

# Eliminate Aviation Gasoline Lead Emissions Initiative (EAGLE)

## Aviation Noise & Emissions Symposium: Getting the Lead Out

Tuesday, May 2, 2023

U.C. Davis

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## EAGLE is an Industry/Government Partner Coalition:

- Aircraft Owners & Pilots Association
- General Aviation Manufacturers Association
- National Association of State Aviation Officials
- Experimental Aircraft Association
- National Air Transportation Association
- National Business Aviation Association
- American Association of Airport Executives
- International Council of Air Shows
- Helicopter Association International
- American Petroleum Institute
- Federal Aviation Administration

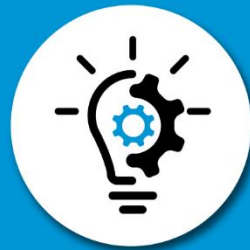
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**The mission is to eliminate aviation gasoline lead emissions before the end of 2030 without adversely affecting the safe and efficient operation of the general aviation fleet.**

# EAGLE Pillars



Supply Chain  
Infrastructure  
and Deployment



Research,  
Development,  
and Innovation



Unleaded Fuel  
Evaluation and  
Authorization



Regulation,  
Policy, and  
Programmatic  
Activities

# OVERVIEW

- **Current State of the Industry**

- 220,000\* Aircraft – \$245 Billion Annual Industry – 1.2 Million Employees
- 5,000 Public Use Airports – 3,500 sell 100LL
- 68% Can Use low UL Octane (25%) – 32% must use High UL Octane (75%)
- Total Annual AvGas Volume equals 4 Days of Auto Gas Consumption (0.011%)

- **Tetraethyl Lead (TEL) as an Additive**

- Essential to preventing Engine Knock = Catastrophic Failure
- Boost Octane = Power
- Lead is a Known Neuro Toxin – Used since Roman times; Helped win WWII



\* All numbers posted are approximations

# OVERVIEW

- **EPA Proposed Endangerment Finding**

- Current standards permit lead emissions...that is about to change
- 2022 Proposed Endangerment Finding
- 2023 Positive Endangerment Finding
  - Air Quality Act of 1963, as amended triggers Statutory & Regulatory Requirements, including proposed rules, public hearings, cost-benefit, etc.

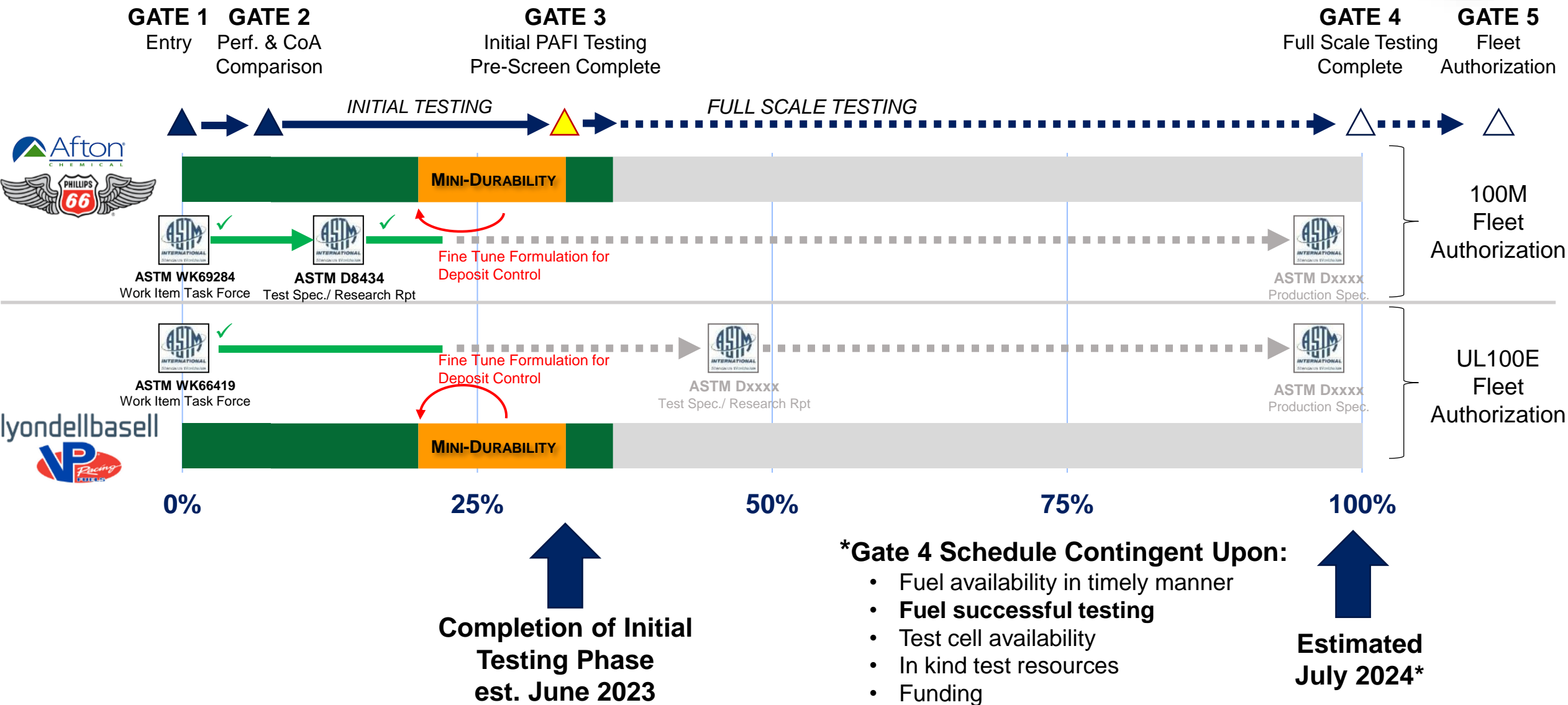
- **On Finding an Alternative**

Two Pathways:

- Piston Alternative Fuels Initiative (PAFI)
- Supplemental Type Certification (STC or AML-STC)



# Status of Unleaded Fuels - PAFI







# Status of Unleaded STC Fuels

## General Aviation Modifications Inc.

- Received AML-STC Authorization in September 2022
- G100UL Currently not commercially available
- Does not have ASTM Approval



## Swift Fuels, Inc.

- Expects STC Authorization in 2023
- 100R Currently not yet available; UL94 Unleaded Fuel is available and being sold at 30+ airports
- Expects to receive ASTM Approval





## What's EAGLE's Flight Plan?

- Reduce Lead Emissions at the Source Now
- Encourage Flight Schools to Use UL94
- Incentivize Airports to Plan for UL100
- Work with OEM's to Modernize Technology
- Stay ahead of the Regulatory Changes

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**ASSIST REFINERS, BLENTERS, DISTRIBUTORS, AIRPORTS & FBOs IN ACCELERATING THE DEPLOYMENT OF UNLEADED HIGH-OCTANE FUELS WHILE MAINTAINING 100LL UNTIL UNLEADED FUEL IS WIDELY AVAILABLE TO THE PUBLIC**





# Thank You!

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