

Safety Regulation Group

Strategy and Policy Department
Airworthiness Division

INTERPRETATION OF FUEL CAPACITY IN THE DEFINITION OF "SELF-PROPELLED HANG-GLIDER" AS SET OUT IN ARTICLE 155 OF THE AIR NAVIGATION ORDER 2005.

ISSUE

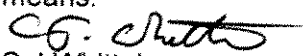
The CAA has received a number of enquiries recently regarding the interpretation of Article 155 of the Air Navigation Order where it defines the maximum fuel capacity of a self-propelled hang-glider. (The term self-propelled hang-glider includes powered hang-gliders and powered parachutes). The Air Navigation Order defines a self-propelled hang-glider and excludes aircraft that fall within that definition from the obligation to comply with majority of the regulations. The current definition is reproduced in Annex A to this letter.

The enquiries stem from the fact that commercially-produced powered hang-gliders and powered parachutes are supplied with fuel tanks that have a total volume in excess of 10 litres, and so the question arises as to whether this places these aircraft outside of the definition.

It is a common feature of machines that embody fluid systems that the physical capacity of the system is in excess of the maximum volume of fluid specified by the designer. To take an example from the car industry: the maximum coolant level is commonly marked on the header tank some distance short of the filler neck. This is to allow for expansion of the coolant. Thus the maximum capacity is defined at a level that is distinctly less than the physical volume of the system. There is no reason why an equivalent approach cannot be taken to control the maximum capacity of the fuel tank of a self-propelled hang-glider.

The CAA intends to amend the current definition to delete the text: "(c) has a maximum fuel capacity of 10 litres;". The current text is contemporary with an earlier definition of the "microlight aeroplane", which also included a maximum fuel capacity. In the case of microlight aeroplanes it was later accepted that a fuel capacity limitation was not required, given the limitations on weight and stalling speed set out elsewhere in the definition. It is now considered that this is also the case for self-propelled hang-gliders; i.e. the specified maximum unladen weight, including full fuel, is sufficient. It is intended that the fuel capacity limitation will be removed at the next amendment of the Air Navigation Order.

Until such time as the Air Navigation Order is amended, if some level marking or other method is provided to enable pilots to fill the fuel tanks of their self-propelled hang-gliders to a volume not exceeding 10 litres, then the aircraft can remain within the definition by that means.


C.J. Whittaker
Policy Manager, Initial Airworthiness

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Civil Aviation Authority

Aviation House 2E Gatwick Airport South Crawley West Sussex England RH6 0YR www.caa.co.uk
Telephone 01293 573759 Fax 01293 573838 cliff.whittaker@srg.caa.co.uk

This letter is sent to the following:

British Microlight Aircraft Association
British Hang Gliding and Paragliding Association Ltd
Paramotors UK

ANNEX A TO LETTER DATED 16th JANUARY 2009

AIR NAVIGATION ORDER 2005,

Article 155(1)

'Self-propelled hang-glider' means an aircraft comprising an aerofoil wing and a mechanical propulsion device which:

- (a) is foot launched;
 - (b) has a stall speed or minimum steady flight speed in the landing configuration not exceeding 35 knots calibrated airspeed;
 - (c) has a maximum fuel capacity of 10 litres; and
 - (d) has a maximum unladen weight, including full fuel, of 60 kg for single place aircraft and 70 kg for two place aircraft.
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