

Aircraft Mfr _____ Model _____ S/N _____ Rego _____

Total Hours _____ Total Launches _____ Engine Hours _____ Date _____

Inspecting Engineer _____ GNZ Rating _____ Job No _____

Section 1: Required Documents, Manuals and Data

- 1.1 Documents Carried in Aircraft: DI Book (yellow) and Tech Log (blue centre page) []
 Airworthiness Certificate, CAA 2129, CAA 2173, CAA Flight Manual Reference []
 Manufacturer's Flight Manual (FM) - identify latest revision status _____ []
- 1.2 Manufacturer's Maintenance Manual (MM) - identify latest revision status _____ []
- 1.3 *Mandatory* maintenance items in MM - specific to this aircraft + not in Tech 22 _____ []
 _____ []
- 1.4 *Recommended* items (non-mandatory) from MM and other sources - consider _____ []
 _____ []
- 1.5 Aircraft Log Book - filled out correctly and up to date, launch type identified []
- 1.6 Information from Operator: Tech Log, work instructions, known defects, concerns []
 _____ []
- 1.7 Applicable Airworthiness Directives - new and repetitive - list all, check when complete []
DCA / GLIDER / 1C Control Cables - Inspection []
 _____ []
 _____ []
- 1.8 Past Maintenance Records - review comments and notes from earlier inspections []
 _____ []

Section 2: Expiry of Non-Annual Items (tick when compliant, enter date or airframe hours when due)

- 2.1 Tow hook(s) - launches since last hook change - max 2000 nose _____ belly _____ []
- 2.2 Transponder / Altimeter / Altitude Encoder - 2 years _____/_____/_____ []
- 2.3 ELT(AF) Batteries (incl remote) - if fixed + automatic - 2 yrs _____/_____/_____ []
- 2.4 Compass swing - 4 years _____/_____/_____ []
- 2.5 Oxygen Regulator - if fixed installation - 4 years _____/_____/_____ []
- 2.6 Weight and Balance - enter date last weighed - no significant changes? _____/_____/_____ []
- 2.7 Oxygen Cylinder pressure test - 10 years (5 yrs if > 40 yrs old) _____/_____/_____ []
- 2.8 Seat harness webbing - replace every 12 years - or as required by MM _____/_____/_____ []
- 2.9 Other non-annual items specific to this glider _____ _____/_____/_____ []
 _____ _____/_____/_____ []
 _____ _____/_____/_____ []

For more information about use of this Form refer to GNZ Form AC 3-16. Use Tech 30 Worksheet to plan your work.

Section 3: Airframe Inspection

3.1	Cockpit General - no loose objects, no unauthorised or unrecorded additions or mods	[]
	Cockpit controls - ease of movement, backlash, colour codes, locks and detents	[]
	Canopy - hinges, latches, cracks, jettison mechanism, side window, air vents	[]
	Seating - security, seat back adjustment, cushioning, head rests, upholstery	[]
	Restraints - harnesses (buckles, attachment points, webbing, stitching), fixed ballast anchors	[]
	Placards - legible, adequate, correct units (eg feet, knots), rego label visible both seats	[]
3.2	Instruments General - instrument panel(s) secure, PDA's securely mounted	[]
	Markings and labels - all switches and controls labelled, markings legible	[]
	Pitot and static ports, probes - unobstructed, no ingress of moisture (check aft statics)	[]
	Plumbing - tubing supported, flasks secure, no loose connections, pneumatic leaks, moisture	[]
	Radio and Transponder - microphone, controls, speakers, PTT buttons, transponder antenna	[]
3.3	Electrical Wiring	
	Batteries - securely mounted, battery life, fusing, connectors, no potential short circuits	[]
	Wiring, switches, knobs, fuses, jacks - wiring is secure, operational check of all devices	[]
3.4	Fuselage General - tick if seat pan has been removed for inspection under	[]
	External skin including fin, drain holes, cracks, scuff marks, surface damage	[]
	Possible ground loop or heavy landing damage - internal bulkheads, area around wing attach	[]
3.5	Tow Hooks	
	Clean, check for wear, corrosion, broken spring halves, lubricate	[]
	Tow Release Mechanism - release knob, cables, pulleys, force to activate, spring return	[]
	Function Check - closes smoothly, releases completely under load, adequate cable end play	[]
3.6	Wheels and Skids	
	Main Wheel(s) and tyres - acceptable condition, correct tyre pressure, no tyre bulges	[]
	Retraction mechanism - undercarriage doors close fully, door springs/bungees	[]
	Brake - linings/pads, effective operation, cable adjustment, fluid level, fluid leaks, fluid change	[]
	Shock absorber if fitted - oleo or rubber blocks - general condition	[]
	No damage to undercarriage struts, no bent axle, wheel runs true and straight, corrosion	[]
	Tail wheel or skid - condition, skid attached securely, wheel runs smoothly, pressure	[]
3.7	Wings and Winglets	
	External skin, drain holes, cracks, wrinkles, surface damage, root rib, winglet connections	[]
	Air Brake Panels - lubrication, corrosion, anti-chatter devices, drain holes, lubricate	[]
	Wing Attachment - lubricate pins, check all fittings for damage, fore-and-aft play at wingtips	[]
	Water Ballast system - vents, valves, dump mechanism, reported leaks, tail tank + valve	[]

