#### **CONTACT**

Slingsby Aviation Ltd, Kirbymoorside, York. YO6 6EZ. 01751 432474

#### T 1 Grasshopper

Air Cadet Operational Notes and Maintenance Manuals are available from the BGA

#### Tutor (Cadet Mk 2) & T.31 (Cadet Mk 3, Tandem Tutor)

Tutor Data Sheet Kirby Cadet Mk3 & T31B (Tandem Tutor) Data Sheet

Status	Subject	Detail	Reference Information	TNS
	Special Inspection	Special Inspection	<u>TI 03</u>	
	Care & Maintenace	Care & maintenance of Sailplanes manufactured prior to 1947	<u>TI 04</u>	
M	Main spar failure	Inspection and modification of front wing spar	<u>TI 23 Mod 80</u>	
	Rudder cable stops	Adjust to avoid fin loads		08/89

#### T21A & B Sedbergh

#### T21B Data Sheet

Status	Subject	Detail	Reference Information	TNS
	TX Mk 1_Air_Publication	Sedberg tx mk 1_air_publication_4309a vol 2	Air Publication 4309A Vol 2	
	T21B_BGA_MOD-2004-05	T21B replacement tyre & inner tube.	T21B BGA MOD-2004-05	
	T21B_BGA_MOD 2004-12a	Replacement tail plane strut mounting (Steel).	T21B BGA MOD 2004-12a	
	T21B_BGA_MOD 2004-12b	Replacement tail plane strut mounting (Steel).	T21B BGA MOD 2004-12b	
	T21B_BGA Mod 2005_03	T21B Installation of C of G release hook	T21B BGA Mod 2005 03	
	C of G Hook Mod Photographs	C of G Hook Mod Photographs	<b>Hook Mod Photographs</b>	
	Tow hook	Side plates cracked		<u>10/93</u> & <u>08/80</u>
	Control stick	Interconnect – failure threads cracked		12/93,10/91 & 06/83
	Drag spar	Attachment at pylon front cracked at bolt-hole		<u>10/83</u>
	Elevator	Disconnection in flight clevis pin too long - safety pin fouls on tailplane		<u>06/84</u>
	Elevator	Drive rod failure at ball-end fitting in cockpit - inspect annually		<u>08/85</u>
	Elevator	End fitting to drive tube rivet failure- inspect annually		<u>02/96</u> & <u>08/95</u>
	Main frames	1 & 4 cracked inspect annually		<u>10/85</u> & <u>06/86</u>
	Control cables	Damaged by lightening		<u>04/87</u>
	Rudder cable stops	Adjust to avoid fin loads		<u>08/89</u>
	Wing root fittings	Cracks in welds		<u>06/93</u>
0	Weak Link	For mod BGA 2005/03 C of G release, BLUE link is approved		<u>5/2006</u>

## T41 Skylark 2

## Skylark 2 & 2B Data Sheet

Status	Subject	Detail	Reference Information	TNS
	Tailplane attachments	Rigging and Inspection instructions	<u>TI 01</u>	
	Trimmer control/T&S batteries	Trimmer inspection & adjustment/modified battery attachment	<u>TI 02</u>	
	Aileron mass balance weights	Inspection instructions	<u>TI 05</u>	
	Elevator control connection	Tightening down of wing nut	<u>TI 07</u>	
	Damage to elevator cables	Inspection & recommended action	<u>TI 09</u>	
M	Shoulder harness	Canvas seats	TI 12 Mod 96 (CAA)	
M	Shoulder harness	Non canvas seats	TI 14 Mod 97 (CAA)	
M	Canopy catch	Improved type (lift off)	TI 13 Mod 98 (CAA)	
M	Canopy catch	Improved type (hinged)	TI 11 Mod 99 (CAA)	
	Rudder stops	Adjust to avoid fin load		<u>06/87</u>
	Fin spar inspection at the base	Annual & after heavy landings etc	<u>TI 107/T50</u>	08/87
	Rudder cables	Fouling on the fin		04/88

