

To all BGA Glider Pilots

April 2006

MAXIMUM MANOEUVRING SPEED

The report following a fatal accident involving a K7 two seat glider that suffered structural failure in flight has indicated that glider pilots should be reminded of the significance of the Maximum Manoeuvring speed – V_a . The report referred to can be viewed on the BGA website at www.gliding.co.uk/accidents

username; user

password; rising moon

The BGA Theory Manual 'Gliding', copyright 2002 by the British Gliding Association and available from the BGA at www.gliding.co.uk clarifies the subject in Section Two, the Manoeuvring Envelope. It is strongly recommended that all qualified glider pilots remind themselves of the meaning and significance of V_a , and that all CFI's ensure that their club instructors have adequate subject knowledge and are therefore able to appropriately brief pilots under training. It's probably a bit late to be wondering what V_a means when recovering from a spin or any other manoeuvre resulting in a rapid increase in airspeed.

As defined in JAR 22, the maximum manoeuvring speed (V_a) is where the 5.3G limit line crosses the stall line. The minimum requirement that a glider designer must meet is that at any speed up to and including V_a , the pilot should be able to apply full deflection of any one control without damaging the glider.

Glider flight manuals are not always as specific as the JAR22 definition. Quite often an owner will read a comment in a flight manual similar to 'full range control movements must not be used at speeds in excess of V_a '. Special care should be taken when using considerable deflection of more than one control together (such as elevator and aileron) at speeds approaching V_a , as an overstress could result. (e.g. as might occur if attempting a barrel roll in a glider). Similarly combined full deflection of rudder and elevator as commonly used to fly a snap or flick roll needs to be kept to speeds well below V_a and then only performed on gliders specifically cleared for such action.

Any pilot who has any doubt regarding his or her level of knowledge regarding flight loads is advised to discuss the issue with their CFI.

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