

Begin forwarded message:

From: Megan Eisenstein <MEisenstein@nata.aero>
Date: October 18, 2022 at 1:23:28 PM EDT
To: mayor@longbeach.gov
Cc: district1@longbeach.gov, district2@longbeach.gov, district3@longbeach.gov,
district4@longbeach.gov, district5@longbeach.gov, district6@longbeach.gov, district7@longbeach.gov,
district8@longbeach.gov, district9@longbeach.gov, parker.houston@longbeach.gov, Curt Castagna
<ccastagna@nata.aero>, Keith Deberry <kdeberry@nata.aero>
Subject: NATA Letter to LB City Council re Motion on Leaded Fuel Transition at KLGB

Dear Mayor Garcia:

Please find attached a letter from the National Air Transportation Association's (NATA) President and CEO Curt Castagna outlining the Association's input in establishing a plan to reduce lead pollution and implement programs to transition to unleaded aviation fuels at the Long Beach Airport. As a fellow resident and local business owner based in Long Beach, Mr. Castagna has demonstrated a successful history in stakeholder engagement and stands ready to serve as a resource in transitioning airports off lead-based fuels.

I also attached the following documents for your review:

1. NATA White Paper: Unleaded Avgas Conversion Considerations for Aviation Fuel Providers
2. NATA Unleaded Avgas Fact Sheet
3. General Aviation Industry Statement re EPA's Endangerment Finding
4. EAGLE White Paper re EPA Endangerment Finding

Thank you for your time and please do not hesitate to contact me with any questions or concerns you may have.

All the best,

—
Megan Eisenstein
Managing Director, Industry & Regulatory Affairs

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Washington, DC 20006

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October 18, 2022

The Honorable Mayor Robert Garcia
411 West Ocean Blvd
11th Floor
Long Beach, CA 90802

VIA ELECTRONIC MAIL: Mayor@longbeach.gov

Dear Mayor Garcia:

The National Air Transportation Association (NATA) submits this correspondence in response to a recommendation to establish a plan to reduce lead pollution and implement programs to transition to unleaded aviation fuels at the Long Beach Airport (KLGB). NATA, as the voice of aviation businesses and an active participant in unleaded aviation fuel stakeholder groups, is uniquely qualified to discuss the issues surrounding such a transition. As fellow council members begin to proactively seek information on considerations for offering more environmentally friendly fuel options at KLGB, NATA can serve as a resource in providing best practices for deploying unleaded avgas in a safe, reasonable, and efficient manner as well as act as a conduit for collaboration between airport stakeholders and local city officials.

Representing over 3,700 member locations, NATA advocates on behalf of a broad array of aeronautical service providers requisite for a vibrant general aviation sector, including general aviation airports, Fixed Base Operators (FBOs), and fuel producers and suppliers. Other member segments serving the needs of aviation businesses include, on-demand air charter, aircraft rental, storage, flight training, aircraft maintenance, parts sales, line support and business aircraft and fractional ownership fleet management. NATA members range in size from large companies with international presence to smaller, single-location operators that depend exclusively on general aviation for their livelihood.

NATA, along with other industry and government stakeholders, supports the Eliminate Aviation Gasoline Lead Emissions (EAGLE) Initiative's goal of a lead-free future for U.S. piston-engine aircraft by the end of 2030. The Association supports efforts to develop a commercially viable, fleet-wide, unleaded alternative to 100LL. To that end, NATA will ask for increased funding in the upcoming FAA Reauthorization to accelerate development of unleaded avgas as well as infrastructure grants to make alternative unleaded fuel more widely available.

As we collectively move toward a scalable solution, NATA and its members are continuing to demonstrate leadership in keeping a safety first focus on infrastructure support, as well as on the development of resources and training for airports, FBOs, and other refueling operators, such as the recently released 'Unleaded Avgas Conversion Considerations for Aviation Fuel Providers,' a white paper to educate fuel service providers on best practices for the safe and effective deployment of unleaded avgas.



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We welcome the opportunity to further discuss this issue with you and your fellow council members.

Sincerely,

A handwritten signature in black ink, appearing to read "Curt Castagna". The signature is fluid and cursive, with a long horizontal stroke at the end.

