Date of Hearing: June 17, 2024

ASSEMBLY COMMITTEE ON TRANSPORTATION
Lori D. Wilson, Chair
SB 1193 (Menjivar) – As Amended May 16, 2024

SENATE VOTE: 29-8

SUBJECT: Airports: leaded aviation gasoline

SUMMARY: Prohibits an airport operator or aviation retail establishment from selling, distributing, or making available leaded aviation gasoline (avgas), beginning January 1, 2027 and for all airports by January 1, 2030. Specifically, **this bill**:

1) Prohibits an airport operator or aviation retail establishment from selling or making available leaded aviation gasoline beginning January 1, 2027 at airports in disadvantaged communities or adjacent to communities with a population of at least 700,000, by January 1, 2028 at airports located in or immediately adjacent to urban growth boundaries, and by January 1, 2030 for all airports.

2) Allows an airport operator or aviation retail establishment to request the board of county supervisors in the county in which the point of sale occurs to determine that an unleaded aviation fuel is not commercially available in the county and grant a one year, renewable exemption.

3) Provides that if the bill's provisions conflict with federal grant assurances on or before January 1, 2025, the provisions shall only apply upon the expiration of those grant assurances.

4) Provides that if any provision of the bill is held invalid it shall not affect the other provisions of this bill.

EXISTING LAW:

1) Federal law establishes the Federal Aviation Administration (FAA) with powers to regulate all aspects of civil aviation. (49 U.S. Code § 106)

2) Establishes the Aeronautics Division within Caltrans which establishes statewide guidelines for airport land use. (Public Utilities Code 21241)

FISCAL EFFECT: According to the Senate Appropriations Committee this bill has "No state costs. The bill is keyed as a mandate because it creates a new crime for failure to comply with the prohibition against selling leaded aviation gasoline. Existing law specifies that the state is not responsible for reimbursement of any local costs associated with the creation of a new crime."

COMMENTS:

Lead is a toxic metal that has been used in many products over time. Even in small amounts, lead can have harmful effects on the body. Infants and young children are especially sensitive to lead, and even low levels may contribute to behavioral problems, learning deficits and lowered IQ. While many leaded products have been phased out, lead may still be found in and around older homes and buildings, in certain occupations and hobbies, and some consumer products, remedies, and foods.

Lead has been used as a gasoline additive since the early 1920s, when researchers at General Motors found that adding tetraethyl lead (hereafter referred to simply as "lead") to gasoline improved engine performance. In early 1973, the Environmental Protection Agency (EPA) adopted a series of regulations to phase out leaded gasoline and forced the oil industry to provide for the general availability of lead-free gasoline. By the 1980s, most gasoline used in the United States was unleaded. The state of California banned the sale of leaded gasoline in 1992, four years before the federal government, almost 20 years after the oil industry was forced to provide general availability of unleaded gasoline and about a decade after unleaded gasoline was the most widely used fuel in automobiles.

The US EPA recently determined that emissions of lead from aircraft that operate on leaded fuel cause or contribute to air pollution which may reasonably be anticipated to endanger public health and welfare. In addition, a 2022 study the County of Santa Clara commissioned that found the use of leaded aviation gas significantly elevates the blood lead levels of at-risk children.

The federal government in May 2024 reauthorized the Federal Aviation Administration (FAA) through HR 3935. HR 3935 includes provisions to eliminate lead emissions from aviation fuel by 2030. Importantly, there are two sections in the reauthorization act that directly related to this bill. Section 770 of HR 3935 states:

"(22) the airport owner or operator may not restrict or prohibit the sale or self-fueling of any 100-octane low lead avgas for purchase or use by operators of general aviation aircraft if such avgas was available at such airport at any time during calendar year 2022, until the earlier of—

(A) December 31, 2030; or

(B) the date on which the airport or any retail fuel seller at such airport makes available an unleaded avgas that—

(i) has been authorized for use by the Administrator of the Federal Aviation Administration as a replacement for 100-octane low lead avgas for use in nearly all piston-engine aircraft and engine models; and

(ii) meets either an industry consensus standard or other standard that facilitates the safe use, production, and distribution of such unleaded avgas, as determined appropriate by the Administrator.''

If an airport or operator fails to continue to offer leaded aviation fuel, they may be subject to a fine of up to $5,000 per day. SB 1193 provides that if the bill's provisions conflict with federal grant assurances on or before January 1, 2025, the provisions shall only apply upon the expiration of those grant assurances. However, almost all airports in California receive FAA grants for a variety of projects and failure to properly understand, and carry out the requirements of grant assurances can have serious consequences for an airport. This provision only covers

airports that have received an FAA grant prior to January 1, 2025 and would be in direct conflict with airports that receive FAA grants after January 1, 2025.

