



Guillotine testing Midland gliding club

Issue 2 30th June 2022 G Dailey

Change from issue 1: Add cable cut surface inspection after annual check.

The MGC practice follows BGA guidelines [1] which say follow the manufacturer's advice.

The manufacturer, Skylaunch, specify a testing and refurbishment regime [2]. The refurbishment rule in this document is not completely clear, so Andy Holmes obtained clarification from Mike Groves of Skylaunch .

The following MGC testing and refurbishment procedure is therefore as recommended by the BGA and the manufacturer (Skylaunch).

MGC has added a recording and checking process that should be used to record test firings AND live firings.

Guidance notes, aide-memoire sheets and blank record sheets are provided in appendix 1.

This document was reviewed with Mike Groves (Skylaunch) 21/04/2021 and minor amendments were made in accordance with his recommendations.

References

1. BGA winch operator's manual <https://members.gliding.co.uk/library/flying-operations/winch-operators-manual>
2. Skylaunch Technical Bulletin 12/3/2013 Cable Guillotine Testing <http://www.skylaunch.com/technical.php>

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Guillotine test cycle

Test fire the guillotines every 28 'flying' days or a maximum of every 2 months, whichever occurs first.

Routine test firings:

- Main winches (scissor type guillotines). Fire with nothing in the jaws to check full range of movement.
- Retrieve winches (anvil type guillotines). Fire with wood in the jaws to protect the cutter. Use a softwood block approx. 45mm square and 150mm long.

Annually:

Test fire on to two pieces of the cable used in the winch being tested. Cable to be taped together to simulate a joint. Inspect the cable to ensure that it was cut cleanly.

Refurbishment:

The guillotine shall be returned to Skylaunch for refurbishing after:

- 24 firings of any type
- 6 firings cutting wire

Whichever comes first. NB "live" firings are to be recorded and included.

Recording:

Test firings shall be done by an authorised winch driver with a witness present.

Test to be recorded in the DI book. Both driver and witness to sign and print names.

All firings (including "live" firings are to be recorded on the log sheet (appendix 1 item 1), normally kept on the MT office notice board.

In addition, for annual tests, the annual test form is to be completed, signed, witnessed and stored in the MT office filing cabinet.

The recording process is to be overseen by a checker (currently Nigel Holmes) several times a year and the checks are to be recorded in the Midland Gliding Club Health and Safety file.



Appendix I Guidance notes, aide memoire, blanks

These are provided for guidance and convenience. Their use is not obligatory except for the annual test form. **The detail of how to perform guillotine tests will form part of the training and these notes are intended as an aid to memory, not a substitute for training.**

NEVER get fingers near any movable part of the guillotine. Wire should be fished through with a hook and inspections should be visual only.

Guillotine testing aide memoire

- Check the DI book and log sheet to see whether testing is due, and if so, what type of test. Rules shown on reverse of log sheet. Log sheet is on the office notice board.
- Make sure you have been trained to do this and find a witness.
- Resetting tools should be on the shelves in the cage, as should grease guns.
- **For a routine test**, fire the retrieve winches on to a block of wood approx. 45mm square and 150mm long. Fire the Main winches with nothing between the blades.
- **For an annual test**, prepare 2 pieces of the type of wire used in the winch under test, about 1 ft long, and tape them together at several points to mimic a cable join. Fire the guillotine on to the middle of the length. Inspect the cut surfaces to verify a clean cut and store the cable test piece with the annual test completion form.
- Check and grease the mechanism after firing, while it is not under load.
- **Retrieve winch:**
 - Make sure that the retrieve winch resetting tool thread is fully engaged, right down to the lock-nut pair, and stay to the side of the thread axis in case of accidental release.
 - Apply gentle pressure on the release lever once the mechanism is in about the right place for reset.
 - Make sure that all the shiny part of the trigger plunger has gone back into the housing.
 - Do not attempt to compress the spring further once the RW plunger has engaged fully. Remove the resetting tool
 - Engage the operator lever safety lock.
 - Remove the wood block and check blade impression is clean and nothing has been left behind.

- **Main winch:**

- It is possible for the trigger to catch one blade only. Look from underneath and use a piece of wood (Not fingers) or the resetting tool to rotate the blade assembly to ensure that the trigger plate engages between both blade extensions. THEN apply gentle pressure to the release lever.
- Engage the cab lever safety lock.
- Remove the resetting tool.

All winches:

- DO NOT force the lever back into place. Mechanism will be damaged.
- Visually inspect the blades and anvils of both types of guillotine for damage (use a mirror or photo),
- Use a hook to re-thread the cable and tie it off.

Recording:

- Record the test in the DI book, date, name and signature of winch driver and witness.
- Record the test or “live” firing date on the log sheet on the notice board. NB put a star alongside the entry and tick one of the boxes at the bottom of the column if the firing was on to wire.
- If the test was an annual test or a post-refurbishment test:
 - There should be blank forms in the MT office filing cabinet. (don't use the last one). See example later.
 - Complete the test form and get witness to sign it.
 - Put the form into a document wallet
 - File this in the folder in the MT office filing cabinet.
 - Label and store the cut cable test piece alongside/nearby.

Post-refurbishment and Annual test blank

copied from Skylaunch, adapted for use by long Mynd winch team



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GUILLOTINE TEST CERTIFICATE



WINCH MODEL:	
CHASSIS NUMBER:	
DATE:	/ / 20
CABLE (STEEL, DYNEEMA, SKYROPE, OTHER-SPECIFY)	Type: Diameter: mm

TEST:	✓ / -
Test for new manufactured machine (4 cables in each Guillotine, 3 if Skyrope)	
Test after refurbishment (2 Cables in each Guillotine)	
Annual Test (2 Cables in each Guillotine)	
Monthly Test—28 Flying Days (Scissor Guillotines—No Cables; Chisel Guillotines—45 x 45mm Block of wood)	

GUILLOTINE NO.*	1 OR Left	2 OR Right	3	4	5	6
PASS ✓						

Person:	Print + Signature:	Company Stamp:
Operator		
Witness		
Safety Inspector		

* Left/Right Guillotine assumes view from winch operator's seat, additional numbers are for 3 to 6 drum Winch.



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Guillotine test schedule

- Testing due after 28 working days or two months, whichever comes first.
- Record all actuations, test or real. **Mark firing on cable as *** and tick box at bottom
- Routine tests should be against wood (retrieve) or nothing (main).
- Annual test against 2x cable
- Return guillotine/winch to Skylaunch after 23 actuations (max 6 cable firings)

	Skylaunch main	Knox main	Skylaunch retrieve	Knox retrieve
	Refurbished	Refurbished	Refurbished	Refurbished
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				

Wire firing

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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See notes overleaf

Notes

Test intervals taken from Skylaunch Technical Bulletin 12/3/2013 Cable Guillotine Testing plus clarification from Mike Groves.

Guillotine may be fired max 24 times before return to Skylaunch for refurbishment. Of these, a maximum of 6 may be firing on to cable, whether tests or “live” firings.

There are only 23 firing slots before refurbishment in the table, though 24 firings are permitted. This was done so that maintenance outage can be planned and a winch should not be made unusable by an unplanned “live” firing.

There are 6 small boxes at the bottom of each column to record firing on to cable. If these are all filled, guillotine must be refurbished.

Blades should be visually inspected for damage after firing against wire, but should not need sharpening. In the unlikely event of visible damage:

- Do not attempt repair.
- Don't use the winch, take photos and send to winch master or Skylaunch.