Avgas solution years away, reports AOPA's Fuller

By Dave Hirschman

Finding a safe, economical, unleaded aviation fuel to propel the general aviation fleet in the future is one of the most complicated tasks our industry has ever faced—and AOPA is determined to make sure it's done right.

"There's a real sense of urgency," said AOPA President Craig Fuller. "We have people working on it intensely, and I believe we can get to a solution."

The association is actively working to build consensus and evaluating potential solutions, although no definitive avgas replacement has yet been found. AOPA is part of a coalition of aviation organizations working on this project. The group represents a broad cross-section of general aviation stakeholders representing pilots, aircraft owners, operators and manufacturers, fuel producers, refiners, and FBOs.

Fuller said the aviation industry will likely need about 24 months to gather and evaluate technical data and identify the way to an unleaded future. The new fuel must operate safely in high-compression and turbocharged piston engines, and it has to be manufactured, distributed, and sold at a realistic price.

The transition to the new fuel will likely take several more years, Fuller said.

Although about 70 percent of today's piston GA aircraft could switch to an unleaded fuel immediately with no reduction in performance, aircraft with high-compression and turbocharged engines must have high-octane fuel to avoid destructive detonation—and lead has been used reliably since the 1940s to boost octane.

AOPA is committed to finding a single solution that can accommodate all piston aircraft because requiring FBOs, refiners, and fuel distributors to stock two different varieties would impose insurmountable economic barriers.

"The conundrum is that the higher percentage of the fleet could use less than 100 octane," Fuller said. "It's the 30 percent we have to solve the problem for. Unless you solve it for everybody, you're not going to have a fuel that's affordable and available to everyone."

Several promising unleaded alternatives to avgas have emerged recently including bio-fuels, 94UL (essentially today's avgas without the lead), and super-high-octane, petroleum-based fuel. Significant technical hurdles remain, however, and it's unclear whether any of these alternatives can be produced in industrial quantities and satisfy the industry's need for a replacement to 100LL.

AOPA is pushing hard for FAA funding of the engine laboratories that can evaluate the safety and reliability of these possible alternatives.

“There appear to be some very good options out there,” Fuller said. “I am 100 percent committed to finding a solution that works for our 412,000 members. I’m determined to see this through so that we have a solution that will work for all of the aviation community.”

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