Curt Castagna
President and CEO
National Air Transportation Association

CC:

Mary Zendejas, District 1, district1@longbeach.gov
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WHITE PAPER

Unleaded Avgas Conversion Considerations for Aviation Fuel Providers

Purpose

The National Air Transportation Association (NATA), along with other industry and government stakeholders, supports the [Eliminate Aviation Gasoline Lead Emissions \(EAGLE\) Initiative's](#) goal of a lead-free future for U.S. piston-engine aircraft by the end of 2030. EAGLE aims to eliminate the use of leaded fuels by the existing general aviation (GA) fleet without adversely impacting its safe and efficient operation – which includes maintaining 100 Low Lead (100LL) availability across the country during the transition. The regulatory process put in motion by the [Environmental Protection Agency](#) to issue an endangerment finding against leaded Avgas is prompting airports in some communities to consider a transition to unleaded (UL) Avgas before a fleet authorization, lead-free alternative is available.

Note: A ban on the sale or use of 100LL at a federally obligated airport is inconsistent with Grant Assurance 22(a), *Economic Non-Discrimination* (49 U.S.C. 47107(a)(1)¹) and conflicts with the self-service provision of this grant assurance.

NATA suggests four key phases for fuel providers offering UL Avgas in addition to 100LL: Discovery, Preliminary Communications, Infrastructure Considerations, and Final Communications.

- **Discovery** – This preliminary phase will help fuel providers decide if there is sufficient demand and regulatory approval for offering Avgas (see [NATA's UL Avgas Fact Sheet](#) for more information on the current state of UL Avgas availability) at their operations. Steps may include:
 - Complete an airport survey to determine the number of aircraft based at the airport that are compatible and approved for use with UL Avgas.
 - Consider availability of supply and local market demand based on survey results.
 - Verify regulatory requirements with state and local authorities (i.e., state environmental agencies, local fire authorities, etc.).

¹ https://www.faa.gov/airports/aip/grant_assurances.

Unleaded Avgas Conversion Considerations for Aviation Fuel Providers

- **Preliminary Communication** – If the discovery phase proves a viable demand for UL Avgas, preliminary stakeholder communications are essential for a successful project and may include:
 - Provide initial notice of the intention to offer UL Avgas to all stakeholders and users.
 - Hold a series of informational/educational meetings with those stakeholders, including:
 - Airport sponsors
 - National Association of State Aviation Officials (NASAO)
 - Fixed Based Operators (FBOs)
 - Flight Schools
 - Tenants (pilots)
 - Aircraft and powerplant (A&P) mechanics – Supplement Type Certificate (STC) process
 - Local communities and governments
 - Develop a misfueling prevention training program to ensure delivery of the correct grade of fuel at every refueling.
 - NATA’s Safety 1st Program provides free misfueling prevention training at www.preventmisfueling.com.
 - Confirm fuel supplier, delivery, contract, and product liability insurance.

- **Infrastructure Considerations** – UL Avgas requires its own grade dedicated storage tanks, refueling trucks and systems on airports. Aviation fuel providers who wish to convert existing 100LL refueling systems must consult with their fuel supplier(s) to confirm specific requirements necessary for converting 100LL storage tanks, self-serves, and/or mobile refuelers to UL Avgas. The following considerations are generalized and offered only in reference to conversion of on airport 100LL systems to UL Avgas. Converting airport refueling systems from other fuel types will require additional measures, including:
 - Remove as much fuel as possible from fuel storage tank(s) and/or mobile refuelers of 100LL consistent with fuel suppliers recommended acceptable fuel mix ratio (ASTM specifications for UL Avgas allow for a maximum of 0.0130 g Pb/l of Tetraethyl lead).
 - Introduce UL Avgas to the tank and flush downstream piping, filter vessels, and hose(s) until nozzle end samples are visually clear and bright.
 - Flushing helps prevent carry-over of residual blue dye from 100LL and mitigates the risk of UL Avgas being visually misidentified as 100LL.
 - Typically, this requires at least 1.5 times the total volume of associated piping and hoses.

