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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 T53B

Type design definition 53B-00-001

1.1.1.II Certification Basis

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

BCAR Section E Issue 2

Exemptions

Non compliance with Section E3-2 paragraph 3 was accepted on the basis of equivalent safety.

1.1.1.III Technical Characteristics and Operating Limitations

Airspeed Limits	Never exceed speed	123 knots IAS
	Aircraft tow	80 knots IAS
	Auto-winch tow	70 knots IAS
	Max. speed in rough air	82 knots IAS
	Dive brakes extended	123 knots IAS
Maximum Weight	1160 lb	(Cloud and aerobatic flying)
	1285 lb	(Non cloud flying)
Design Maximum Load Factors	+5.0g to -2.5g (at 1160 lb)	
	+4.0g to -1.5g (at 1285 lb)	
Manoeuvres	the only aerobatic manoeuvres which are permitted are:	
	tight turns	
	loops	
	chandelles	
	spins in which the speed does not exceed 70 knots IAS	
C.G. Range	from 5 inches forward to 4.22 inches aft of datum	
Towing cable weak link	the breaking load of the weak link in the towing cable must not exceed 1400 lb	

Miscellaneous	a) night flying is prohibited b) cloud flying is permitted - up to the applicable weight limit and that the following additional instruments are installed: Altimeter and Turn and Bank Indicator c) when flying solo the glider must be flown from the front seat.			
Max. Number of Occupants	Two			
Baggage	None			
Control Surface Movements	Elevators	up	25°	down 25°
	Rudder	right	30°	left 30°
	Aileron	up	30°	down 15°
	Air brakes	6.9" above upper surface of wing		
		7.2" below lower surface of wing		

1.2 Data Pertinent to all Models

1. Fuselage Datum

That leading edge of the mainplane which is situated 11.6 inches from the centre line of the aircraft.

Levelling means	When the top of the rear fuselage slopes down to the tail at an angle of 8° 12'
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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:

- (a) "Flight in cloud - permissible only when altimeter and turn and slip indicators are fitted"
- (b) "Manoeuvres permissible - loops, tight turns (3 1/2g) spins and chandelles"
- (c) "Night flying is prohibited"
- (d) "The following IAS must not be exceeded:
 Glide or dive 123 knots
 Aircraft tow 80 knots
 Auto-winch tow 70 knots
 Spins must not be continued above 70 knots
 When flying in rough air, max. speed 80 knots
- (e) Breaking load of weak link in towing cable not to exceed 1400 lb

SECTION 2: Airworthiness Directives

0156 PRE 80 T.I.No. 36 Replacement of mounting Bracket for elevator lever (rear control box). Applicable to all T53B gliders. Compliance required as detailed in Technical Instruction.

0157 PRE 80 T.I.No. 40 Change of tailplane incidence. Applicable to all T53B gliders. Compliance required as detailed in Technical Instruction.

0158 PRE 80 T.I.No. 66 Inspection of wing centre section. Applicable to all T53B and later Variant YS.53. Compliance required as detailed in Technical Instruction.

002-05-81 T.I.No. 68 Strengthening of wing centre section. Applicable to all T53B and later Variant YS.53. Compliance required as detailed in Technical Instruction.

003-05-81 T.I.No. 69 Inspection of attachment of wing centre section to frame 6. Applicable to all T53B and later Variant YS.53. Compliance required as detailed in Technical Instruction.

004-05-81 T.I.No. 70 Replacement of aft attachment fitting in the wing centre section. Applicable to all T53B and later Variant YS.53. Compliance required as detailed in Technical Instruction.

001-01-82 T.I.No. 100/T53 Inspection of attachment of wing centre. Applicable to all T53B and later Variant YS.53 section to Frame 6. aircraft. Compliance required as detailed in Technical Instruction.

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.
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SECTION 4: Other Limitations

Mandatory maintenance instructions

The Certification Maintenance Requirements, no known Slingsby T53B maintenance information. rRefer 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