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Piako Gliding Club

2013 SOS-B
(Start of Season Briefing)



Winching Safety

Piako Gliding Club
Start of Season Briefing 5th Oct 2013
WINCHING SAFETY



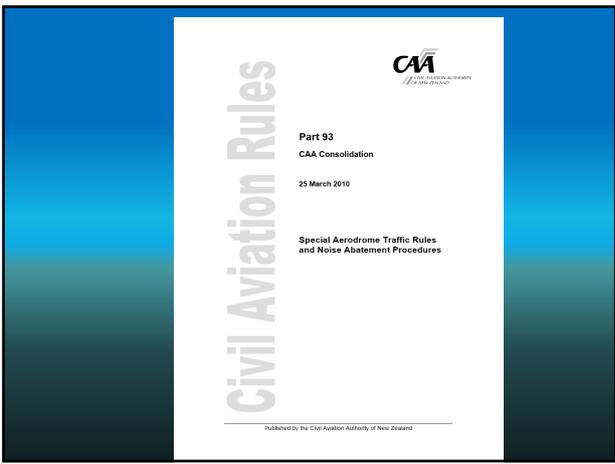
Why Winch??

GOOD THINGS
What can you buy for \$15 ???

- Low cost \$15
- Fun
- Green
- Easier than aerotow
- Addictive
- Generally safe
- More launches per hour
- Profitable for the club
- Variable launch heights mean good for training and doing circuits

NOT SO GOOD THINGS

- Responses need to be decisive
- When things go wrong they can go seriously wrong
- Other airfield users probably don't like it and would like a reason to see it not be around.
- Takes a team to operate
- Sometimes difficult to get a constant launch speed
- Cable breaks/ power loss
- Can be more difficult to catch a thermal
- More limiting wind conditions than aerotow



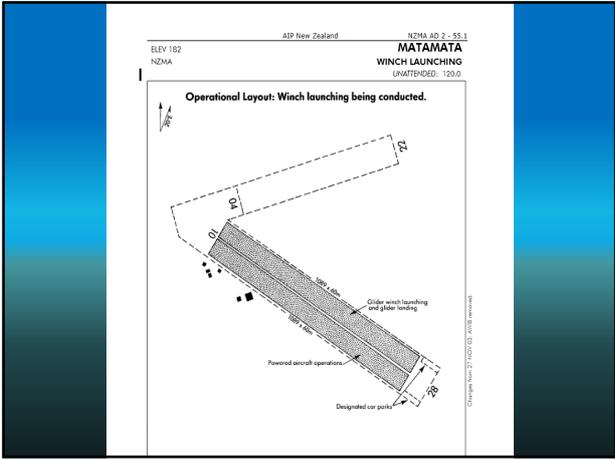
Subpart F — Matamata Aerodrome

93.251 Applicability
This Subpart prescribes special rules for aerodrome traffic at Matamata aerodrome.

93.253 Reserved

93.255 Operation of gliders
A pilot-in-command of a glider must not launch by winch unless—

- (1) the winch is positioned to the northern side of runway 10 and 28; and
- (2) the crosswind component on the runway in use is less than 15 knots; and
- (3) the launch is under the direct supervision of a glider instructor who is authorised by a gliding organisation; and
- (4) a row of cone markers are positioned along the centreline of runway 10 and 28 and take-off and landings are—
 - (i) for gliders, conducted on the northern side of the cone markers; and
 - (ii) for powered aircraft, conducted on the southern side of the cone markers; and
- (5) the winch is equipped with a flashing amber light and that light is activated and functioning; and
- (6) the winch launch can be conducted without conflict with other aerodrome traffic.



1. When RWY 10/28 is being used for winch launching a row of cone markers will be placed along the centreline.

2. The threshold of RWY 28 is 130 metres from the boundary fence and cars involved in glider operations may be parked in the designated parking areas. In transit they are required to give way to aircraft traffic and to remain adjacent to the southern boundary of the runway.

3. Powered aircraft operations are restricted to the southern side of RWY 10/28, and winch launching operations are restricted to the northern side.

4. Winch launching may not commence at any time when it could result in conflict with other traffic or when parachutes are in descent.

5. Gliders may land on the southern side of the runway but must be moved clear immediately upon completion of the landing roll.

6. All parachute descents must be targeted to the PLA active marker.

Effective: 23 SEP 10 © Civil Aviation Authority **MATAMATA WINCH LAUNCHING**

MOAP

GNZ General Requirements and Standards for Launching

3.2 A glider pilot must have completed the training syllabus for the launch method to be used and had their logbook endorsed for the appropriate type of launch before acting as pilot-incommand.

