
European Aviation Safety Agency

EASA
SPECIFIC AIRWORTHINESS
SPECIFICATION

for
Slingsby T59

The UK Type Certificate for this aircraft type is no longer valid. The most recent UK type certificate holder was:

Slingsby Sailplanes Limited
Kirkbymoorside
York

This Specific Airworthiness Specification (SAS) is issued in accordance with Regulation (EC) 1592/2002 Article 15(1) (b). It identifies the build standard, conditions and limitations for aircraft which meet the standards of the applicable type certificate - CAA - UK TCDS Number BG2

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SECTION 1: Aircraft Design Definitions

1.1 Aircraft built to conform with CAA-UK Type Certificate Standard

1.1.1.I T59D

Type design definition T59D-00-001

Note: T59D Series 1 Without Anti-Balance Tab on Elevator
T59D Series 2 With Anti-Balance Tab on Starboard Elevator

1.1.1.II Certification Basis

The following requirements are the basis of certification of the type design:

The manufacturer provided demonstration of compliance with the OSTIV Airworthiness Requirements for Sailplanes issued September 1971. These were accepted as being equivalent to those of BCAR Section E Issue 2

Exemptions

None.

1.1.1.III Technical Characteristics and Operating Limitations

		Without Anti-Balance Tab	With Anti-Balance Tab
Airspeed Limits	Never exceed speed	135 knots IAS	135 knots IAS
	Max Airbrake operating speed	135 knots IAS	135 knots IAS
	Max Aero tow speed	81 knots IAS	81 knots IAS
	Max Winch/ Auto Tow speed	70 knots IAS	70 knots IAS
	Max speed in rough air	105 knots IAS	105 knots IAS
	Max speed with flap setting:		
	-2 up	135 knots IAS	135 knots IAS
	-1 up	135 knots IAS	135 knots IAS
	0	108 knots IAS	100 knots IAS
	+1 down	108 knots IAS	100 knots IAS
+2 down	81 knots IAS	70 knots IAS	
+2 with landing flap	65 knots IAS	65 knots IAS	

Maximum Weights

Take off with water ballast	1040 lb
Take off without water ballast	990 lb
Landing with or without water ballast	990 lb

C.G. Range (Without Anti- Balance Tab) From 11.5 inches forward to 14.76 inches aft of datum
C.G. Range (With Anti- Balance Tab) From 11.5 inches forward to 15.83 inches aft of datum

Design Maximum Load Factors +5.0g to -2.65g

Manoeuvres The only aerobatic manoeuvres which are permitted are tight turns up to 3.5g and spins.

Aerobatics are not permitted.

Towing cable weak link The breaking load of the weak link in the towing cable must not exceed 1000 lb

Miscellaneous
a) night flying is prohibited.
b) cloud flying is permitted.
c) the glider must be painted white.

Max. Number of Occupants One

Baggage None

Control Surface Movements

Elevators	up	16.5°	down	16.5°
Rudder	right	25°	left	25°
Aileron (0° Flap)	up	20°	down	10°
Aileron*	up	27°	down	20°
Flaps	up	8°	down	35°
Air brakes	4.45" ± 0.20" above upper surface of wing			

* A flap/aileron mixer unit provides aileron droop with some selected flap positions.

1.2 Data Pertinent to all Models

1. Fuselage Datum

Wing root leading edge with the top of the rear fuselage reading 2.5° tail down.

2. 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.

3. Placards

The following placards must be installed in full view of the pilot:

(i)

(a)	.Max. Rough Air	105 knots
(b)	Max Aero Tow	81 knots
(c)	Max Winch/ Auto Tow	70 knots
(d)	Max Airbrakes Open	135 knots"

(ii)

<u>"Flap Setting</u>	<u>Speed Vne</u>		
+2 & Landing Flap Down	65 knots		
+2 Down	81 knots	(Anti- Balance tab fitted	70 knots)
+1 Down	108 knots	(Anti- Balance tab fitted	100 knots)
0	108 knots	(Anti- Balance tab fitted	100 knots)
-1 Up	135 knots		
-2 Up	135 knots"		

(iii)