## T42 Eagle

Status	Subject	Detail	Reference Information	TNS
	Security of canopy catch	Correct operation of locking catch	<u>TI 10</u>	
	Canopy retention strap	Fouls rear stick	<u>TI 18 Mod 1</u>	
M	Wing spars	Strengthening	<u>TI 19 Mod 5</u>	

## T43 Skylark 3 & T.50 Skylark 4

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Status	Subject	Detail	Reference Information	TNS
	Elevator control connection	Tightening down of wing nut	<u>TI 01</u>	
	Trimmer control Battery attachment	Inspection & adjustment of trimmer control system Modified attachment for turn & slip batteries	<u>TI 02</u>	
	Care & maintenance	Care & maintenanceof sailplanes over 10 years old	<u>TI 04</u>	
	Airelon mass balance weights	Special instruction of airelon mass balance weights	<u>TI 05</u>	
	Elevator control connection	Tightening down of wing nut	<u>TI 07</u>	
	Airelon cable bolts	Wear on 2 B A bolts attaching airelon cables to wing joint	<u>TI 08</u>	
	Security of IP-113 canopy catch	Correct operation of handle	<u>TI 10</u>	
M	Wing root strengthening		Mod 7	
	Wing fittings	Severe corrosion inspect & treat as necessary		<u>10/96</u> & <u>12/81</u>
M	Harness attachments		Mod 96 & Mod 97	
	Canopy catch worn	Excess backlash external lever does not function	<u>Mod 99</u>	<u>06/83</u>
	Fin spar inspection at the base	Annual & after heavy landings etc	<u>TN 107/T50</u>	<u>08/87</u>
	Rudder stops	Adjust to avoid fin loads		<u>06/87</u>
	Aileron misrigging	Fit wing tips with ailerons neutral		<u>10/92</u>
	Aileron pip-pin connector	Failed - aileron disconnected		<u>06/93</u>
	Elevator misconnected	Driver lower lug not in slot - loosens in flight	Skylark 3	<u>04/97</u>
	Rudder horn	Severe corrosion		02/99

## T45 Swallow

## Swallow Data Sheet

Status	Subject	Detail	Reference Information	TNS
	Elevator control connection	Tightening down of wing nut	<u>TI 07</u>	
	Port rudder pedal fouling	Inspect to avert possibility of port rudder fouling	<u>TI 15</u>	
	Lack of full rudder deflection	Rectification of fault	<u>TI 33</u>	
М	Canopy catches	Insecure	Mod 10	
	Fin spar	Damaged by rudder cables after wearing through the fairlead		04/88
	Rudder stops insecure	Resulting in rudder over-travel		
	Cockpit torque tube	Cracks		12/90

## T49 A & B Capstan

## T49B Capstan Data Sheet

Status	Subject	Detail	Reference Information	TNS
	T49B Capstan Mod 2	Improved wing to fuselage fairing	<u>TI 21-Mod 2</u>	
	T49 Capstan	Improved access to dive brake adjustment in wing -	<u>TI 26</u>	
	T49B Capstam Mod 5	Reinforcing of the canopy front lamination	<u>TI 27</u>	
	Cracks in bracing at frame 3			08/74
	Air brake rod	Threaded end fractured adjacent to the brake		03/75
	Tow release	Cable frayed at pulley guard		08/84
	Rudder lower hinge	Corroded		<u>12/82</u>
	Rudder stops	Adjust to avoid fin loads		<u>08/87</u>
	Rudder-post	Cracked at weld		<u>10/93</u>
	Airbrakes jammed	Protruding bolt on brake paddle		<u>06/97</u>
	Fuselage skin	Damaged by skid rubber air brake mechanism damaged		08/98
	Rudder cables	Damage airbrake rod cables wrapped around rod behind cockpit		<u>08/98</u>
M	Rudder torque tube	Inspection and modification	BGA 029/05/2002 iss.1	06/02

