



Avoiding Surprises!  
Motorglider Safety Tips  
By Stephen Dee

How many times have you heard, “Flying is safer than driving,” or “The most dangerous part about airline travel is the drive to the airport!” While I agree entirely, there is no escaping the fact that the environment we fly in, regardless of the type aircraft, is simply not a forgiving one. Whether mistakes are made in execution or through simple ignorance, both have the same potential for disaster. I am of the opinion that the best safety device in any airplane is a well-trained and prepared pilot. So, I offer these suggestions for preparing both the pilot and his machine for an upcoming season. First, let’s talk about pilot preparation.

Whether you’ve been flying for months already, or if you’ve not yet gotten airborne this year, take a tip from those of us who fly professionally; invest some time and money in recurrent training. I am often baffled by the looks I get when I suggest this at some of seminars I conduct. Most pilots apparently think that since they hold a Pilot Certificate, the thought of needing recurrent training is akin to a slap in the face. To those I ask that if the most competent, current, and practiced fliers, such as military and airline pilots, see fit to have two or three recurrent sessions a year to stay on top of their game, wouldn’t it make sense that seasonal, recreational fliers such as ourselves would benefit from at least one? Find an Instructor who flies or is familiar with the ship you fly, and have him work you over the coals! The refreshers that I conduct consist of ground training followed by a couple of dual flights in my Grob 103SL that include both normal and abnormal situations. I often find that most of my students are well prepared mentally, and can recite procedures, but when it comes to actually putting things in motion, it’s a different story. “Saying,” and “doing,” are different skill sets, which is why I always include the challenges of both normal and abnormal procedures in my recurrent training profiles, such as engine retraction failure, or the dreaded engine failure on takeoff. These are always conducted from a safe altitude and proximity to the airport, so that there is room to recover from errors made. Pilot errors made here are productive training; pilot errors made without supervision and remediation lead to accidents. Since there are not a lot of two-seat Self-Launch sailplanes out there, you might have to focus on chair flying these profiles with an Instructor, but that will still greatly enhance your proficiency, and consequently, your safety.

Start your refresher training with a review of the POH, to include normal procedures, systems operation, and ops limits. Rehearse the steps of your engine extension and start process, to include abnormal. By rehearsing, I mean get the glider out of the trailer, put it together, charge the batteries, and put your hands on the switches and make things happen. Progress to the steps required for in-flight engine shutdown and retraction, and associated abnormal. At the end of your cockpit session, take a “blindfold cockpit

check.” By that I mean, literally blindfold yourself and have someone direct you to identify, touch, or actuate all the switches, controls, and indicators in your cockpit. If you can’t find them all at 1 “G” and zero knots, keep working until you can; it might prevent needless thrashing when things are more demanding. During chair flying, work through the various aspects of numerous flights, taking each scenario to conclusion, summarizing what each one emphasized. If your ship is so equipped, get out the manual and/or practice in your cockpit with your Nav device. Turn it on, check your database, and make some typical entries to knock the cobwebs off using its software. Once you feel you’re up to speed with knowledge and procedures, turn your attention to preparing your ship for the season.

Prior to the first flight each year, whether or not your Annual/Condition Inspection is due, give everything a good look, and dig down much deeper than a daily preflight. A good look into the engine and electrical systems is essential. Electrical crimp joints and fuel line clamp fittings are good places to start—you might be surprised by what you find! Twice in recent memory I have been impacted by poor mechanical connections in the electrical system that vibrated loose. One of them had the potential for living a motorglider pilot’s worst nightmare: an engine extended, with no way to start it or retract it! On that day, the bus bars connecting the four 6-volt batteries together in my DG-400 loosened enough after a long flight that there was current available to extend my engine after landing, but not enough to start it, or stow it. Only after lengthy trouble shooting did I discover the bus bars partially connected which in spite of nylon stop threaded nuts, had loosened enough to break the electrical connection. In my Grob, after a morning training flight, the engine would not start for the afternoon session. I spent three days with an ohmmeter tracking down what turned out to be a bad crimp joint in the ignition harness. While tracing the leads all the way between the cockpit and the engine, I also found 2 loose hoses and the primary starter lead so loose that they were dangling. Once you’re sure that the glider is ship shape, make a few local flights before charging into that 1000-Km task you’ve been planning, and you’ll be much better prepared when the big day comes.

Are motorgliders safe? Are they worth the increased complexity and competency required to operate? I certainly think so, when flown prudently. The bottom line I share with all my Self-Launch Endorsement students is, that you should never put yourself into a position with engine use, whether considering extension or retraction, unless you’re situated to make a safe landing just in case things don’t go as planned. It’s a whole lot safer to be pleasantly surprised when the engine cooperates, than to be painfully stricken when you are in desperate need of one that doesn’t.