Unleaded Avgas Conversion Considerations for Aviation Fuel Providers

- Replace all filter elements.
 - Elements will contain residual TEL (tetra-ethyl lead) and require proper disposal.
- Update identification markings.
 - All 100LL Avgas identification markings (placards, labels, decals, etc.) must be removed and replaced with identification markings for the UL Avgas being dispensed.
- Update self-serve dispenser terminals.
 - Fueling terminals (i.e., QT Pod) should be updated to include prompts for pilots to enter the Supplemental Type Certificate (STC) number for their aircraft.
- **Final Communications** – Once UL Avgas is available, final actions should include:
 - Update Spill Prevention Control and Counter Measure (SPCC) plan to reflect additional storage tanks and/or change of fuel grade for existing tanks.
 - Inform nationwide trade groups, such as NATA, NASAO of the change.
 - Inform stakeholders and users via press release, advertisement, etc.
 - Update Airport Master Record – FAA 5010.
 - Add changes to website(s), including:
 - Company
 - Airport
 - Flight planning (I-flight Planner, Global Air, AirNav, etc.)
 - Maintain recurrent misfueling prevention training.
 - NATA recommends annual misfueling prevention training through the Safety 1st Training Center, NATA’s Safety 1st OnSITE program, or www.preventmisfueling.com.

IS THERE A FLEET AUTHORIZATION, LEAD-FREE ALTERNATIVE AVGAS TO REPLACE 100LL?

No. Fleet authorization is the term used by the FAA to reference a replacement fuel, that does not require a Supplemental Type Certificate (STC) or airframe or engine manufacturer approval.

WHAT GRADES OF UNLEADED AVGAS ARE COMMERCIALY AVAILABLE NOW?

Currently, Swift Fuel's UL94 is the only grade of Unleaded Avgas that is commercially produced and available at some airports. However, on September 1, 2022, the FAA approved STCs to allow General Aviation Modifications Inc's. (GAMI) unleaded 100-octane (G100UL) to be used in every general aviation spark-ignition engine and every airframe powered by those engines. To use G100UL, STCs for both the airframe and engine must be obtained.

CAN I FIND UL82, UL87, UL91, AND G100UL AT MY LOCAL AIRPORT?

These grades of Unleaded Avgas exist, but are not commercially produced or available at airports as of now.

CAN MOGAS BE USED IN PLACE OF AVGAS?

There are significant differences between the ASTM fuel specifications for unleaded motor gasoline (Mogas) and unleaded aviation gasoline (Avgas). Mogas is tested to ASTM D4814-21c and UL94 Avgas is tested to ASTM D7547-21 (There is currently no ASTM specification for G100UL). Note, these two specifications differ widely from octane and shelf life to fuel chemistry and Reid Vapor Pressure. ASTM D4814-21c "provides for a variation of the volatility and water tolerance of automotive fuel in accordance with seasonal climatic changes at the locality where the fuel is used." It also allows for Ethanol, which is not approved for use in any aircraft. Avgas that meets ASTM D7547-21 does not contain ethanol nor does it change with the seasons which means its performance remains consistent throughout the year. Why does all this matter? Because if there is no guarantee of which Mogas blend is being dispensed from the pump, there is no guarantee of its performance in aircraft.

WHICH AIRCRAFT CAN OPERATE ON SWIFT'S UL94 AVGAS?

ONLY aircraft which are specifically approved can operate on UL94. To determine if your aircraft is eligible, please visit: <https://www.swiftfuelsavgas.com/stc>.

CAN UL94 AVGAS BE COMMINGLED IN AIRCRAFT WITH 100LL AVGAS?

It depends. If the aircraft is specifically approved for UL94, the answer is yes. If the aircraft is approved for 100LL only, the answer is no. The detonation suppression of UL94 is insufficient for aircraft approved for 100LL only.

WHAT HAPPENS IF AN AIRCRAFT REQUIRING 100LL IS REFUELED WITH UL94?

Unless the aircraft has been dual certified to run on both fuels, the aircraft has been misfuelled and may require defueling. It is advised to not operate the engine as it may not operate within the same known performance envelope.

HOW CAN I ENSURE MY AIRCRAFT REQUIRING 100LL IS NOT MISFUELLED WITH UL94?

Pilots should communicate with FBOs and verify their fuel orders every time fueling takes place. A properly communicated fuel order (verbal or written) includes:

- Aircraft registration (tail) number – the tail number is the ONLY unique piece of information that can positively identify an aircraft.
- Type and grade of fuel – until recently, spark-ignition piston misfuelling concerns were primarily limited to misfuelling with Jet-A. Now, if an aircraft requires 100LL, requesting “Avgas” is no longer sufficient. All fuel orders must specify the grade of fuel requested.
- Volume of fuel to be distributed into each tank.

