

SECTION 1: Aircraft Design Definitions

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

1.1.1.I Dart T51 (15 metre)

Type design definition 51-1-1 & 51-1-201

1.1.1.II Certification Basis

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

BCAR Section E Issue 2 including those appropriate to non cloud flying, cloud flying and aerobatic manoeuvres

Exemptions

A dive speed in excess of that required by Section E was accepted.

An aileron control circuit stiffness which was less than required by Section E was accepted.

1.1.1.III Technical Characteristics and Operating Limitations

Airspeed Limits	Glide or dive	119 knots
	Aircraft tow	82 knots
	Auto-winch tow	71 knots
	Max. speed in rough air	82 knots
	Dive brakes extended	119 knots
C.G. Range	+9 inches to + 13.6 inches	
Levelling means	When the top of the fuselage slopes tail down at an angle of 1° 42'	
Maximum Weight	Model T51	780 lb
	Models T51/17 and T51/17R	820 lb
Max. Number of Occupants	One	
Baggage	None	
Control Surface Movements	Tailplane	up 2.4" down 3.0"
	Rudder	right 7.3" left 7.3"
	Aileron	up 4.1" down 2.2"
	Dive brakes	5.6" above wing surfaces (top brake)

1.1.2.I T51 Dart 17 (17 metre span) and T51 Dart 17R (17 metre span & retractable u/c)

The T51/17 and T51/17R models have larger wingspan than the T51 and the T51/17R has a retractable main gear. Other Technical Characteristics and Operating Limitations are the same as the Dart T51.

1.1.2.II Dart T51 17R Serial No. DG/51/1

Dart 17 R Serial No. DG51/51/1 was rebuilt 1974-76 using parts from probably two Dart 17's and one Dart 15. This Specific Airworthiness Specification may be used as a basis for the issue of a Restricted Certificate of Airworthiness for Serial No. DG/51/1 as Slingsby T51 Dart 17R.

Aircraft Identification: A fireproof dataplate identifying the aircraft as a Dart T51 17R, serial number DG/51/1 must be fitted to the fuselage of the aircraft where it is accessible and legible. All major components have to be provided with a serial number DG/51/1/(x).

1.2 Data Pertinent to all Models

1. Fuselage Datum

Wing leading edge at root

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 - tight turns (3 1/2g) loops and spins, chandelles"
- (c) "Night flying is prohibited"
- (d) "The following IAS must not be exceeded:
 - Glide or dive 119 knots
 - Aircraft tow 82 knots
 - Auto-winch tow 71 knots
 - Maximum speed in rough air 82 knots
 - Dive brakes extended 119 knots
- (e) Breaking load of weak link in towing cable not to exceed 1000 lb

SECTION 2: Airworthiness Directives

0155 PRE 80 – Inspection of main wing spar for corrosion. Applicable to all T51 Dart gliders fitted with metal reinforced spars. Technical Instruction No. 58 refers. Refer 005-09-97.

005-09-97 T.I. No. 109/T51 Inspection of Dart 15/17M aluminium alloy Applicable to T51 Dart aircraft with aluminium alloy (Dural) spar booms. 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.

SECTION 4: Other Limitations

Mandatory maintenance instructions

The Certification Maintenance Requirements, are contained in Dart Pilots Notes. Also refer 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
