

## **An Open and Shut Case**

By Tom Johnson

Your glider canopy. The part that keeps the wind out of your hair and streamlines the fuselage. An essential part of any modern sailplane.

Aside from my soaring ego, the canopy on my Ventus is probably the most fragile piece of equipment on my sailplane. And like my ego, it requires TLC to keep it in good shape.

Your canopy is very expensive. Every time someone breaks a canopy, it costs \$5000 to \$10000 to repair and replace. While this is usually covered by our insurance, it doesn't take many incidents to place a significant financial burden on our group insurance plan. So how you and I treat or abuse our canopies can affect all our insurance bills.

When your glider is in the trailer, please lock your canopy down. Potholes, speed bumps. Or whatever can jostle the trailer enough to pop the canopy open and slam it back down. Locking it down also reduces the stress on the canopy hinges and lessens the likelihood of fatigue cracking issues.

When you get your glider out of the trailer to assemble, be careful not to scratch it with the various tools needed for proper assembly.

When you are working in the cockpit, have a pillow or some other restraint device to stop the canopy frame from falling on you. Canopy frame edges can open big gashes in your head and spill lots of blood. It can ruin your soaring day.

Please DO NOT walk away from your glider with the canopy open and not secured in position. A gust of wind or a passing thermal can slam the canopy shut and now you are picking shards of plexiglass out of the cockpit. If you don't get them all, one of those shards could find its way into your shorts and make it very uncomfortable for you.

Clean your canopy before you fly. Don't let your canopy look like it just came back from an off-road rally. A clean canopy provides better visibility and helps in seeing other traffic or hazards, and gliders marking thermals down the road. And a dirty canopy is more likely to reflect almost anything you have in your interior making it harder still to see out.

When opening or closing your canopy, handle it by the canopy frame or locking handle, not the window.

Well, you have gotten to the flight line and the canopy is still intact. It is time to go flying. Get in. Strap in. Checklists complete and launch.

Encourage your wing runner or helper to assist in making sure the canopy is down and locked.

But what procedure do you use to make sure the canopy is locked prior to launch? Checklist? Flow and checklist? You can do it like we do it in the Big Boeing when cleared for take-off. Once cleared, I check Recall, Thrust Setting, Trim, Flaps, and Lights. Do the same in your sailplane. Rope hooked and towplane taking up slack, one final check of canopy, flaps, and trim. If you do not have a personal procedure, you might consider developing one for yourself.

Speaking of Strap In, are you strapped in tight enough? Have you ever hit a bump on take-off or turbulence in the air and bounced your head off the canopy? It hurts, and it might even crack or shatter the canopy.

You think you have done it all correctly, now it is time to go.

The launch begins and you get airborne when suddenly the canopy flies open. What do you do? The first thing you do is "Fly the Aircraft". If you are still behind the towplane and able to control your position, there is no need to do anything else at this point. Keep climbing until you get to an altitude that allows a safe pattern and approach. The glider will fly just fine with the canopy open or gone. Do not turn an embarrassing incident into a full-blown accident by rushing to get off tow or back on the ground. Remember that you will be in a high state of tension and readiness, so do your best to calm down and take things slowly. Do not rush yourself.

The same goes if you bust the canopy with your head on take-off. Releasing is an option, but only if you have thought this abort scenario through. Runway length, towplane power, and environmental conditions may dictate taking the canopy you busted with your head airborne. Remember the glider will fly just fine with a busted canopy. Taking a busted canopy airborne is better than flying into the trees at the end of the runway.

Be nice to your canopy and it will be nice to you.

Your sailplane, your insurance bill, and your fellow glider pilots will thank you.