Once the above has been communicated to FBO staff, verify the information by having the order repeated back to you. Additionally, verify your fuel ticket/credit receipt for proper grade of fuel and quantity before signing.

CAN UL94 BE COMMINGLED WITH 100LL IN AIRPORT STORAGE TANKS AND FUELING VEHICLES?

No. If both 100LL and UL94 are being offered at airports, each requires their own dedicated and segregated storage tanks and refueling equipment.

I AM AN AIRPORT OPERATOR/FBO AND CONSIDERING ADDING A UL94 TANK AS A SELF-SERVE, SHOULD I BE AWARE OF ANY CONCERNS OR SPECIAL REQUIREMENTS?

Yes. Airports, FBOs, and all other fuel providers contemplating adding UL94 should implement comprehensive Management of Change processes and perform Risk Assessments to ensure safe and effective introduction of new fuels to their operations. Minimally, all self-serves dispensing UL94 should have signage and placarding advising that the UL94 being dispensed can only be used by aircraft with certification and placarding approved by the FAA.

HOW IS UL94 LABELED AND IDENTIFIED DIFFERENTLY FROM AVGAS 100LL?

The industry standard for aviation refueling equipment identification markings is the Energy Institute's (EI) 1542, where the familiar Avgas 100LL placard with red background, white lettering, and a blue band is held. EI 1542 does not yet include reference to UL94. However, NATA is working with the Energy Institute to formalize a color-coding scheme. Pilots should ensure they identify the fuel type and grade they intend to use as placarding may vary between airports and FBOs, especially with self-serve operations.

WHEN WILL THERE BE A FLEET AUTHORIZATION, LEAD-FREE ALTERNATIVE AVGAS TO REPLACE 100LL?

The timeline for a fleet authorization, lead-free alternative Avgas is unclear, but the industry is fast-tracking this goal under the EAGLE Initiative – a comprehensive public-private partnership consisting of aviation and petroleum industry and U.S. government stakeholders. The shared goal is to work toward the transition to a lead-free aviation fuel for piston-engine aircraft by the end of 2030, without compromising safety or economic health of the general aviation industry.



Joint General Aviation Industry Statement Regarding EPA Proposed Endangerment Finding for Lead Emissions from Piston Aircraft

October 7, 2022 -- The general aviation industry and the Federal Aviation Administration (FAA) have a shared goal to rid lead from all aviation fuel used for piston-powered aircraft no later than 2030. The FAA and industry have come together under the EAGLE (Eliminate Aviation Gasoline Lead Emissions) banner to see this mission realized.

The GA industry has been preparing for the proposed EPA finding, which is a multi-step regulatory process, and has aligned the goals of EAGLE to meet the challenges of transitioning to an unleaded future without compromising the economic and broader public benefits of general aviation.

It's important to note that today's EPA announcement in no way bans or mitigates the use or sale of 100-low lead (100LL) fuel at any of the nation's more than 5,000 public-use airports. The general aviation industry and the FAA remain committed to a safe and smart unleaded transition. Any ban of 100LL for piston-powered aircraft before an unleaded alternative is widely available poses a serious safety risk to pilots, carries economic consequences to thousands of local communities, and is a violation of current federal rules and regulations.

To date, the FAA has approved a 100-octane unleaded fuel developed by General Aviation Modifications, Inc., in Oklahoma, for nearly all general aviation piston aircraft engines and airframes. Steps are now being taken by GAMI to move this fuel through the commercialization process.

In addition, Swift Fuels, LLC, an Indiana-based company, is also making significant progress on its 100-octane unleaded fuel solution and anticipates approval by the FAA in 2023. Swift Fuels has already received approval for its 94UL fuel, which is in use today for aircraft engines that can fly on this lower octane fuel.

Moreover, progress is being made on unleaded fuels currently being evaluated by the FAA in its Piston Aviation Fuel Initiative program. Partnerships between Afton Chemical/Phillips 66 and Lyondell/VP Racing have each developed high-octane fuels as potential replacements for 100LL. Congress has provided more than \$40 million for this testing and evaluation effort.

The general aviation fleet of more than 220,000 aircraft consists of those used for recreational and business purposes, and also provides airlift assistance in times of natural disasters, evacuations, movement of combat injured veterans, medical supplies and personnel where needed, and more. The industry directly supports over 1.2 million jobs and contributes more than \$247 billion in economic output.



