



## **Proposed Amendments to Vehicle Fill Pipe Regulations to Help Address Storage Tank Overpressure**

October 25, 2018



# What is a Vehicle Fill Pipe?

Where the nozzle is inserted to refuel a vehicle leading into the fuel tank

Today the focus is the fill pipe head



# Vehicle Attributes Leading to Improper Seal



1. Capless fill pipes with open drain path



2. Loose Latch

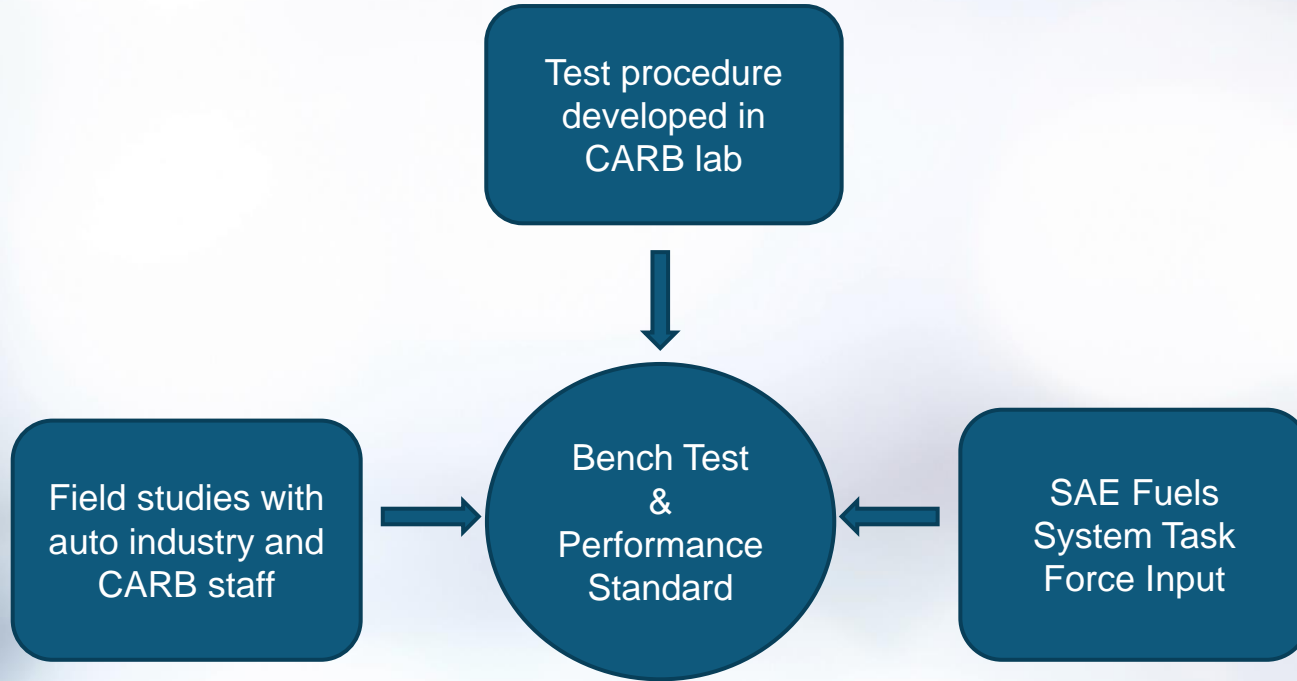
- Depth of fill pipe locking lip
- Diameter of fill pipe



3. Secondary outer ring

# Performance Leak Standard Development Process

Leak  
Standard

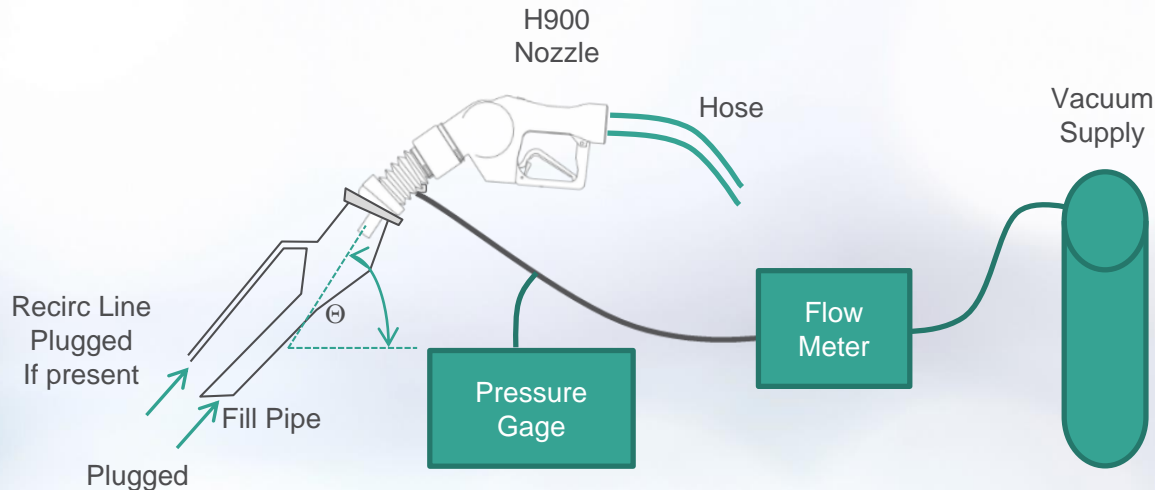


# Bench Performance Leak Test

## Method, Equipment, Standard

Leak  
Standard

- Adjust vacuum supply: -500 Pascal @ pressure gage
- Output = leak rate in liters per minute @ flow meter



