Reducing the use of leaded fuel in piston-engined aircraft

Most airfields in the UK stock the **leaded** aviation fuel 100LL and most piston engine aircraft make use of this fuel as it is an easy and well understood path.

The situation:

- Lead is a substance of concern and there is no safe level, we all have to do what we can to reduce introducing it into the atmosphere.
- The automotive industry tackled the use of lead in fuel several decades ago, piston engine aircraft are now a significant source of lead in the atmosphere.
- Efforts have been underway (PAFI) since the 1990s to find a drop-in replacement for 100LL that is lead free but it is clearly not easy and no simple solution has yet been found that could be produced at a reasonable cost.
- There is only one supplier of TEL that goes into the making of AvGas (100LL) and this is based in the UK. If this supplier shuts down for any reason, world supplies of AvGas will be severely disrupted. The EU have recently given notice of banning the movement of TEL within the EU (although they have offered a window to apply for an exemption). As the petroleum blending sites are in the EU, this would mean importing AvGas from outside the EU, probably the USA and this will affect cost.
- The affect of activists deciding that aviation has had time enough to resolve the situation might precipitate decision by the manufacturer to cease production or disrupt supplies.
- In the US, GAMI have announced a fuel that could replace AvGas and rather than gaining standards authorisation are applying for approval to use in specific aircraft – as a way around the very costly standards processes. They plan to add many aircraft to the approved list. However, it is unclear whether this will export to Europe for various reasons. Volume supply partnering could be an issue and there are questions about the advisability of some of the chemicals involved that replace the lead. Further information is awaited.
- Using lead in fuel causes considerable issues for engine maintenance. Unleaded fuels can result in much cleaner engines with reduced maintenance requirements.

Yet, many of our aircraft (approx. 70%) can run on existing unleaded aviation fuel eg UL91.

Many pilots/operators do not know this or decide to use the generally available 100LL in any event.

AOPA is keen to promote the use of unleaded fuels:

1. make unleaded aviation fuel more generally available and at an attractive price. Gain DfT support to encourage airfield installations, national fuel distribution and a temporary tax break.
2. make it easy for pilots to know whether their aircraft can use unleaded aviation fuel. eg placards by fuel filler caps and new information added to G-INFO to facilitate lookup.
3. encourage people buying new aircraft to only consider models that are clearly capable of running on unleaded fuel.
4. pursue the authorisation of a higher octane unleaded fuel for those aircraft not able to run on the current unleaded variants. A leading European contender is under trials and should be prioritised.
5. encourage the introduction of electric aircraft charging facilities widely at airfields.