

PART 2

LIMITATIONS

List of Chapters

	Chapter
LIMITATIONS	1

PART 2

The limitations given in this Part are taken from the MA Release (Issue 5 to AL 2) which must be consulted to ascertain the latest release standard.

Note: The limitations given in this Part, unless otherwise specified, are Normal Operating limitations which may be reached as often as required without undue risk.

CHAPTER 1 - LIMITATIONS

Contents

	Para
General	1
Airfield	2
Centre of Gravity	4
Aircraft Weight	6
Crew Weight	8
Airspeed	9
Launching	11
Aerobatics	15
Meteorological	18
Instrument Flying	23
Night Flying	24

General

1. The Viking T Mk 1 is released in the Air Cadet training role by day. The aircraft may be flown dual or solo with a suitably qualified pilot as aircraft commander. For solo flying the pilot is to occupy the front seat.

Airfield

2. Operation is restricted to paved or short grass surfaces. Operations from newly mown surfaces are not be permitted if long cut grass has not been removed or grass has been left in large piles or clumps.
3. The glider is not to be operated from wet mud, wet snow, slush, frozen or rutted surfaces. The glider may, however, be operated from dry or crystalline snow provided that:
 - a. The snow is no more than 2 inches deep.
 - b. There are no drifts or snow banks near the take-off and landing areas.

Centre of Gravity

4. The approved range of CG positions during flight is 260 mm to 460 mm (10.24 ins to 18.11 ins) aft of the datum line (front edge of the wing at the wing root), and is equivalent to 24.7 % to 43.6% of the Mean Aerodynamic Chord (MAC) of the wing.
5. The approved centre of gravity range must not be exceeded by the payload distribution. The exact position of the centre of the gravity at flying weight can be calculated as described in the Maintenance Manual.

Aircraft Weight

6. The maximum permitted all up weight (AUW) for flying:
 - a. Without canards (pre-Mod 003) is 625 kg.
 - b. With canards (post-Mod 003) is 580 kg.
7. During aerobatics the carriage of baggage is prohibited. At all other times the maximum permitted baggage weight is 10 kg.

Note: When operating at weights above 580 kg, the speeds for aerobatics and approach should be increased by 5 knots.

Crew Weight

8. The maximum load in the front or rear seat is not to exceed 110 kg.

Table 1 - Range of Ballast Weights

<i>Ballast Weights Fitted</i>	<i>Permitted Weight Range of Front Occupant (including parachute)</i>
2	55 to 94 kg
1	63 to 102 kg
0	70 to 110 kg

CAUTION: Utilisation of these limits to the full is likely to render the aircraft above its maximum permissible weight.

Airspeed

9. *Maximum Airspeeds.* The maximum permitted airspeeds are:

Maximum permitted speed in calm air	V_{NE}	119 knots
Maximum permitted speed in rough air	V_B	92 knots
Maximum manoeuvring speed	V_M	92 knots
Maximum tow speed (aerotow)	V_T	92 knots
Maximum tow speed (winch)	V_w	65 knots

Note: Manoeuvring speed (V_M) is the maximum speed at which full or rapid deflection of primary flight controls may be used. Between V_M and the maximum speed (V_{NE}) the control deflections should be restricted to 1/3 of the full range.

10. *Airbrakes.* The airbrakes may be operated at any speed.

Launching

11. *Winch.* Launching by winch using the CG hook is permitted, subject to winch limitations. Use of the forward (nose) towing hook is not permitted.

12. *Aerotow.* Launching by aerotow using the forward (nose) towing hook is

permitted, subject to the limitations of the towing aircraft.

13. *Motor Vehicle*. Launching using a moving motor vehicle is not permitted.

14. *Weak Link Breaking Strain*. For winch launch and aerotow launch the weak link breaking strain must not exceed 754 kg.

Aerobatics

15. The Viking airframe is limited to operations between 0g to +3.5g.

WARNING: The limitations on the cockpit placards are 'never exceed' limits. Pilots are not to exceed the normal operating limits deliberately.

16. *Spinning*. Intentional spinning is permitted. However:

a. The aerodynamic characteristics may be altered to make deliberate spinning more likely by adding canards to the nose of the glider in accordance with Mod 003.

b. Operating techniques with Mod 003 embodied are given in Part 3.

17. *Aerobatics*. The only approved aerobatic manoeuvres are loops, spins and chandelles. Aerobatics with the airbrakes extended are prohibited.

Meteorological

18. *Crosswind*. The maximum permitted crosswind component for take-off or landing is 11 knots.

19. *Cloud*. Flying in cloud is not permitted.

20. *Rain*. Take-off in rain is not permitted. If rain is encountered inadvertently the aircraft is to be flown clear of the conditions as quickly as possible.

WARNING: The stalling speed may be increased by 4 knots when water is present on the flying surfaces. The approach speed, with water present on the flying surfaces, should be increased by 5 knots.

21. *Icing.* The aircraft is not cleared for flight in icing conditions. If icing is encountered inadvertently the aircraft is to be flown clear of the conditions as quickly as possible.

- ◆ 22. *Ambient Temperature.* Operations in ambient temperature conditions of 36°C and above are not permitted. ◆

Instrument Flying

23. The aircraft is not cleared for instrument flying.

Night Flying

24. The aircraft is not cleared for night flying.

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