Section 827 of HR 3935, lays out the framework for the federal Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative. The initiative requires the FAA, along with industry and other government stakeholders, to facilitate:

> "(A) the safe elimination of the use of leaded avgas by piston-engine aircraft by the end of 2030 without adversely affecting the safe and efficient operation of the piston-engine aircraft fleet;
> (B) the approval of the use of unleaded alternative to leaded avgas for use in all piston-engine aircraft types and piston-engine models;
> (C) the implementation of the requirements of section 47107(a)(22) of title 49, United States Code, as added by this Act, as such requirements relate to the continued availability of avgas;
> (D) efforts to make unleaded avgas that is approved for use in piston-engine aircraft and engines widely available for purchase and use at airports in the National Plan of Integrated Airport Systems; and
> (E) the development of a transition plan to safely enable the transition of the piston-engine general aviation aircraft fleet to unleaded avgas by 2030, to the extent practicable.

Safety. Ensuring a safe transition to unleaded avgas is a highly complex process at all stages, so it is critical that new fuels are properly vetted for safety, from production through use by an aircraft. While the FAA approves avgas for use in aircraft types and aircraft engines, the FAA does not regulate or oversee the production, handling, operation, or quality control of avgas prior to the point it reaches the aircraft fuel tank. As a result, pilots, airports, fixed base operators (FBOs), and avgas distributors have historically relied on ASTM International (formerly known as American Society for Testing and Materials) product specifications.

ASTM International is a globally recognized leader in the development and delivery of voluntary consensus standards. ASTM standards allow refineries, terminals, fuel distributors, FBOs and other aviation stakeholders throughout the supply chain to appropriately examine and process aviation gasolines to ensure their quality towards safe and efficient use. Among other characteristics, ASTM D7826-21 *Standard Guide for Evaluation of New Aviation Gasolines and New Aviation Gasoline Additives* evaluates compatibility with materials throughout the supply chain upstream of the aircraft, including those used in hoses, filters, gaskets, and other wetted components among railcars, transport trucks, fuel farms, mobile refuelers, and other dispensing equipment. Just as aircraft owners and operators need assurances that the use of an alternative fuel will not compromise the integrity of any component of their aircraft nor void applicable warranties, the same is true for fuel distributors, transport companies, airports, and FBOs, who rely on ASTM specifications to minimize or eliminate the potential for degradation or contamination of either the fuel itself or the equipment used to transport, handle, and dispense it. There is currently no 100-octane aviation fuel with an ASTM certification.

The FAA approves Fleet Authorization of a candidate fuel once it has successfully completed Piston Engine Aviation Fuels Initiative (PAFI) testing and has a published ASTM specification. UL100E is the first aviation fuel to successfully pass (in November 2023) the most rigorous PAFI phase of initial detonation and 150-hour engine durability testing. UL100E is still in the process of completing PAFI full-scale engine/flight testing and the ASTM process.

The FAA has approved two unleaded fuels, Swift Fuel's UL94 and General Aviation Modifications, Inc.'s (GAMI) G100UL, for a broad portion of the GA fleet to use. The FAA's approval of unleaded avgas for use in these aircraft is an important first step in the process of transitioning to an unleaded fuel for the entire GA fleet, but it is not the only step needed to ensure a safe transition. Fuel distributors and FBOs lack safety assurance without an industry consensus standard or ASTM International product specification. At present, G100UL is not commercially available for distribution and sale in the U.S. largely due to the fact it does not have an ASTM International product specification.

Cost. The sale of fuel at airports is an important source of revenue, especially in rural locations. Unleaded avgas will likely be more expensive than leaded avgas because of supply constraints and higher transportation costs. A January 2024 article in the Long Beach Business Journal noted that leaded avgas cost $7.59/gallon compared to $11.39/gallon for the unleaded alternative. The cost differential could cause aircraft owners to choose to refuel at airports that continue to offer the lower cost leaded avgas, causing airports that only offer an unleaded alternative to lose revenue.

Exemption provision. A Senate amendment provides an airport operator or aviation retail establishment to request to the board of county supervisors in which the point of sale occurs to determine that an unleaded aviation fuel is not commercially available in the county. This exemption is valid for one year and can be renewed by a subsequent determination by the board. Boards of county supervisors are not experts on the aviation industry and would likely need to contract with a third party to provide clear and convincing evidence that an unleaded aviation fuel is not commercially available in the county. This cost is recoverable by the county and would place a cost burden on the airport operator or aviation retail establishment.

