

For all owners of active Continental-engined LAA aircraft wishing to operate on unleaded Mogas fuel

As has now been widely reported in the aviation press, the CAA have re-issued Airworthiness Notice 98C (now CAP 747, Section 2, Part 4, General Concession 5) to extend the exemptions from ANO Article 101 to allow the use of unleaded Mogas to EN (BS) 228 95 RON in certain Continental and Lycoming powered aeroplanes, subject to various safety measures to limit the degree of risk and subject to each aircraft/engine combination having been approved for the purpose by the CAA or, in our case, the LAA.

This decision is based on the similarity between EN (BS) 228 95 RON fuel and the US unleaded Mogas specifications which have been successfully in use in the USA for several years, and also successful use of leaded four star Mogas in the UK in the past under Airworthiness Notices 98 and 98A (now CAP 747, Section 2, Part 4, General Concessions 2 & 3). Our own tests of unleaded Mogas in several LAA Continental powered aircraft have not shown up any problems over a total of 200 hours flying over the summer and autumn of the year 2000, and we are grateful for the LAA owners who volunteered to participate in the trial.

The list of LAA aircraft types with Continental engines approved for use with unleaded Mogas is shown in the Appendix to the LAA Airworthiness Approval Note PFA-999-413 Supplement 3, a copy of which is available for download elsewhere in the 'Mogas' section. This list includes the great majority of Continental powered LAA aircraft but not all. If you find that your aircraft/Continental engine combination is not one of those listed, and you wish to use unleaded Mogas, apply in writing to LAA Engineering to request that your combination be examined for suitability.

Procedure

If your aircraft/engine combination is listed on Appendix A to AAN PFA-999-413 Supplement 3, approval can be obtained by the simple process of having your LAA inspector check your aircraft against the checklist LAA/IC-ULM-CONTINENTAL, and carrying out an engine ground run using unleaded fuel.

It may be that the inspection will show up the need for changes to the aircraft fuel system to bring it up to scratch, in which case you must have the work certified in the usual way and any modifications to the design of the aircraft, engine or systems must be submitted to LAA Engineering for approval.

When any modifications have been cleared by LAA Engineering, and your inspector is satisfied that the aircraft complies in every respect with the requirements then he must:

- fit a mandatory cockpit placard (available for download or from the LAA shop)
- fit a mandatory placard adjacent to each fuel filler (available as above)
- sign the checklist at its base and staple it into the airframe logbook along with this information sheet.
- make an entry in your aircraft and engine logbooks (see below)
- attach 'Operating Information – Unleaded Mogas' to your aircraft's Flight Manual, Pilot's Notes or Airframe Logbook (see below).

Logbook entry

'With effect from (date) this (aircraft / engine) may be run on unleaded petrol to BS EN 228 95 RON in accordance with CAP 747, Section 2, Part 4, General Concession 5'

The above wording has been agreed by the CAA to meet the intent of the Airworthiness Notices.

Operating Information

Attach the document 'Operating Information – Unleaded Mogas' to the aircraft's Pilot's Notes, Flight Manual, or, in the absence of these, to the airframe logbook, and operate the aircraft in accordance with the additional operating limitations and other general guidance provided.

We occasionally hear complaints from the environmental lobby about the continued use of leaded fuel by piston engined aircraft, despite our protests that the majority of our engines do not need nor like lead in their fuel, and the high octane, high lead 100LL is only required by a tiny minority. In the long term we expect to see a new unleaded aviation fuel becoming available at airfields to replace 100LL, meanwhile EN228 95 RON Mogas can at least provide up to 600 owners of LAA Continental-powered aircraft with the opportunity to 'fly green' if they should wish, as well as providing owners remote from airfield fuel supplies the freedom to operate with readily-available fuel from the local garage forecourt.