

Bristell NG-5 Aircraft

Operating Limitations Document Change & Requirement to Re-Weigh Aircraft

In July 2020, LAA Engineering issued an Airworthiness Information Leaflet (MOD/381/011 Issue 1) requiring owners to use a different moment arm for the pilot and the passenger than initially defined in the POH. The corrected figure, established as 150 mm further aft of the original moment arm, was 750 mm aft of the wing leading edge datum.

In addition to this change, after discussion with LAA Engineering, the aircraft's manufacturer has redefined the position of the aircraft's weight and balance datum from the wing leading edge to the engine firewall. Naturally, this has changed the pilot moment arm figure (as well as all the other moment arms) and the loaded CG range figures. For example, the new pilot and passenger moment arms, to be used in calculations, is now 1156 mm aft of the firewall.

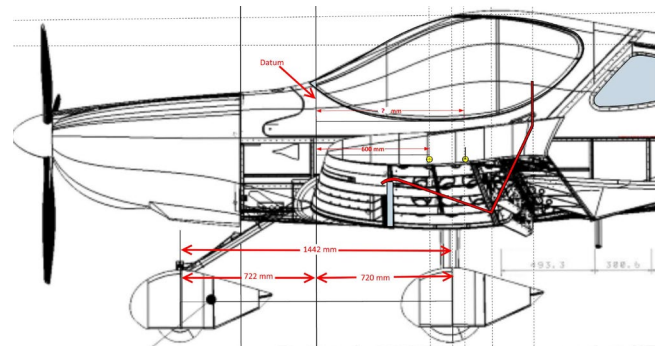
To take account of these manufacturer's changes, the Operating Limitations document, which forms part of the aircraft's individual Permit to Fly documentation, must be amended and re-issued by LAA Engineering.

Further investigation has revealed that many Bristell NG5 aircraft owners have created their individual weight and balance schedules by using weights recorded at the aircraft's weighing, but wheel moments based upon POH dimensions, rather than dimensions established by actual measurement. For this reason, and before the updated Operating Limitations document can be released, each aircraft will need to be re-weighed and a new weight and balance schedule created.

To mandate the changes to the pilot moment arm figure, using the firewall as a revised datum, LAA Engineering has up-issued LAA/MOD/011 to Issue 2; this document can be downloaded [HERE](#).

To mandate the requirement to re-weigh the aircraft and create a revised weight and balance schedule for each aircraft, LAA/MOD/012 Issue 1 has been created; this document can be downloaded [HERE](#).

The current edition of the POH (08/2020 rev3a) is available via the UK agent's web portal: <https://groups.io/g/Bristelluk>.



When weighing an aircraft it is essential that accurate measurements are made from the aircraft's datum to the point where the aircraft is weighed, normally the wheels. Using the results obtained, an accurate empty weight and empty centre of gravity figure can be calculated. Using this empty CG figure, a pilot can accurately calculate the 'all-up' weight, and loaded centre of gravity position, prior to each flight.



An aircraft operating under a national Permit to Fly is, under law, considered as an individual machine, as opposed to a series production aircraft operating under an internationally recognised Certificate of Airworthiness. This difference means that each 'Permit' aircraft must have a bespoke Operating Limitations document, these 'Ops Lims' form part of the Permit to Fly documentation.