



# Operational Safety Bulletin

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## Sideslipping

Deliberately sideslipping a glider is a technique sometimes employed by glider pilots to reduce the performance of the glider in order to lose height as a means of controlling the descent rate during the approach phase prior to landing.

Although sideslipping is required pilot training it is employed less as a landing approach technique now than it was in the past as most modern gliders have adequate glide path control (i.e. effective airbrakes) removing the need to use other techniques in most circumstances.

GFA Instructor's Handbook Section "Sideslipping" (page 74) provides advice on the technique and its use, it is recommended reading for Instructors and all pilots. However, the purpose of this OSB is to highlight a particular concern when sideslipping some gliders – an uncommanded nose-down pitch

Some gliders when sideslipped with airbrakes or spoilers extended suffer a significant disturbance to the airflow over the elevator causing a loss of aerodynamic efficiency and therefore a subsequent loss of elevator authority. This loss of elevator authority can be particularly sudden and dramatic if the airbrakes are extended after the sideslip has been established. Some gliders will pitch to a steep nose-down attitude and recovery is not possible until the airbrakes have been retracted or the sideslip corrected.

Flight manuals or type handling notes for some gliders contain specific advice, or warnings, on sideslipping and this advice should never be ignored. However, some gliders with known adverse sideslip handling characteristics do not carry such advice or warnings, so it should not be assumed that no advice means there is not a problem. Pilots should never sideslip a glider at low altitude until the characteristics of the glider are understood and appreciated.

Pilots who have been trained for and are experienced with sideslipping should first explore the sideslipping characteristics of gliders they fly in safe circumstances before using it as a landing approach control technique. Safe circumstances will obviously include clear airspace and safe altitude. Recovery from an uncommanded nose-down pitch may necessitate closing the airbrakes and correcting the sideslip - pilots should be ready to respond immediately.

Uncommanded nose-down pitching is not the only adverse handling characteristic known to be associated with sideslipping, but it is potentially the most hazardous. Rudder lock-over occurs with some glider types - the rudder does not return to the neutral position when pressure is released and requires positive application of opposite rudder to return the rudder to its neutral position. If any adverse handling characteristics are discovered all pilots that fly the glider should be warned and GFA Operations should be notified via the RTO/Operations.

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