Aircraft Flight Manual Summary – LS7 neo WL PH-1668 / LK

Chapter 1: **General Description**

Span	15,00 m
Length	6,66 m
MAC	0,649 m
Wing area	9,73 m^2
Wing aspect ratio	23,1
Max All-Up weight	486 kg
Max landing mass	486 kg
Max wing loading	50,0 kg/m^2
Water compartment tanks	150 kg
Fin water compartment tank	5,5 kg / 4,1 kg (with tail battery)

Chapter 2: **Operating Limitations**

Airworthiness category: **Utility**

Aerobatic manoeuvres not approved

Sideslip with winglets prohibited

Airspeed limitations:

Max calm air speed	V_{NE}	270 km/h
Max rough air speed	V_{RA}	190 km/h
Max manoeuvring speed	V_A	190 km/h
Max aerotow speed	V_T	190 km/h
Max winch speed	V_W	140 km/h

Rough air = turbulence in wave-rotors, CB-clouds, dust devils, or turbulence in ridge lift.

Airspeed indicator colours:

Green arc	73 – 190 km/h
Yellow arc	190 – 270 km/h
Red radial line	270 km/h
Yellow triangle	90 km/h

Load factors:	**Max**	**Min**
At manoeuvring speed V_M	+5,3	-2,65
At maximum speed V_{NE}	+4,0	-1,5
With airbrakes extended	+3,5	0,0

Weights:

Empty weight	approx. 2xx kg
Max all-up	486 kg
Min weight pilot	*see placard*
Max pilot weight	120 kg
Max baggage load	5 kg
Trimming weights	5,0 kg / lead plate

Fin tank ballast is used to compensate for a forward shift of the centre of gravity due to wing ballast, pilot mass or both.

Note: do not use the fin tank when there is the danger of the water ballast becoming frozen.

Weak links:

Aerotow	max. 5 kN	**white**
Winch	max. 7,5 kN	**red**

Tire pressure:

Main wheel	3 – 3,5 bar (no water ballast)
Main wheel	4 bar (up to 486 kg)
Tail wheel	6,2 bar

Crosswind:
The maximum demonstrated crosswind component is **20 km/h (11 kts)** for aerotow and **30 km/h (16 kts)** for winch launch

Chapter 3: **Emergency Procedures**
Spin recovery:

1) Apply full opposite rudder
2) Ease the control stick forward until the rotation ceases
3) Centralize the rudder and smoothly recover from the dive

Emergency Exit:

1) Pull both red handles to the stops
2) Push the canopy off at both red and white handles
3) Open the safety harness
4) Get up and get out

Rain: increase approach speed with at least 10km/h

Inadvertent Freezing / Icing: Do not dump water below 5°C. For prolonged flights below 5°C use no water ballast or add commercial anti-freezing solution.

Emergency landing on water: extend landing gear and open parachute harness.

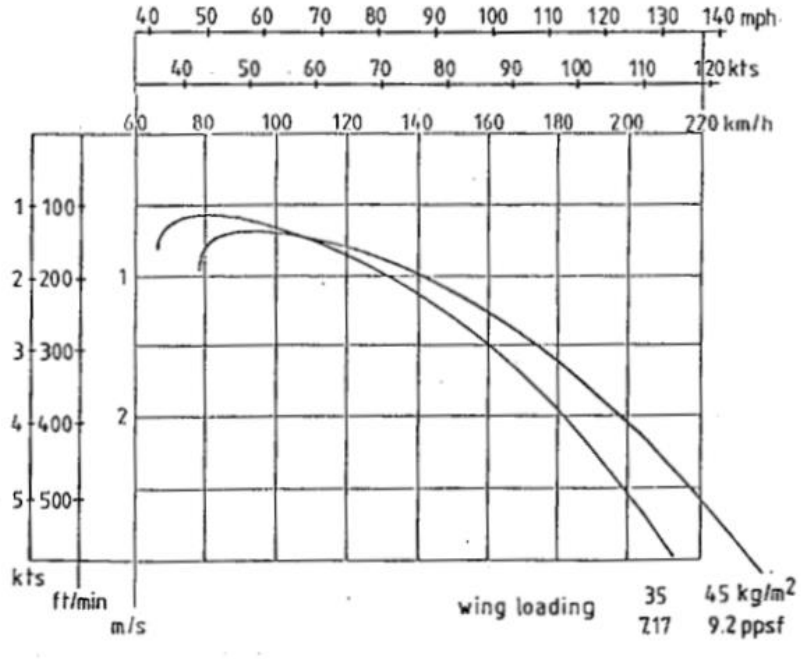
Chapter 4: **Normal operation procedures**

Winch launch:
Trim slightly nose heavy
Pronounced forward stick pressure is necessary during transition arc to prevent pitch up tendency
Minimum speed: 90 km/h (without water ballast), 100 km/h (with water ballast)

Aerotow:
Trim slightly nose heavy
Minimum speed: 100 km/h (without water ballast), 120 km/h (with water ballast)

Water ballast:
Dumping the wing water ballast takes 15 seconds for every 10 litres.
Note: before an off-field landing water ballast should always be dumped.

Flight polar:



Chapter 4: **Rigging and De-Rigging**

Rigging:

1) Extend landing gear
2) Control stick neutral and water ballast lever closed, airbrakes unlocked
3) Left wing first, aileron slightly down (never upwards!), then right wing
4) Insert and lock main pins
5) Insert tail fin battery
6) When using water ballast:
   - Wings level
   - Open dump valve
   - Fill tail tank first by connecting funnel to dumping tube inside lower right rudder
   - Close dump valve and remove funnel from rudder
   - Open left wing valve through baggage compartment using knurled knut, (10 turns counter clockwise)
   - Remove ventilation plug at wingtip
   - Connect funnel to dump orifice on under side of left wing and fill with desired amount of water
   - Close ventilation at wingtip and close left wing valve using knurled knot clockwise
   - Repeat process for right wing
7) Install horizontal tail, secure with slotted nut against tapered pins until red marking on attachment brackets is invisible
8) Install winglets
9) Install TE-probe and mount battery in baggage compartment
10) Seal all gaps, furnish cockpit and complete daily inspection

De-rigging: Reverse assembly sequence