According to the author, "SB 1193 would mitigate lead exposure to disadvantaged communities by phasing out the sale of leaded airplane fuel (avgas). Last fall, the USEPA issued its final determination that aircraft lead emissions cause or contribute to air pollution endangering public health. Currently, only small, piston-engine aircraft use avgas. Unleaded fuel is commercially available, with market growth imminent. Established science shows lead exposure causes detrimental, irreversible health effects in children, e.g. reduced IQ, decreased academic performance, and increased risk for other health concerns. Lower income communities with large populations of BIPOC are disparately exposed to environmental hazards. One California study found children living <1 mile away from an airport had 21% higher blood lead levels compared to children living further away. Senate District 20 is Latino-majority with three airports within a 10 mile radius. There is no safe level of lead exposure. SB 1193 would phase out unsafe leaded avgas emissions."

Supporters of the bill state, "Exposure to lead causes irreversible and lifelong health effects in children. Lead exposure can have harmful effects on cognitive function, including reduced IQ, decreased academic performance, as well as increased risk for additional health concerns. All of these outcomes result in long-term human suffering, financial costs to families – and enormous costs to state systems of education and healthcare. There is no evidence of a threshold below which there are no harmful effects on cognition from lead exposure. Responsibly phasing out an established harm to young students and families is fiscally responsible and shrewd in the face of budgetary deficits."

Opponents of the bill state, "Congress enacted the Federal Aviation Administration Reauthorization legislation on May 15 of this year and was promptly signed into law by President Biden. The new federal law now requires the vast majority of the nation's airports to continue to offer leaded aviation gasoline (avgas) through 2030, unless an earlier transition date is possible. A variety of conditions must be met in order for the leaded fuel transition to occur, including the identification of an unleaded fuel "that meets industry standards". The new federal law also includes a $5,000 per day fine for airports that do not comply with the requirement to maintain the availability of leaded avgas. The provisions of SB 1193 are now clearly inconsistent with federal law, to which airports must comply."

Committee concerns: This bill requires the elimination of leaded avgas at certain airports a few years earlier than a federal initiative that is underway. Doing so could cause widespread confusion among pilots, result in airports losing federal grant funds, impose additional costs on airports to receive the exemption allowed for in this bill, and potentially create safety concerns for pilots operating these aircraft. This could be avoided by allowing the federal process to prevail. While eliminating lead in order to minimize exposure especially to children is critically important, so is ensuring that aircraft that currently operate on leaded fuels have an unleaded alternative that is 100% safe and effective.

Proposed committee amendments: The proposed committee amendments help to ensure that any state effort to ban leaded aviation fuel ban aligns with federal efforts that are currently underway. The proposed amendments are as follows:

Strike Public Utilities Code (PUC) 21710 (b), (c), and (d).

Amend PUC 21711 to read: *An airport operator or aviation retail establishment shall not sell, distribute, or otherwise make available leaded aviation gasoline to consumers on or after January 1, 2031, in compliance with Section 47107 of Title 49 of the United States Code.*

Strike PUC 21711 (b) and (c).

Strike PUC 21712 (a) and (b).

REGISTERED SUPPORT / OPPOSITION:

Support

Acterra: Action for a Healthy Planet
Active San Gabriel Valley
Ban Sup (single Use Plastic)
California Environmental Voters
California Lulac State Organization
Center for Biological Diversity
Children Now
City of San Jose
Clean Water Action
Cleanearth4kids.org
Climate Reality Project, San Fernando Valley
Climateplan

Coalition for Clean Air
Contra Costa Move On
County of Santa Clara
Environmental Defense Fund
Facts Families Advocating for Chemical and Toxics Safety
Friends Committee on Legislation of California
Grandparents4Action
Indivisible Alta Pasadena
Indivisible California Green Team
Lutheran Office of Public Policy - California
Our Voice: Communities for Quality Education
San Francisco Bay Area Chapter Physicians for Social Responsibility
Santa Cruz Climate Action Network
South Coast Air Quality Management District
The Salvador E. Alvarez Institute for Non-violence
Voices for Progress
Western Center on Law & Poverty

Opposition

Agua Dulce Airport Association
Aircraft Owners and Pilots Association
Big Bear Airport Pilots Association
California Pilots Association
Central Valley Aviation Association
Community and Airport Partnership for Safe Operation
Experimental Aircraft Association (EAA)
Fox Airport Association
Friends of Banning Airport
Friends of Oceano Airport
Gnoss Field Community Association
Half Moon Bay Airport Pilots' Association
Hollister Airmen's Association
Lake County Airmen's Association
Little River Airport Pilots Association
Modesto Airport Pilots Association
National Air Transportation Association
National Business Aviation Association
Palo Alto Airport Association
Palomar Airport Association
Redlands Airport Association
San Carlos Airport Pilots Association
Scott Valley Pilots Association
South County Airport Pilots Association
Sutter Buttes Regional Aviation Association
Tehachapi Society of Pilots, INC.
Turlock Regional Aviation Association
Vertical Aviation International (VAI)
Watsonville Airport Pilots Association

Whiteman Airport Association

Oppose Unless Amended

Association of California Airports
California Airports Council
Western States Petroleum Association

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