## T51 Dart 15, 15R, 15WR, 17, 17R, 17WR

## Dart 15 & 17 Data Sheet

Status	Subject	Detail	Reference Information	TNS
	Replacement Label	Replacement of retractable undercarriage label	TI 28 Mod 63 & 64	
M	Undercarriage strengthening	Strenghtening of manual retractable undercarriage	<u>TI 29 Mod 66</u>	
	Tailplane mass balance weight	Increase in tailplane mass balance weight	<u>TI 30 Mod 67</u>	
	Alternative to Mod 67	Alternative to Mod 67	<u>TI 32 Mod 67A</u>	
	Undercarriage body down lock	Replacement of retractable undercarriage (manual) body down lock	<u>TI 35 Mod 69</u>	
	Drag spar safety pins too long	Become unlocked		<u>08/79</u>
	Aileron flutter	Caused by excessive backlash (5 mm total play)		<u>10/76</u> & <u>10/83</u>
	Longerons	Cracked at frame 6 in-flight break up inspect annually & after any "event"		04/85
	Centre section frames & diagonals	Cracked		<u>08/85</u>
	Longerons inspection	After heavy landings etc & annually		<u>08/87</u>
	Spar	Corrosion at wing root		<u>04/93</u> & <u>12/91</u>
N 4	Dural spar boom	Corrosion at bond mandatory inspection every 5 years	<u>TI 109 iss 3</u>	
М	Dural spar boom	Revised inspection at issue 3		<u>12/97</u> & <u>08/00</u>
	Elevator flutter	Excess play between elevators		<u>10/98</u>
BGA Com	pendium – 07/18			

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## T53/YS-53 Sovereign

## Slingsby T53 & YS53 Data Sheet Slingsby T53B - Specific airworthiness specification - CAA SAS.A.088 Issue 2

Status	Subject Airbrakes locked out	<b>Detail</b> Mechanism jammed at fuselage frame 6	Reference Information	TNS 08/80
М	Elevator lever mounting bracket	Replace (at rear control box)	<u>TI 36, Mod 11</u>	05/81
	Lifting Handle	Introduction of stronger lifting handle	<u>TI 38 Mod 10</u>	
	Modification to fuselage	Modification to fuselage between frames 4 & 5	<u>TI 39 Mod 14</u>	
M	Tailplane incidence change		<u>TI 40, Mod 15</u>	<u>05/81</u>
M	Wing centre section	Inspection and strengthening	AD 002-05-81, <u>TI 66</u> & <u>TI 68</u>	<u>05/81</u>
М	Wing attachment	Bracket (frame 6) inspection and replacement	AD 003-05-81, AD 004-05-81, <u>TI 69</u> & <u>TI 70</u>	<u>05/81</u>
	Wing attachment	Bracket (frame 6) inspection of replacement parts	<u>TI 90</u>	<u>02/80</u> & <u>05/81</u>
	Centre sections cracks	At frames 4 & 6	<u>TI 100</u>	<u>08/85</u>
	Frames 4 to 6	Corrosion and loose rivets		<u>08/86</u>
М	Wing	Inspection of centre section	AD 001-10-82, <u>TI 100/T53</u>	

