdt 42; 23.335 and 23.371 are at Amdt 48; 23.445 is at Amdt 42; 23.572 is at Amdt 48; 23.1041, 23.1043, 23.1047, 23.1091, 23.1093, 23.1103, 23.1107, 23.1141 and 23.1143 are at Amdt 51; 23.1147 is at Amdt 43; 23.1163 is at Amdt 42; 23.1181 and 23.1183 are at Amdt 51; 23.1193 is at Amdt 43; 23.1203 is at Amdt 51; 23.1305 is at Amdt 52; 23.1307 is at Amdt 49; 23.1308 is at Amdt 57; 23.1309, 23.1311, 23.1326 and 23.1329 are at Amdt 49; 23.1331 is at Amdt 43; 23.1337 is at Amdt 51; 23.1351, 23.1353 and 23.1383 are at Amdt 49; 23.1385, 23.1387, 23.1389, 23.1391, 23.1393 and 23.1395 are at Amdt 43; 23.1401 and 23.1431 are at Amdt 49; 23.1521 is at Amdt 50; 23.1525, 23.1549, 23.1557 are at Amdt 45; and 23.1559, 23.1583, 23.1585, 23.1587 and 23.1589 are at Amdt 50.										

Aircraft Serial Number: SA02100 and subsequent

- 23.993, 23.1103, 23.1147, 23.1193, 23.1322, 23.1385, 23.1387, 23.1389, 23.1391, 23.1393 and 23.1395 are at Amdt 43,
 - 23.251, 23.773, 23.1525, 23.1549 and 23.1557 are at Amdt 45,
 - 23.335, 23.371 and 23.572 are at Amdt 48,
 - 23.867, 23.1307, 23.1321, 23.1323, 23.1351, 23.1353, 23.1383 and 23.1401 are at Amdt 49,
 - 23.71, 23.145, 23.161, 23.201, 23.203, 23.1521, 23.1543, 23.1583, 23.1585, 23.1587 and 23.1589 are at Amdt 50,
 - 23.955, 23.1041, 23.1043, 23.1047, 23.1091, 23.1093, 23.1107, 23.1141, 23.1143, 23.1181, 23.1183, 23.1203 and 23.1337 are at Amdt 51,
 - 23.1305 is at Amdt 52,
 - 23.1308 is at Amdt 57,
 - 23.777, 23.853, 23.1301, 23.1303, 23.1309, 23.1310, 23.1311, 23.1331, 23.1431 and 23.1559 are at Amdt 62.
- 23.1326 is at CASA Special Condition A1326, and ELOS Seabird -1233/01 was determined for FAR 23.1337(b)(1). CASA document D16/112954 refers.

Type Design Data Serial Number 070015

1. Master Drawing List SB7L-360A2, SBR07/14 , Issue 1, dated 22 July 2013, including later approved changes.
2. SB7L-360A2 *Pilot's Operating Handbook and CASA Approved Flight Manual* Document SBR 05/13, Issue 3, amended 27 August 2015, including later approved changes.
3. Maintenance Manual SB7L-360A2, SBR06/13 Issue 1, dated 24 September 2013, including later approved changes.

Serial Number SA02100 and subsequent.

1. Master Drawing List SB7L-360A2, SBR07/14, Issue 3, dated 1 April 2016, including later approved changes.
2. SB7L-360A2 *Pilot's Operating Handbook and CASA Approved Flight Manual* Document SBR 30/15, dated 5 May 2016, including later approved changes.
3. SB7L-360A2 Maintenance Manual, SBR 31/15 Issue 1, dated 1 April 2016, including later approved changes.

Serial Numbers Eligible 070015, and SA02100 and subsequent.

Production Basis CASA Production Certificate No. 417197, dated 25 November 2003, as revised to include the A2 model.

Noise Certification Compliance with ICAO Annex 16 Chapter 10 and FAR 36 Appendix G has been shown.

Noise Certification

Compliance with ICAO Annex 16 Chapter 10 and FAR 36 Appendix G has been shown.

NOTES

Note 1. Service life limits for life limited parts are contained in the applicable manufacturer's Maintenance Manuals, Chapter 4, Airworthiness Limitations.

REVISION NOTES

- Revision 2. - adds the Hoffman HO44HM-177 138LD propeller as an alternative propeller for the SB7L-360A model.
- Revision 3. - adds IFR approval for model SB7L-360A.
- Revision 4. - adds new model SB7L-360A2.
- Revision 5. - corrects the document number for the -360A2 model flight manual.
- Revision 6. - identifies type design data by a new MDL number, in a new format. MDL SBR07/14 Issue 1 consolidates SBR19/11 Revision 4 and SBR 20/13 Revision 1 into one document, and is a later revision of both of those MDLs.
- Revision 7. - adds noise compliance statement for model SB7L-360A2.
- Revision 8. - amends SB7L-360A max engine RPM.
- Revision 9. - updates usable fuel in S/N 070009, SA01100, SA02100 and subsequent.
- Revision 10. - adds certification basis and type design data for SB7L-360A and SB7L-360A2 upgraded cockpit.
- Revision 11. - amends SB7L-360A and SB7L-360A2 eligible serial numbers.
- Revision 12. - updates SB7L-360A2 engine model number
- Revision 13. - amends listed total fuel capacity of SB7L-360A and SB7L-360A2 models.
- Revision 14. - removed models SB7L-235, SB7L-360, & notes 2 to 6
- Revision 15. - TC Holder changed from Seabird Aviation Australia Pty Ltd to Seeker Aviation Australia Pty Ltd.