Eliminating Lead Emissions in Aviation

Fuel development is a rigorous process. A great deal of new FAA research and industry development is required, and the FAA must be assured that unleaded fuels are safe for piston engines in more than 200,000 aircraft.

EAGLE Initiative
The government-industry backed Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative began in February 2022. Its goal is to transition to lead-free fuels for piston-engine aircraft in the United States no later than the end of 2030. Implementation requires the participation of many across the industry, including pilots; airport managers; airport fixed-based operators; industry associations; fuel suppliers; and aircraft engine, propulsion, and airframe manufacturers. FAA funding associated with EAGLE efforts totals $10 million during 2023 for fuel testing and evaluation.

In the Pipeline
We have authorized several unleaded fuels (GAMI G100UL, Swift UL94, Air BP UL91) already. Additionally, we are working with other companies (Afton/Phillips 66, Lyondellbasell) who are developing fleet-wide unleaded fuel and unleaded fuels for engines that need specific octane levels.

Infrastructure Needs
To achieve our goal, oil producers and refineries (part of EAGLE) need to increase production and distribution of already approved fuels. The FAA currently is authorized to provide limited entitlement funding and BIL allocated funds for aircraft fueling systems, such as fuel tanks, at non-primary general aviation airports.

Safe Transition
Additionally, the Airport Cooperative Research Program within the Transportation Research Board is developing a project to collect data and create best practices focused on the safe transition to unleaded fuels for the country's fleet of piston aircraft. We anticipate that Reid-Hillview Airport and San Martin Airport in Santa Clara County, Calif., will participate in the project. The county has agreed to address airfield safety and land-use issues under an agreement signed with the FAA.