"Weak link 1000 lb"

(iv)

"Non Aerobatic
Cloud flying - Turn/ Slip fitted"

and (v)

“Max landing 990lbs”

SECTION 2: Airworthiness Directives

0159 PRE 80	4	Modification of canopy catch spigot mounting. Applicable to all T59 gliders. Technical Instruction No. 43 refers.
0160 PRE 80		Antisymmetric wing bending vibration of 17 m and 19 m Kestrel gliders. Applicable to all Slingsby built T59A, T59D, T59E and T59F gliders. Technical Instruction No. 54 refers.
0161 PRE 80		Mandatory inspection of wings. Applicable to all T59 gliders. Technical Instruction No. 62 refers.
0162 PRE 80		Inspection of elevator actuator fitting. Applicable to all T59 gliders. Technical Instruction No. 63 refers.
0163 PRE 80	18	Replacement of elevator actuator bracket. Applicable to all T59 gliders. Technical Instruction No. 65 refers.
0164 PRE 80		Dive Brake Operating limitations. Applicable to all T59A, B, C, D, E and F gliders. Technical Instruction No. 72 refers.
0165 PRE 80	28	Fitting of improved dive-brake control mechanism. Applicable to all T59A, B, C, D, E and F gliders. Compliance required not later than 31 December 1975. In the interim, Technical Instruction No. 72 must be complied with. Technical Instruction No. 75 refers.
0166 PRE 80	31	Fixing of Unibal bearings into aluminum housings on root ribs. Applicable to all T59A, B, C, D, E and F gliders. Compliance required not later than 31 December 1975. Technical Instruction No. 76 refers.
0167 PRE 80	33	Introduction of stop to restrict forward travel of rudder pedals. Applicable to all T59A, B, C, D, E and F gliders. Technical Instruction No. 78 refers.
0168 PRE 80		Inspection of rudder cables. Applicable to all T59A, B, C, D, E and F gliders. Technical Instruction No. 77 refers.
0169 PRE 80		Inspection of critical areas for loose bolts. Applicable to all T59 gliders. Technical Instruction No. 89 refers.
002-01-82		Inspection of rudder actuator. Applicable to all T59A, B, C, D, E, F, G, H & J gliders. Technical Instruction No. 101/T59 refers.
019-01-87		Inspection of elevator push rod. Applicable to all T59A, B, C, D, E, F, G, H & J gliders. Technical Instruction No. 106/T59 refers.

NOTE

1. Any Airworthiness Directives published after June 2007 can be found on the EASA website (<http://ad.easa.europa.eu>).

2. Technical Instructions (Service Bulletins) can be obtained from:

Slingsby Advanced Composites Ltd.
Ings Lane
Kirkbymoorside
North Yorkshire
England
YO62 6EZ

Telephone: +44 (0) 1751 432474

SECTION 3: Occurrence Reporting

This Specific Airworthiness Specification may be used as a basis for the issue of a Restricted Certificate of Airworthiness in accordance with 21A.173 (b) (2) under the following conditions:

- a) The holder of a Restricted Certificate of Airworthiness based on this Specific Airworthiness Specification shall report to the State of Registry all information related to occurrences associated with the operation of the aircraft which affects or could affect the safety of operation¹.
- b) Such reports shall be despatched within 72 hours of the time when the occurrence was identified unless exceptional circumstances prevent this.
- c) The State of Registry shall forward the information received under (a) to the Agency when it relates to failures, malfunctions, defects or other occurrences which cause or might cause adverse effects on the continuing airworthiness of the aircraft.

SECTION 4: Other Limitations

Mandatory maintenance instructions

The Certification Maintenance Requirements, for all variants are contained in Kestrel Pilots Notes currently at Amendment 2. Also refer to applicable Slingsby T.I.'s.

There are no Life Limited Parts. Airframe and parts are; "On Condition".

¹ AMC 20-8 contains guidance describing the occurrences which are to be reported. This document can be found on the EASA website under Regulations>Certification Specifications:

http://www.easa.europa.eu/doc/Agency_Mesures/AMC_GM/decision_ED_2003_12_RM.pdf