3.3 The launch vehicle (which includes tow planes, winches and tow cars) must be fitted with a tow release mechanism. Such a release mechanism must allow the launch operator to release or cut the towline or cable without delay or hazard when required.

3.4 The launch vehicle must have a daily inspection by a person approved by the affiliate. The affiliate shall establish a suitable DI schedule to ensure all launch equipment is checked for its serviceability prior to use.

3.5 The release mechanism on both the glider and launch vehicle shall be tested prior to the first flight of each day. Where a guillotine is used as the primary release mechanism, it is not necessary to check the operation of the guillotine each day. However, the launch operator must be satisfied that the general integrity and functionality of the mechanism is acceptable.

3.4 The glider end of all launch cables and tow ropes must be fitted with double rings meeting the specifications given in Appendix 3-A (page 116). Rings at the glider end of the cable or tow rope must be inspected prior to each flight.

3.7 Each winch or car launch cable must incorporate a weak link. In no circumstances should this exceed the weak link strength recommended in the glider's Flight Manual. Where no specific strength is given, maximum strength of the weak link should be approximately one and onethird times the gross weight of the glider being launched. The weak link must be incorporated at the glider end of the cable between the glider and the parachute.

3.8 The launch operator must be aware of the maximum permissible launch speed for the glider and should be briefed on the most suitable launch speed for the type of glider and any other requirements the glider pilot may have.

3.9 Pilots are to ensure only non-compressive foam cushions (e.g. energy absorbing foam) are used. Non-compressive foam ensures pilots do not move aft after initial launch acceleration. Non-compressive foam also provides protection to the spine in heavy impact situations.

3.10 The pilot must be ready for launch prior to accepting the cable/rope for hook on.

3.11 The wing runner is responsible for attaching the cable or towrope to the correct tow hook for the type of launch being conducted.

3.12 The pilot is responsible for releasing the cable at any time they consider the safety of the launch is being compromised - e.g. a cable over-run, a wing drop or a veer on the take-off roll.

5. Winch and Car-tow Launch Requirements

5.1 The affiliate must train and approve launch operators engaged in winch or car-tow launching. Winch and car-tow launch operators must complete the appropriate syllabus of training contained in Appendix 2-H (page 95) under the direct supervision of a competent person.

5.2 An approved winch/car-tow launch operator shall not undertake unsupervised launches unless they have completed at least 3 launches by the same method in the preceding 6 months.

5.3 To help the launch operator to clearly see when the cable is released, the glider end of the cable must be made visible by a parachute. The parachute must not be so large that it could engulf the nose of the glider in the event of a cable break.

5.4 A winch and a tow-car must be provided with a suitable cage or screen to protect the operator.

5.5 A "safety zone" is to be established around a winch or car-tow to ensure people not involved with the operation remain well clear.

5.6 The winch engine must not be run while work is being carried out on a cable.

5.7 Where a multi-drum winch, or more than one winch are in operation and cable runs are closer than 60m apart, only one glider may be attached to a cable at any time. After each launch the used cable must be drawn into the winch before another cable is used.

5.8 All cables are to be treated as "live" during a winch or car-tow launch and must not be crossed, touched or stepped on.

6. Launch Signals

6.1 An adequate system of communication is required to exist between the take-off point and the launch operator.

6.2 When telephone or radio is in use, means must exist for an emergency stop signal to be sent which can be received notwithstanding any engine noise. For this purpose a clear, visual signal may be adopted.

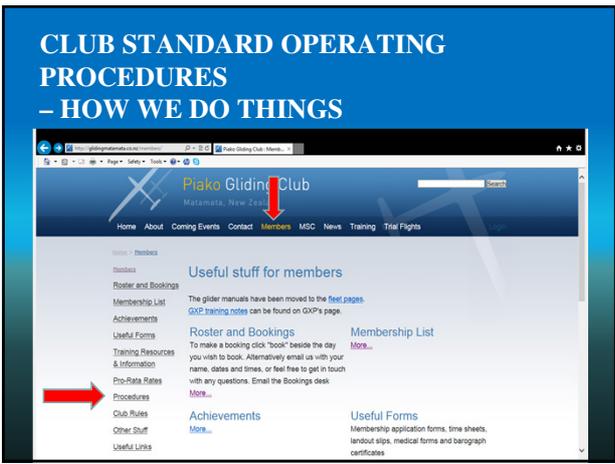
6.3 The launch operator must be able to see the glider throughout the launch. A mirror should be used on a tow plane. The design of winch equipment must allow direct visual contact with the glider until the typical release point. For a tow car, an observer may be carried to maintain visual contact with the glider and to relay any signals during a launch.

