

A LETTER FROM BRENT WOUTERS, CIRRUS PRESIDENT & CEO

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Cirrus Aircraft Community,

Recently there has been much industry discussion regarding the future of 100LL aviation gasoline, the likely transition to an unleaded aviation fuel in the future and the possible impacts to owners, operators and general aviation industry health of a future fuel. While this subject is by no means a new issue, the recent Environmental Protection Agency (EPA) issuance of an Advance Notice of Proposed Rulemaking (ANPR) regarding lead content in aviation fuel formally initiates a regulatory decision-making process and has increased awareness of this topic and its potential future impacts. Cirrus has been actively working on this fuel issue for many years now and we are integrally involved in the industry leadership team working with the EPA, the FAA, and avgas producers. Simply, we are aggressively focused to achieve the very best path ahead and Cirrus will ensure that this path will keep your aircraft flying with the minimum possible transition and operating costs.

Many aircraft manufacturers - including Cirrus - and GA industry organizations agree that a transition to unleaded fuel is appropriate. Moreover we collectively agree that every effort should be made to find a transparent or near-transparent replacement fuel for 100LL. However, a very significant amount of research completed over the last 10 years to identify a suitable 100 octane, or near 100 octane, unleaded fuel has not yet resulted in a clear solution for a replacement fuel. There are several encouraging new high octane unleaded fuel formulations being evaluated, such as Swift fuel and GAMI's G100UL, and Cirrus is supportive of all these efforts. However, the challenge with these and any new fuels is in having to address many issues beyond simply octane rating. Those other issues include operation at temperature extremes, fuel stability over time, health and safety aspect of the fuel and its combustion products, material compatibility, 'producibility', cost and so on. As a result and at present, the octane level of a future fuel is uncertain. We do know that the lowest octane level that we may have to contend with is 94, or 94UL as it is called. This is essentially what is left when the tetra-ethyl lead is removed from the 100LL. Cirrus is working on contingency plans in case we are stuck with a 94 octane fuel, but let me be clear: Cirrus Aircraft does not believe that a 94UL solution is desirable for its owners or the health of the industry, and will strive for a better replacement fuel.

What is the industry plan? The Aircraft Owners and Pilots Association (AOPA), Experimental Aircraft Association (EAA), General Aviation Manufacturers Association (GAMA), National Air Transportation Association (NATA), National Business Aviation Association (NBAA), American Petroleum Institute (API) and the National

Petrochemical and Refiners Association (NPRO) are collectively committed to working with EPA and FAA toward the development of a Future Avgas Strategy & Transition Plan (FAST) to help achieve significant reductions in lead emissions from GA aircraft along a timeline which balances environmental benefit with aviation safety, technical feasibility and impact upon the GA industry. It's clear objectives are to:

- Identify the best possible unleaded avgas replacement fuel by working with the avgas producers, fuels research organizations, owners and operators, the Coordinating Research Council (CRC), ASTM groups, engine and airframe manufacturers, and FAA.
- Consider the impact, if any, on the existing fleet and fuel infrastructure and long term availability (including cost).
- Develop a transition plan to unleaded avgas that preserves the health of the industry and reduces impacts on owners and operators.

This avgas stakeholder group leadership team is also engaging in collaborative efforts with aircraft owners groups, such as COPA. While research continues toward the best unleaded fuel solution, the stakeholder group is evaluating a two step transition process. First, provide near term reductions in lead emissions from GA by reducing the lead content of 100LL that would be completely transparent to existing aircraft. Second, define a transition to a viable unleaded avgas along an approximate 10 year timeline depending upon the impact on aircraft and/or fuel production and distribution infrastructure.

What is Cirrus Aircraft doing? Our efforts are focused in three main directions.

- Leadership & Advocacy. Cirrus chairs the primary industry working group team which began as a GAMA-based committee and has expanded to collaborate with AOPA, EAA, and other key stakeholder groups. This provides Cirrus with the information and access to the key stakeholders, including oil companies, to help guide efforts that will promote the best solution, which, again, is preferably a 100 octane or near-100 octane transparent replacement avgas.
- Fuels Research Support. Cirrus has availed itself to support the needs of aviation fuels research entities. This support can range from on-aircraft testing, to chemical compatibility testing for airframe structures and system components, to feedback on operational and cost aspects. Cirrus also participates in the Coordinating Research Council (CRC) technical research group and the ASTM unleaded fuel group.
- Flexible Aircraft Solutions. Due to the uncertainty involved in this issue, Cirrus is developing solutions for both existing and new aircraft that address a wide range of possible fuel specification outcomes. This doesn't change our commitment to finding a transparent solution. This week we are introducing a new aircraft model in the SR22 family which is flexible to a wide range of future fuel octane ratings. At the same time, we are working help ensure that all of our aircraft models, both new and in the field, will be compatible with a future unleaded fuel in either a transparent sense or with reasonable upgrade paths.

At Cirrus we are always thinking and planning ahead, and as in this case, sometimes years ahead. We understand the well-placed concern around the fuel issue as it affects the Cirrus Aircraft community. Your priorities are our priorities and we will help take care of our fleet and your well-being.

Again, we plan to communicate regularly on this issue and encourage feedback to better tailor our efforts to your needs and address concerns.

Best regards,

Brent Wouters
President & CEO
Cirrus Aircraft