## T59 A, C, D & H Kestrel 17, 19, 20 & 22 (Kestrel "2") (See Glasflugel section for Glasflugel 401 aircraft)

## T59 TCDS Slingsby Glass Fibre Repair Manual

Status	Subject	Detail	Reference Information	TNS
	Pre-rigging inspection – root end	Pre-rigging inspection of root end of main spar T59C	<u>TI 41</u>	
M	Canopy	Modify canopy catch spigot mounting	<u>TI 43, Mod 4</u>	1973
M	Landing Gear	Reposition bolts on u/c operating shaft	<u>TI 44 Mod 5</u>	
	Seal flaps and ailerons		<u>TI 49, Mod 11</u>	1973
	C of G Limit	C of G limit from 14.76" to 15.83"	TI 52, Mods 9 & 13	1973
M	Aileron	Mass balance limits changed to avoid wing flutter	<u>TI 54</u>	1973
	Rudder pedal gearing	Reduction of rudder pedal gearing	<u>TI 56 Mod 17</u>	
M	Controls	Introduction of take off flap position on landing flap control	<u>TI 57 Mod 15</u>	
	Fuselage rigging bars	Fitting of hardened steel pins to fuselage rigging bars	<u>TI 59 Mod 16</u>	
	Emergency pitot installation	Emergency pitot installation	<u>TI 60 Mod 14</u>	
	Wings	Inspection	<u>TI 62</u>	
	Elevator	Actuator fitting inspection	<u>TI 63</u>	
	Landing flap rods	Check for end bending	<u>TI 64</u>	
M	Elevator actuator replacement	By part number 59A-30-25	<u>TI 65</u> , <u>T65 iss 2</u> Mod 18	1974
	Rudder actuator	Improved bearings fitted	<u>TI 67 iss 2, Mod 26</u>	
	Ruddrer chord	Extension of rudder chord by 76mm	<u>TI 71 Mod 25</u>	
	Dive Brakes	Operating limitations	<u>TI 72</u>	
M	Air Brake	Control system improvement	<u>TI 75</u> , <u>T75 iss 2</u> . <u>T75 iss 3</u> Mod 28	04/75 & 06/75
	Root rib	'Uniballs' - loctite them in	<u>TI 76, Mod 31</u>	1975
	Rudder cables	Inspection	<u>TI 77</u>	
M	Rudder cable failures (fatal)	Fit stop to prevent rudder pedals going fully forward.	<u>TI 78, Mod 33</u>	<u>10/75</u>
M	Fit servo tab to elevator	Series I becomes series II, aft		
	Airbrake	Tensions airbrake caps as necessaryto prevent flap flutter		<u>10/75</u>
	Controls	Repeated failures if pedal geometry is wrong		<u>04/76</u>
	Controls	Frequently inspect cables in the nose		<u>04/77</u>
M	New mass balancing limits	Addendum 7 to pilot's notes		<u>01/76</u>
	Flap/aileron connections	Reversed at bell cranks - check after assembly		<u>07/76</u>
	Critical areas	Inspection for loose bolts	TI 89	
M	Rudder drive annual crack check	Mandatory 'Magnaflux' check	AD 002 01-82, <u>TI 101/T59</u>	<u>08/86</u> & <u>12/81</u>
	Undercarriage operating arm	Weld failure R H side of wheel box		<u>09/82</u>
	Flap drive shaft mount loose	Damaged while rigging - caused flap flutter		<u>10/83</u>
	Flap and aileron 'buzz'	Max total freeplays 1/8 " & 1/16"		<u>06/88</u> & <u>10/85</u>

Status	Subject	Detail	Reference Information	TNS
М	Elevator push rod inspection	For internal corrosion	<u>TI 106</u>	<u>02/87</u>
	LE delamination	Water ballast leak drill extra drain holes & inspect annually		<u>08/88</u> & <u>06/87</u>
	Aileron skew-drives	Assemble with loctite to minimise backlash		06/88
	Aileron LE foul	With detached/loose gelcoat-		<u>06/90</u>
	Tailplane front mounting lock	Must be wire locked		BGA
	Winch hook angle changed	Improved launch (optional)		04/99
	Water ingress at wing root rib	Caused 12" x 6" of disbonding		12/99
1	Landing gear	Operating rod weld failure at attachment to operating shaft (poor weld)		4-2006

## T61 Series

(Airworthiness Directives and Mandatory Modifications listed in CAA MAMIS)

BGA .ZIP file with all manuals, drawings and other information.