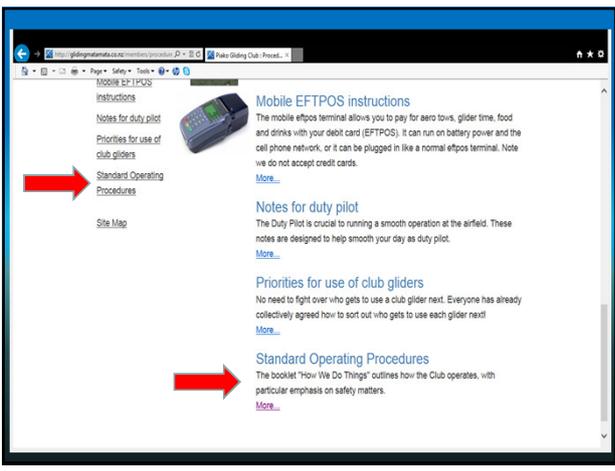
6.5 The person controlling the launch must be trained and authorised as competent by a gliding instructor.

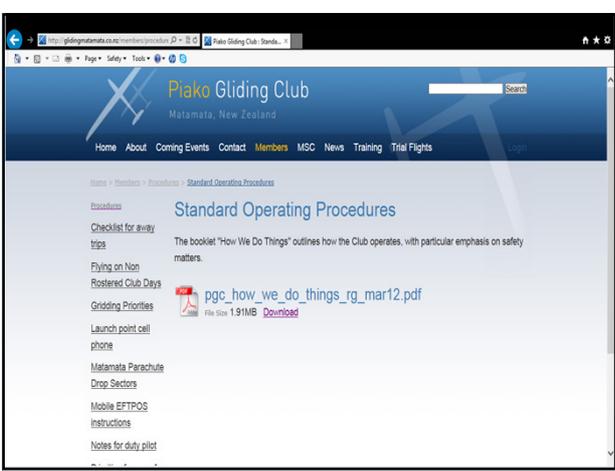
8. Signals During a Winch or Car-Tow Launch

8.1 Radio may be used to call the glider's speed during a launch. It may also be used to request more or less speed during the launch.

8.2 If not using radio and the airspeed is higher than desired during the launch the pilot should yaw the glider from side to side with the rudder. The nose should be lowered and a safe speed maintained prior to signalling, otherwise the launch should be abandoned. If the airspeed during the launch is too slow, the launch should be abandoned.







COMMON PRACTICES

Launching

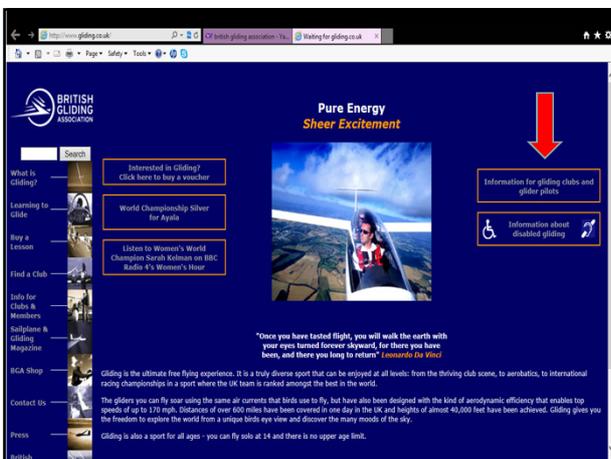
- Ring CTC daily before winching
- Listening watch for traffic calls on 120.00
- Lookout by wingtip runner
- No persons or vehicle between the glider and the winch immediate prior or during the launch.
- If launch is aborted, get the nose down to normal gliding attitude (no 1)
- If not landing ahead (either 360 or S turn) always turn downwind first
- All releases (including cable breaks) double pull on the release, to ensure that no cable is still attached

Winch Drivers

- Listening watch for traffic calls on 120.00
- Lookout before every launch and visually check no aircraft on finals or in conflict
- Smooth acceleration. If you have to cut power in early part of the launch, never re-accelerate.
- Cut power immediately in the event of cable break or release. Exception might be if the launch is in the final third.

British Gliding Association Safe Winch Launching Program

- BGA records from 1974 to 2005 included 36 fatal injuries and 74 serious injuries from accidents associated with incomplete winch launches. 283 gliders, about 8 per year, have been destroyed or substantially damaged in winch accidents in that period.
- To address the problem they set up their safe winch launching program in 2005. Since 2006 they have more than halved their winch accident rate as a result of this program and it is still trending down.
- The program is not a set of rules, but rather a history of common accident causes to help pilots understand the key risk factors of winch launching.



Happy Winning