What do I need to know about EPA's Proposed Endangerment Finding for Lead Emissions from Piston Aircraft?

Eliminate Aviation Gasoline Lead Emissions (EAGLE) White Paper

EAGLE is pleased to acknowledge that the U.S. Environmental Protection Agency (EPA) has issued a proposed finding on Friday, October 7, that lead (Pb) emissions from aircraft operating on leaded fuel cause or contribute to air pollution which may reasonably be anticipated to endanger public health ([EPA Proposes Endangerment Finding for Lead Emissions from Aircraft Engines that Operate on Leaded Fuel | US EPA](#)). EPA's notice does not impose any new requirements on, nor limit the distribution, sale or use of the current aviation gasoline which is necessary for safe operation of the current fleet.

This EPA action, if finalized, begins a multistep regulatory process involving both the EPA and FAA. When coupled with the ongoing EAGLE initiative, these efforts facilitate an orderly and safe transition to a lead-free avgas future.

The general aviation community remains committed to removing lead from aviation gasoline through the EAGLE initiative. EAGLE is an industry/federal government collaborative initiative established to support the development and qualification of unleaded fuels and assist with logistics in getting those fuels to market, while ensuring the availability of high octane aviation gasoline for reasons of safety. The stated EAGLE goal is to transition to lead-free aviation fuels for piston aircraft by the end of 2030 without compromising the safe and efficient operation of the fleet and the economic health of the general aviation community.

Key Issues Surrounding this Proposed Finding

High octane aviation gasoline is a vital element of the piston engine aircraft safety system. The 100LL used today has its origins in the development of high-performance, a.k.a. high-compression aircraft engines necessary to enable reliable and economical commercial flight. Lead is used as an additive to create the very high-octane levels required to prevent detonation (engine knock) in high-performance aircraft engines where operation with inadequate fuel octane can result in catastrophic engine failures.

The proposed endangerment finding does not require any action to be taken by, nor does it place any regulatory burdens on airports, local, state, tribal or territorial governments operating airports, pilots, aircraft owners, FBO's or fuel suppliers.



An EPA proposed endangerment finding is just the first step in a multistep regulatory process under the Clean Air Act. The proposed endangerment finding does not require any action to be taken by, nor does it place any regulatory burdens on airports, local, state, tribal or territorial governments operating airports, pilots, aircraft owners, FBO's or fuel suppliers.

As currently provided in federal law, the proposed finding and any final endangerment finding cannot be used by airport owners and operators of federally obligated airports to impose unreasonable restrictions on, limit the sale or use of leaded fuels at airports, compel practices that degrade aviation safety, or close the airport.

Airports and airport sponsors, as well as service providers, need to facilitate a predictable, safe, and secure transition by ensuring the supply of 100LL is available for aircraft that require 100LL. It cannot be stressed enough to state that having a reliable and predictable network of airports maintaining 100LL fuel during the transition period is critical to providing a safe operating environment for over 220,000 piston-powered aircraft that operate privately and commercially across the U.S.

The GA industry and EAGLE support initiatives to reduce near-term lead emissions at airports by making lower octane unleaded avgas available in a responsible manner, minimizing idling and run-up times consistent with safe operating practices, and increasing distance between run up locations and people on/off airport. The National Air Transportation Association's (NATA) [white paper](#) provides a resource, suggesting four key phases for fuel providers working to offer unleaded avgas in addition to 100LL: Discovery, Preliminary Communications, Infrastructure Considerations, and Final Communications.

Eliminate Aviation Gas Lead Emission (EAGLE)

Aviation and petroleum industry stakeholders and the U.S. government fully support a comprehensive government-industry partnership, with the goal of transitioning to lead-free aviation fuels for piston-engine aircraft by the end of 2030. The EAGLE initiative will help expand and accelerate government and industry actions and investment. In addition, EAGLE is focused on establishing the necessary policies and activities to permit both new and existing general aviation piston aircraft to operate lead-free without compromising safety, or the economic health of the general aviation industry and the public benefits it provides. The EAGLE initiative is conducting activities under four pillars:

- Regulation, Policy, and Programmatic Activities: Work is focused on the government policies and processes needed in areas such as lead emissions standards, and infrastructure as well as conducting outreach to industry stakeholders and international partners. This includes support for the EPA endangerment finding process under the Clean Air Act.
- Unleaded Fuel Evaluation and Authorization: Work focuses on the testing, evaluation, and qualifications necessary for a viable, safe, high-octane unleaded replacement for 100 octane low lead (100LL) and issuance of an FAA eligible fleet authorization.



