

AN EXPENSIVE MISTAKE

STRAIGHTEN
UP & FLY
RIGHT

A costly error prompts an experienced pilot to review cockpit actions

I'VE BEEN flying gliders with retractable undercarriage since 1974 and have over 5,000 hours. So why did I fail to lock the wheel down before landing on a tarmac runway? The short answer for me is that I thought I had locked it down, but I hadn't. It was a cold December day, and the thickness of my gloves stopped me from pushing the undercarriage lever fully into the

detent to lock it. I had performed the action of moving the lever but I hadn't checked that I had done it correctly.

Since that expensive mistake I have improved my pre-landing checks. There are now two parts to my undercarriage check: first the action which is to put the wheel down and lock it down; second is the check which is to look for the symbol or word that corresponds to wheel down, and check that the lever is in the correct position and is locked.

It is important to check the symbol or word because the direction of movement of the lever is different in different gliders. In 2021 two pilots flew with the wheel down and then raised the wheel for landing.

The principle of following an action with a check also applies to airbrakes and canopy. We all close and lock the airbrakes before take-off – or do we? The BGA 2021 Accident Review [1] reports five unlocked airbrakes. I have observed a pilot close the airbrakes and push hard to lock them. From the wingtip I could see they were still proud of the wing surface so I called to the pilot to check they were locked. He pushed hard again. That isn't a check! To check the airbrakes are locked pull the lever to open them. If the opening force is strongly resisted then they are locked. So, when you get to Brakes in CB SIFT BEC, close and lock the brakes first, then check that you are holding the correct (blue) lever (there were two recorded cases of using the wrong control in 2021) and pull on the lever gently. If the airbrakes open, they weren't locked! Note, this is not what my edition of the BGA Instructor Manual says, so instructors are unlikely to have taught you to do this.

And talking about using the wrong control, see *Cockpit muddle*, S&G (Aug/Sept 2020) [2]. If you don't seem to be coming down after pulling the airbrake lever glance at the wing. If the airbrake isn't open, could



In the Astir pushing the undercarriage lever forward puts the wheel down



In the LS8 pushing the undercarriage lever forward puts the wheel up!



Astir airbrakes closed but not locked. The ground crew should check this before attaching the cable for launch.



Astir canopy locking pin has missed the hole

you have pulled the wrong lever? Check by looking down to see which lever you have got hold of [3,4].

By now I hope you are getting the idea that each action needs to be followed by a check. The BGA 2021 Accident Review [1] reports four insecure canopies. When you get to the Canopy in CB SIFT BEC, close and lock the canopy, then check by looking at the locking lever(s) and by pushing up firmly. Ideally push up on the frame of the canopy or on a handle provided for the purpose rather than pushing on the Perspex. If you are in a glider with two canopies then do this check on both canopies. If your arms are long enough you may be able to push up on the frame of the rear canopy from the front seat. If you can't reach have someone else check for you. The push up needs to be strong enough to detect any instances where the locking pins have missed going

into the appropriate holes as can happen (for example) on some Schempp-Hirth gliders.

If you have followed my reasoning so far you can probably think of many other instances where it is useful to follow an action with a check. Think about rigging. I'm sure you already do positive rigging checks. After attaching the cable for launching give it a pull to make sure it is secure. When you switch on the radio, check you've got the right frequency with volume and squelch set appropriately by making a radio call.

There are very few new accidents. We need to be smarter about avoiding repeating the old ones. Let's follow vital actions with vital checks so that we catch our mistakes before they bite us.

Phil King and the BGA Safety Team

■ **Clubs can obtain printed copies of Safety Briefings from the BGA Office.**

[1] BGA Accident Review 2021
<https://members.gliding.co.uk/library/uncategorised/2021-safety-review/>

[2] Cockpit muddle, S&G pp64-65 (Aug/Sept 20)

[3] BGA Instructor Manual, sections 11,14 <https://members.gliding.co.uk/instructors/instructor-resources/>

[4] BGA Safety Alert (2010) https://members.gliding.co.uk/wp-content/uploads/sites/3/2015/04/1430312046_alert-leverconfusion.pdf

PREVIOUS 'FLY RIGHT' ARTICLES

- *The perils of distraction* (Apr/May 19)
- *Keeping safe in thermals* (June/July 19)
- *Why it is good to think ahead* (Aug/Sep 19)
- *The effects of wind gradient* (Oct/Nov 19)
- *A fun but safe introduction* (Dec 19/Jan 20)
- *Stop the drop* (Feb/Mar 20)
- *Avoiding upset* (Apr/May 20)
- *Backroom boys* (June/July 20)
- *Cockpit muddle* (Aug/Sep 20)
- *Safe rotation* (Oct/Nov 20)
- *Cockpit remedies* (Dec 20/Jan 21)
- *Covid currency* (Feb/Mar 21)
- *Eroded margins* (April/May 21)
- *A good lookout* (June/July 21)
- *Trouble with turbos* (Aug/Sept 21)
- *'Hopefully' is not an option* (Oct/Nov 21)
- *Act when the launch fails* (Dec 21/Jan 22)
- *Time to solve a knotty problem* (Feb/Mar 22)
- *RTFM: Read the flight manual* (Apr/May 22)
- *Startling events* (June/July 22)
- *Collision risks* (Aug/Sept 22)
- *Winter hazards* (Oct/Nov 22)
- *Swiss Cheese* (Dec/Jan 23)