

THE GLIDING FEDERATION OF AUSTRALIA

Operational Safety Bulletin 1/06 – Aircraft Familiarity

Background

A number of recent accidents have highlighted the likelihood that inadvertent and/or incorrect control input at critical stages may have been contributing factors in some accidents.

It is believed that on some occasions incorrect and/or inadvertent use of controls is brought about by pilot unfamiliarity with aircraft type during high workload flight situations and this Bulletin is issued to remind pilots of the hazard and to assist them to avoid future occurrences.

Cockpit Layout and Control Movements

Although gliders have become more similar in these aspects over time differences remain, some more subtle than others.

Undercarriage retraction/extension systems

Perhaps the most common system is a lever on the right side cockpit wall that is moved forward to lower the wheel and back to raise it (or do I think this because I own a Standard Cirrus?). However, some gliders have right side mounted levers that are forward for wheel up and back for wheel down and others that are left side mounted and forward for up and back for down.

If you find the above confusing just reading it, is it any wonder that many pilots have landed wheel-up after cycling the undercarriage a number of times during circuit when flying a glider that has a different system to the glider they normally fly?

Wheel Brakes

Perhaps the most common system is a “Bike” brake lever mounted on the control column (or do I think so because that is where it is on my Cirrus?). However, there are a number of other arrangements including wheel brake activation via the end travel of the air brake lever, heel brakes, floor mounted levers and etc.

An overrun situation in a tight paddock following an outlanding is not the time to try to remember where the wheel brake is! Nor is it of any use to be squeezing the control column with all your might trying stop when the wheel brake lever is located somewhere else.

Airbrakes and Flaps

Airbrake and flap levers are generally located on the left side cockpit wall. There have been many instances of pilots misidentifying these in high workload situations, such as when landing. The most common fault being that pilots think they are deploying airbrakes when in fact they are using the flap lever. Although not entirely a problem to do with familiarity with glider type it can happen much more readily if the pilot is not familiar with the glider he/she is flying.

However, there are other very important considerations that need to be taken into account with the use of flaps in particular. The application and use of flaps varies considerably from glider to glider, the correct use of flaps during the landing phase can make the difference between a safe and an unsafe landing.

Precautions that can be taken

Unfamiliarity with type is most likely to cause serious problems during high workload situations, most commonly during the landing phase. Confusion and uncertainty can be deadly ingredients to add to a high workload!

Conversions to type

Conversions should always be thorough and comprehensive. Pilots being converted to a new glider type must make sure that they know and fully understand the function and location of all the controls and systems.

Becoming familiar with the glider

Time is of greatest importance and pilots should be aware that “new” gliders take time to get to know. Sometimes differences can be minor and familiarity comes easily, such as when converting into another Standard Class glider of a similar era and performance to the one a pilot is used to flying. However, conversion into an Open Class glider for the first time from Standard Class will require much longer for the pilot to become familiar with all the necessary variations to his/her normal flying habits.

It must also be appreciated that flying a glider of lesser performance and/or less complexity than the pilot is normally used to is not necessarily an easier task. The same unfamiliarity factors can set the same traps and having less performance available can put pilots into unexpected and unfamiliar situations

Pilots are all individuals and only the pilot will know when a new glider feels comfortably to them. Pilots should take as much care as possible to avoid high workload situations until they feel that a safe level of familiarity has been achieved.

There is a natural desire in us all to get our “new” glider out there and see what it can do. Unfortunately, what they can sometimes do is bite us because we are not yet fully ready for them.