Standard: 2.5 liters per minute

# Performance Leak Standard

Leak  
Standard

A simple test to verify a good seal:



- Quantifies a “good seal”
- Allows a maximum leak rate
  - To prevent / minimize air intake

Standard: 2.5 liters per minute

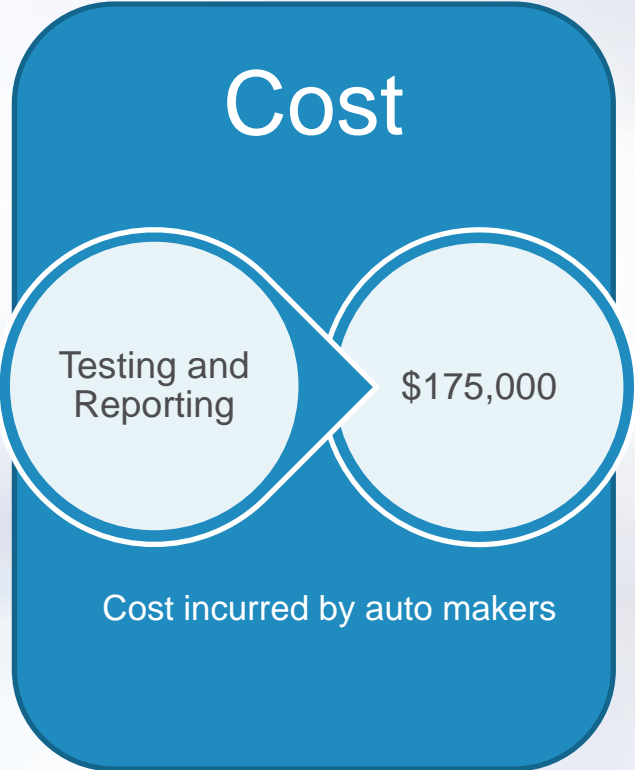
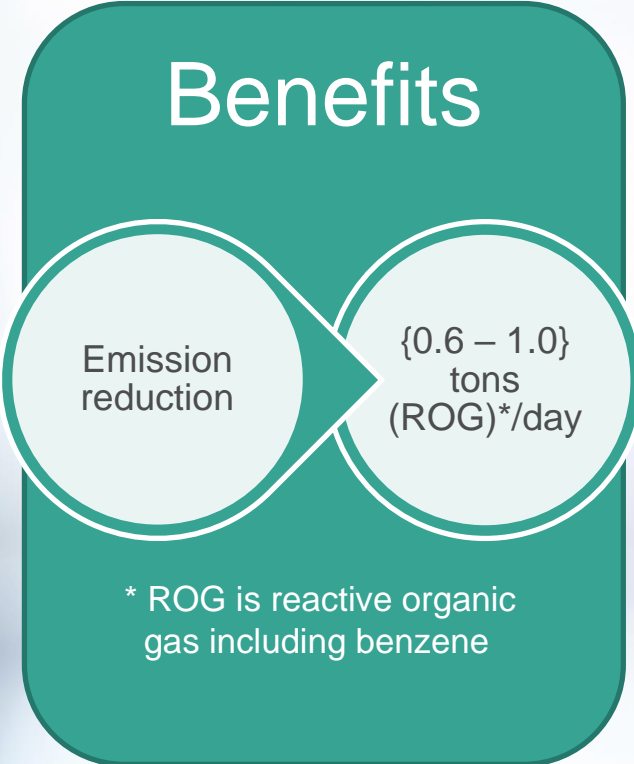
# Dimensional Specifications for New Fill Pipe Head Designs

- Improved dimensions will further ensure emission benefits
- Affects new fill pipe head designs only
  - Minimize compliance burden / cost
- Dimensions being changed
  - Locking lip depth
  - Outer diameter
  - Access zone





# Benefits & Cost



# Stakeholder Comments

- Auto Industry, SAE, Other Stakeholder Comments
  - Mostly Supportive
  - Relax the Performance Leak Standard
  - Minor clarifications on Dimensional Specifications and Bench Test Procedure
- Staff Recommends working with industry
  - Dimensional Specifications and other clarifications
  - Consider any additional information on Leak Standard

# Summary

## Anticipated Benefits

Vehicle fill pipe  
performance leak test  
+  
Additional dimensions  
specifications  
+  
Change to nozzle

- Improve vapor recovery system performance
- Stop further decline in emissions due to poor nozzle/fill pipe seal
- Reduce station alarms
- Emission reductions of ROG including benzene

# Staff Recommendation

Adopt Proposed Amendments