Research, Development, and Innovation: Work focuses on research and testing, effective and timely certification of advanced technology designs, and operational procedures to address the technical challenges associated with high-performance engines and unleaded fuels.

- Supply Chain Infrastructure and Deployment: Work is focused on supporting policy and regulatory proposals for maintaining 100LL availability and airport access to ensure safety during the transition and on supporting standards and regulatory pathways to market for the production, distribution, and servicing of the new unleaded fuel, including government incentive and policy programs.

The EAGLE initiative is ambitious and comprehensive with activity under all pillars well underway—

Progress towards Unleaded Replacements for 100LL

There are currently four fuel developers working toward authorization and commercial deployment of high-octane unleaded fuels which are potentially viable replacements for 100LL. Afton/Phillips 66 and Lyondell/VP Racing fuels are working through the Piston Aviation Fuels Initiative (PAFI). General Aviation Modifications Inc. (GAMI) and Swift Fuels are working through the FAA Supplemental Type Certification (STC) process for evaluation and approval, with GAMI recently receiving an FAA issued STC, allowing their 100-octane unleaded fuel (G100UL) to be used in a broad portion of the spark-ignition piston-aircraft fleet.

The status and outcomes of the efforts to obtain FAA authorization and the successful commercial deployment of these high-octane unleaded fuel candidates will be key in achieving a lead-free future by the end of 2030.

To participate in EAGLE and receive routine updates, please send your interest to:
flyeagle2030@gmail.com

EPA/FAA Regulatory Process and Next Steps as prescribed by the Clean Air Act

Step 1: EPA's Endangerment Finding. Under the Clean Air Act, the EPA has the authority to find that a particular air pollutant emitted from aircraft engines "causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare." This process involves studying the pollutant in question, its sources and quantities, then publishing a proposed finding (which is where we are currently) followed by a potential final finding of endangerment after weighing public comment.



As stated on EPA’s website, “After evaluating comments on the proposal, we plan to issue any final endangerment finding in 2023.” It should be noted that a final finding could be either endangerment or non-endangerment. Assuming the final finding in 2023 concludes that lead emissions from piston engine aircraft does cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare (otherwise known as a *positive endangerment finding*), EPA then moves to a regulatory action in step 2a below.

Upon the finalization of EPA’s positive endangerment finding in 2023, the FAA has an obligation to “prescribe standards for the composition or chemical or physical properties of an aircraft fuel or fuel additive” as described in step 2b below. The EPA and FAA steps outlined in 2a and 2b below will most likely occur concurrently.

Step 2a: EPA’s Aircraft Emissions Standards. Once the EPA determines that a pollutant endangers public health or welfare, it triggers a statutory requirement under the Clean Air Act for EPA to propose and promulgate engine emission standards to address lead pollution from aircraft. The EPA must consult with the FAA to consider technology, safety, and noise when establishing aircraft engine emission standards. The development of these standards will entail another proposed and final rulemaking allowing for public comment and input. It is reasonable to expect this process to take approximately 2 years as there are no lead emission standards currently in place.

Step 2b: FAA’s Fuel Standards. Following a positive endangerment finding by the EPA in 2023 for lead emissions from aircraft piston engines, the FAA is obligated under statute 49 USC 44714 to regulate it both as a fuel component and as a fuel additive. This would be another rulemaking process that will be codified in Title 14 of the Code of Federal Regulations and will take the usual rulemaking steps that would last approximately 2 years.

Under the Clean Air Act, the EPA has the authority to find that a particular air pollutant emitted from aircraft engines “causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare.” This process involves studying the pollutant in question, its sources, and quantities, then publishing a proposed finding (today) followed by a final finding of endangerment after weighing public comment (2023).

Step 3: FAA’s Certification Standards. Once EPA has promulgated lead emissions standards for piston-engine aircraft, the FAA is responsible for enforcing EPA regulations according to sections 231 and 232 of the Clean Air Act. This is yet another multiyear process involving proposed rulemaking, public comment, and internal government coordination. The publication of a final rule does not in and of itself implement an immediate ban on the use of lead in aviation gasoline; however, it does signal its inevitable and eventual prohibition.