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3.8	Flight Controls - measure control surface deflections	[]
	Rudder system - pedals, pedal adjustment, control cables, rudder hinges, horns, seals	[]
	Elevator system - linkages, trimmer, tailplane attachment, connectors, hinges, free play	[]
	Aileron system - linkages, connectors, hinges, aileron end float, free play	[]
	Flaps system (if fitted) - linkages, connectors, good spring action into lock plate	[]
	Air Brake system - linkages, connectors, force required to open/close brakes	[]
	Mylar seals - if fitted - proper adhesion, no loose ends	[]
3.9	Oxygen System (if fitted)	
	Oxygen bottle - securely mounted, gauges undamaged	[]
	Permanently-installed plumbing - secure, no leaks, no grease	[]
	Pressure/Flow Regulator(s) when installed in panel - function check	[]
	or, EDS unit(s) - function check	[]
3.10	Emergency Equipment	
	First Aid Kit - contents complete, sealed container, secure mounting, accessible to pilot	[]
	Survival Kit - advised in aircraft flying cross-country - check if fitted	[]
	Emergency Locator Beacon - fixed + automatically activated - security of mounting	[]
	Flight-Following Device (SPOT, SpiderTracks) - security of mounting	[]
3.11	Engine and Propeller system (if applicable)	
	Manufacturer's checks and maintenance items have been carried out (Ref Section 5)	[]

Section 4: Certification of Annual or Supplemental Inspection

- 4.1 Make an entry in the aircraft log book using the following wording: []

An Annual (*A Supplemental*) Inspection has been carried out on this aircraft in accordance with the requirements of New Zealand Civil Aviation Rule Part 43 and in respect of that maintenance this aircraft is released to service.

After this add the engineer's name, signature, GNZ rating number and date of certification.

- 4.2 Certify all other maintenance work performed: All significant work performed on the aircraft needs to be described in the log book, followed by this statement: []

The maintenance recorded has been carried out in accordance with the requirements of New Zealand Civil Aviation Rule Part 43 and in respect of that maintenance the aircraft is released to service.

- 4.3 Any work which disturbs aircraft controls requires a second inspection and signature. []
- 4.4 After an Annual issue a new Tech 19a. After a Supplemental sign and date the existing Tech 19a Form in the space provided. This places a record of the RTS inside the glider. []
- 4.5 File this Form with the Glider Maintenance Records. []

For more information about use of this Form refer to GNZ Form AC 3-16. Use Tech 30 Worksheet to plan your work.

Section 5: Engine and Propeller (if applicable)

Engine Mfr _____ Model _____ TSO _____

Propeller Mfr _____ Model _____ TSO _____

5.1 Required Documents, Manuals and Data

- 5.1.1 Glider Airframe Maintenance Manual []
- 5.1.2 Engine Mfr's Maintenance Schedule []
- 5.1.3 Engine Airworthiness Directives []
- 5.1.4 Propeller Notes _____ []
- 5.1.5 Technical Notes _____ []
- 5.1.6 Other _____ []
- _____ []
- _____ []

5.2 Expiry of Non-Annual Items - due at:

- 5.2.1 Major Overhaul due _____ hrs []
- 5.2.2 Spark Plugs change _____ hrs []
- 5.2.3 Drive Belt change _____ hrs []
- 5.2.4 Coolant change ____/____/____ []
- 5.2.5 Coolant hose change ____/____/____ []
- 5.2.6 Fuel Lines change ____/____/____ []
- 5.2.7 Other _____ ____/____/____ []
- _____ ____/____/____ []

5.3 Engine

- 5.3.1 Engine mount, rubbers, frame cracks []
- 5.3.2 Cooling fins, baffles, guards []
- 5.3.3 Exhaust system - security, cracks, leaks []
- 5.3.4 Leaks, stains - fuel, grease or oil []
- 5.3.5 Nuts, bolts, engine-mounted accessories []

5.4 Fuel System

- 5.4.1 Tanks, hoses, valves, drains, vents []
- 5.4.2 Pumps, primer, filler, filters []
- 5.4.3 Leaks, fresh fuel in tank, flow test []
- 5.4.4 Carb needles, diaphragms, injectors []

