

EPA Finalizes Endangerment Finding for Lead Emissions from Aircraft that Operate on Leaded Fuel

The EPA Administrator is finalizing a determination that lead emissions from certain aircraft engines cause or contribute to lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act. The EPA is not at this time proposing or issuing aircraft engine lead emission standards.

Background

Protecting children's health and reducing lead exposure are two of EPA's top priorities. The scientific evidence demonstrates that low levels of lead in children's blood can have harmful effects on cognitive function in children, including reduced IQ and decreased academic performance. There is no evidence of a threshold below which there are no harmful effects on cognition in children from lead exposure.

Emissions of Lead from Aircraft Engines

The majority of aircraft that operate on leaded aviation gasoline are piston-engine aircraft. These are typically small aircraft that carry 2-10 passengers. Jet aircraft used for commercial transport do not operate on a fuel containing lead.

Piston-engine aircraft are the largest single source of lead emissions to the air in the U.S., contributing 70% of the lead entering the air annually. The emissions of lead from aircraft operating on leaded fuel may cause elevated levels of lead in air near airports.

Final Action

The EPA has issued a final determination that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution which may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act. This final action encompasses both endangerment and cause or contribute findings, though for convenience, we sometimes refer to them collectively as the final “endangerment finding.” EPA is not at this time proposing or issuing aircraft engine lead emission standards.

This endangerment finding is informed by many years of EPA investigation of emissions of lead from aircraft engines operating on leaded fuel and the impact of these emissions on lead air pollution. EPA issued a proposed endangerment finding last year and considered public input through a notice and comment process.

The endangerment finding itself does not ban or impose restrictions on the use, sale, distribution, dispensing, and general availability of leaded fuel, nor does it establish any new control measures regarding aircraft lead emissions. The endangerment finding also does not impose requirements on anyone other than EPA and the Federal Aviation Administration (FAA).

Next Steps

EPA understands that lead emissions from aircraft are an important and urgent public health issue. With this final finding, EPA is now subject to a duty under the Clean Air Act to propose and promulgate regulatory standards for lead emissions from certain aircraft engines. Under its own authority, FAA is also now subject to a duty to develop standards that address the composition or chemical or physical properties of an aircraft fuel or fuel additive to control or eliminate aircraft lead emissions.

EPA and FAA are committed to working together and with the full range of stakeholders as the Agencies develop their regulatory actions. EPA and FAA take seriously the objective of maintaining aviation safety and recognize that piston-engine aircraft play a significant role in transportation in the United States. There will be opportunities for the public to share their thoughts and concerns during any future rulemaking process. EPA and FAA will announce regulatory timelines as soon as possible.

Separate from EPA’s endangerment finding, in support of the objective to remove lead from aviation gasoline, in early 2022, the FAA and industry announced the program “[Eliminate Aviation Gasoline Lead Emissions](#)” (EAGLE). The FAA industry partnership encompasses fuel producers and distributors, airport operators, engine and aircraft manufacturers, communities that support general aviation airports, and environmental stakeholders. Together, the group aims to achieve a lead-free aviation system no later than 2030. The FAA has approved the use of a 100 Octane unleaded fuel (G100UL) that can be widely used by piston-engine fleet, that is not yet commercially available. The FAA has also approved for use a lower octane fuel (UL 94), currently available at approximately 35 airports in the U.S., and the FAA is working to expand and streamline the process for eligible aircraft to use this fuel. Further, the FAA is working with the industry to identify and authorize for use other viable high octane unleaded aviation gasoline options. Additional information regarding the FAA’s unleaded aviation gasoline activities can be found [here](#).

For More Information

You can access the final endangerment finding on EPA's Office of Transportation and Air Quality website:

www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-lead-emissions-aircraft

For more information, contact the EPA, Office of Transportation and Air Quality at:

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