Status	Subject	Detail	Reference Information	TNS
M	Elevator	Change of control rigging pin T61A	AD0170 PRE 80, TI 42, Mod 3	1145
М	Engine mount studs	replacement of 10mm studs	AD0171 PRE 80, TI 45, Mod 10	
М	Canopy	Addition of fasteners	AD0172 PRE 80, TI 50, Mod 15	
М	Elevator ctr hinge	Inspection & replacement	AD0173 PRE 80, TI 53, Mod 16	
М	Elevator tab	Inspection	AD0174 PRE 80, TI 55	
М	Aileron	Inspection of operating lever	AD 011-10-80, TI 79, Mod 17	
М	Rudder pedals	Reduction of stops	AD 012-10-80, TI 80, Mod 18	
М	Wing root fitting	Pin inspection	AD 009-11-80, TI 94	
М	Fuel shut off valve Truma V8M	8 year (seals) life limitation	AD 82-50/2, SB 653-41	02/90
М	Tailplane	Forward bracket inspection	AD 003-01-82, TI 102/T61	04/90
М	Wings	Inspection of wing centre pin	AD 003-06-82	04/95
М	Truma V8 fuel valves	Truma V8 fuel valves made after 1/6/96 - exchange valve for new	AD 97-140, SB 653-67	08/97
М	Fuel shut off valve NK 490	fitted in place of Truma V8M	SB 653-70	02/98
М	Wings	Inspection of wing centre joint additional limitations	AD 001-07-82, TI 103/T61	07/82
М	Structural Audit (F)	Inspection of airframe (to be completed by April 2004)	TI 111/T61	02/03
М	Fatigue life limits	This AD has been raised to mandate revised fatigue lives.	G-2018-0001 (issued 12/02/18)	

#### **T61 In Service Reports (Advisory)**

Status	Subject	Detail	Reference Information	TNS
1	SF-25/T-61 elevator tab cables	Wire lock at tab		06/73
1	T-61 spar delamination at wing root			11/74
I	Longerons corroded at fin post	Adjacent to microballoon filler		01/75
I	T-61 aileron hinges cracked	Cracked at pin supporting plate weld	TI 73	06/75
1	T-61 elevator push rod fitting	Cracks around holes at fork end in fus centre	TI 74	06/75
1	Wheel assembly bolt failures	Fit larger (8mm) bolts		<u>11/77</u>
I	T-61 tailplane spar delamination	Inspect annually	TI 81	<u>03/79</u>
I	SF-25/T-61 compass errors	Magnetised canopy frame		<u>12/79</u>
1	Spar deterioration	Water in spoiler boxes		<u>06/95</u> & <u>12/80</u>
I	SF-25/T-61 wing main pin holes	Worn & splayed oval		<u>12/80</u>
I	T-61 ignition switch "live"	Test		<u>12/85</u>
I	Crank case cracks	Numerous cases - inspect regularly	TI 102	02/87
1	SF-25/T-61 tailplane	Front attachment cracked		04/90
I	SF-25 fuel flow restriction	Filter incorrectly installed		<u>06/90</u>
I	Top harness attachments	Secure to transverse tube		02/93
I	Tubing on fuel gauges	Hardens and leaks		<u>06/95</u>
I	T-61 magneto to crankshaft coupling	g Failure of type without reinforcing ring		<u>06/96</u>
1	Rear fuselage structure corrosion	Near fin attachments		02/99
1	Aileron drive bearing failure	Central hanger upper bearing between sticks		04/99
I	Tailplane front mount cracked through	Inspect for cracks and poor welds		08/99
I	Throttle cable disconnected	Check security at carburettor connection		<u>10/99</u>