5.5 Ignition System

- 5.5.1 Spark Plugs - clean and gap []
- 5.5.2 Ignition leads - vibration support []
- 5.5.3 Spark plug caps, coils, magnetos, dist []

5.6 Engine Compartment

- 5.6.1 Doors, hatches, latches, shrouds []
- 5.6.2 Wiring, cables, engine controls []
- 5.6.3 Fire hazards, bulkhead fittings []

5.7 Propeller

- 5.7.1 Condition - nicks, cracks, damage []
- 5.7.2 Prop bolt torque, blade tracking []
- 5.7.3 Propeller mounting flange, hub []

5.8 Retraction Mechanism (if applicable)

- 5.8.1 Spindle drive or main actuator []
- 5.8.2 Gas strut for counterbalance []
- 5.8.3 Limit switches, stop blocks, safety cable []

5.9 Other Items (as applicable)

- 5.9.1 Deco valves - check, clean, cable play []
- 5.9.2 Lubricate folding blades (turbo) []
- 5.9.3 Drive belt condition, tension, tracking []
- 5.9.4 Propeller hub condition, bearings []
- 5.9.5 Propeller brake, stop, controls, sensors []
- 5.9.6 Radiator, oil cooler, hoses, connections []
- 5.9.7 Starter motor, ring gear, terminals []
- 5.9.8 Filters - air + oil - replace on schedule []
- 5.9.9 Lubrication, oil change (4-stroke) []
- 5.9.10 Pitch change mechanism - per mfr []

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Section 6: Abnormal Load Inspection: F = Flight Load, G = Gear Up, H = Heavy Landing or Ground Loop

	F	G	H
6.1 Aft Fuselage			
Tail Boom + Fin - apply torsion with fin, check for wrinkles, cracks, delamination	[]	[]	[]
Tail Wheel or skid - area under fin, ground impact damage to tail wheel/axle/skid		[]	[]
Wing Attach area - fittings distorted, pulled out of place, underlying structure	[]	[]	[]
Wing to Undercarriage connection - bent tubes, flaking paint, creases, splits	[]	[]	[]
6.2 Cockpit and Forward Fuselage			
Canopy - no cracks, hinges and latches intact, sits normally on cockpit	[]	[]	[]
Security - of instruments and heavy objects (eg oxygen bottle, battery)	[]	[]	[]
Seat - no signs of strain or damage	[]		[]
Harness - no signs of excess strain, check harness attachment points	[]		[]
Belly Hook - clean, damage to hook, protection lugs or mount, function check		[]	
Cockpit Bulkheads - for delamination from fuselage skin		[]	[]
Other Damage - gear doors, area around point of contact with ground		[]	[]
6.3 Flying Surfaces			
Wings - true, wing bending frequency unaltered, no excess fore-and-aft play	[]		[]
Tailplane - sitting square, attachment fittings intact, ease of assembly	[]	[]	[]
Signs of wingtip contact with ground, aileron damage (follow the trail)			[]
Wing Root - check fuselage attach fittings, main spar, main pin, ease of assembly	[]		[]
6.4 Control Surfaces and Linkages - check for full and free movement	[]	[]	[]
Ailerons and Flaps - distortion, hinges, did aircraft roll backwards?	[]		[]
Rudder - hinges, over-deflected? did aircraft roll backwards or tail-slide?	[]		[]
Elevator - hinges, both sides intact, drive mechanism - did tail slam onto ground?	[]	[]	[]
Flutter or Overspeed - check stiffness of control circuits, hinge or surface damage	[]		
6.5 Main Wheel and Undercarriage (or main skid)			
Wheel Hub - cracked, bent out of shape, bent axle, tyre cut, split or bulging, brake			[]
Undercarriage Struts - bent or cracked tubes, lugs, flaking paint at welds			[]
Retract Mechanism - operates smoothly, no excess force, locking mechanism		[]	[]
Undercarriage attachment points in fuselage (including retraction mechanism)			[]
6.6 Engine Bay (if applicable)			
Engine mounts - no cracks or damage to steel tubing, lugs, mounting rubbers	[]	[]	[]
Engine bay - bulkhead detachment or delamination, impact damage by engine	[]	[]	[]
Retraction mechanism - works smoothly, no excessive forces generated	[]	[]	[]

Certification: If no damage is found during this inspection, make an entry in the aircraft logbook stating:

An Abnormal Load Inspection has been carried out on this aircraft following a <briefly describe abnormal event> in accordance with Tech 22 Section 6, and no significant damage found. In respect of this inspection the aircraft is released to service.

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