#### T65 A & D Vega & T.65C Sport Vega

- to A a b to La control a				
Vega T65	15 Data Sheet Vega T65A	<u>Data Sheet</u> <u>Vega T65A 17 Data Sheet</u> <u>Vega T6</u>	5C (Sport) Data Sheet	
Status	Subject	Detail	Reference Information	TNS
M	Airbrakes inadvertently opening	Airspeed restriction - lifted when Mod 12 has been carried out	<u>TI 82</u>	<u>08/79</u>
	Loose pieces of resin in the wings jam ailerons	Loose pieces of resin to be shaken out	<u>TI 83</u>	<u>06/84</u> , <u>08/83</u> & <u>08/79</u> M
	Aileron actuator	Fouls outboard hand hole	<u>TI 84</u>	<u>08/79</u>
M	Flap/airbrake	Modification if Mod 12 not c/out	<u>TI 85, Mod 12</u>	
	Water tanks	Do not pressure fill at more than 2½ PSI	<u>TI 86</u>	<u>08/79</u>
M	Wing spigots	Replace	<u>TI 87 issue 2,3</u>	<u>10/79</u>
M	Wing strengthening		<u>TI 88, Mod 27</u>	<u>10/79</u>
	Critical areas	Inspection for loose bolts	<u>TI 89</u>	
M	Elevator actuator pin retention	Replace circlip with split-pin	<u>TI 91</u>	<u>04/80</u>
М	Aileron vibration	Mass balance increased (all models)	AD 002-05-81, AD 004-01-82, <u>TI 92</u> , <u>TI 95</u>	<u>12/80</u>
M	Elevator centre hinge-mounting	Rib loose in TP - reinforce	TI 104 iss 1, TI 104 iss 2	<u>11/82</u>
	Canopy jettison inoperative	Check system annually	<u>TI 105</u>	<u>11/82</u>
	Flap drive failure	At universal joint at pilots quadrant Pre Mod 16 aircraft only	<u>TI 108</u>	<u>08/90</u> & <u>08/87</u>
	Tailplane attachment	Cracks inspection within 6 months and after ground loops etc	<u>TI 110/T65</u>	<u>06/99</u>
M	Elevator Drive	BGA inspection of elevator drive U channel	BGA 006/08/2000 iss1	<u>08/00</u>
М	Flying controls	Elevator disconnection and tailplane attachment	BGA 013/13/2001 iss1 TI 104/T65 iss2	<u>04/01</u>

## Vega In Service Reports, Advisory

Status	Subject	Detail	Reference Information	TNS
	Seat pan fouls elevator control	Cut clearance as necessary		<u>10/80</u>
	Canopy lock	Screws loose in frame		<u>12/80</u>
	Stern post detached from fin skin	Inspect & repair as necessary		03/82
	Tailplane mounting spigot	Tongue cracked at bolt holes		02/83
	Rudder travel restricted	At extremes of pedal adjustment limit pedal adjustment		<u>06/84</u>
	Rudder cables	Damaged by a screw at tail wheel retraction hinge, inspect		06/84
	Elevator drive at base of fin	Delaminated		08/85
	Ailerons	Jammed by wheel retraction with one U/C mechanism bolt reversed		<u>10/85</u>
	Elevator hinge	Axis & drive misaligned align to avoid excess backlash & flutter		<u>02/88</u> & <u>10/86</u>
	Undercarriage mechanism wear	Excess free play causes collapse		04/87
	Rudder	Water drains blocked		<u>06/87</u>
	Tailplane	Attachments cracks in GRP inspect frequently		02/88

Status	Subject	Detail	Reference Information	TNS
	Aileron	Hinges and drive box corroded		08/88
	Tailplane upper skin	Unbonded from root rib		02/89
	Tow release & brake cables	Corroded & failed		06/89
	Aileron actuator cover plate	Jammed ailerons - always tape into place		<u>06/89</u>
	Undercarriage lever failure	At rod end bearing in cockpit		<u>06/91</u>
	Undercarriage lever failure	At weld on u/c		12/93
	Flap drive yokes dis-bonded	Noticed because of excess play in flaps		10/97
	Canopy	Locking lever must face upwards to prevent accidental canopy opening		08/98
	Canopy	Latching lever bent, fouling seat and difficult to operate		04/05
	Landing gear	Frame damaged by incorrectly fitted bolt on operating arm.		3-2006