2024 Smog Check Reports

Jonathan Gee BAR Engineering and Research Branch July 18, 2024



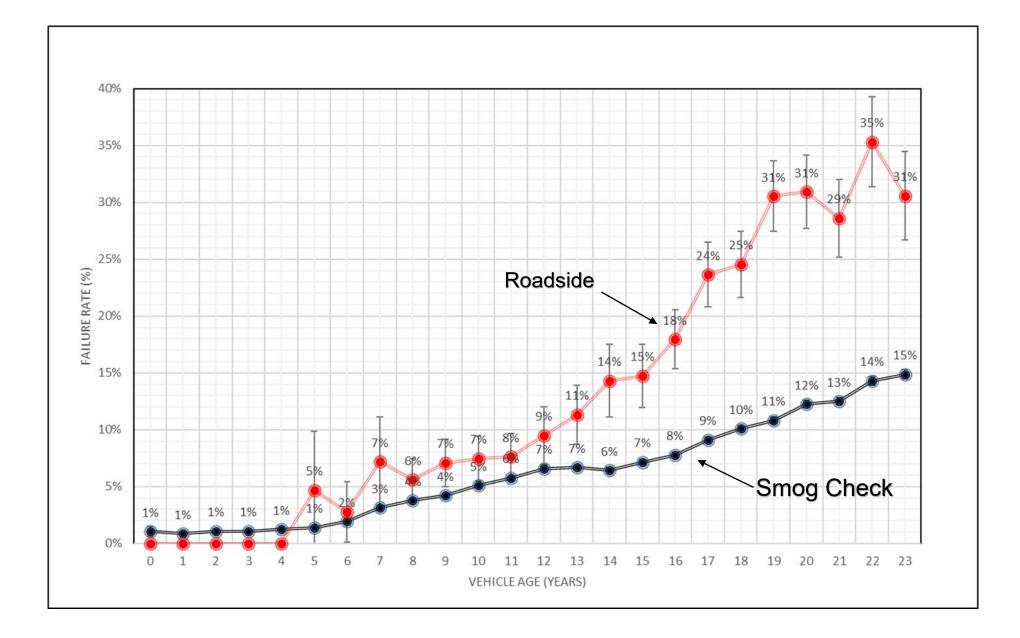
Reporting Requirements

- The Smog Check Performance Report (SCPR) is required by California Health and Safety Code section 44024.5(b)
 - The 2024 SCPR meets the annual reporting requirement for calendar year (CY) 2023 and is based upon data collected during CY 2022 and 2023
 - Annual assessment of the Smog Check Program that includes an analysis of Roadside Inspection Program vs. Smog Check Program vehicle failure rates
 - Estimate of potential additional emission reductions
 - Independent review by U.C. Riverside Center for Environmental Research and Technology (CE-CERT)
- Moving forward, the SCPR will be produced every two years as authorized by AB 1263 (Chapter 681, Statutes of 2023)

2009 SCPR Report Finding and Recommendations

- Finding
 - "...many of the vehicles that initially failed during the previous Smog Check cycle were not actually repaired or were repaired only temporarily."
- Recommendations
 - Refine station performance algorithms for increased enforcement
 - Incentivize high station performance
 - Perform confirmatory testing immediately following certification through either roadside or on-site testing
 - Continue roadside inspections to audit Smog Check and target low performing stations

Failure Rates by Vehicle Age

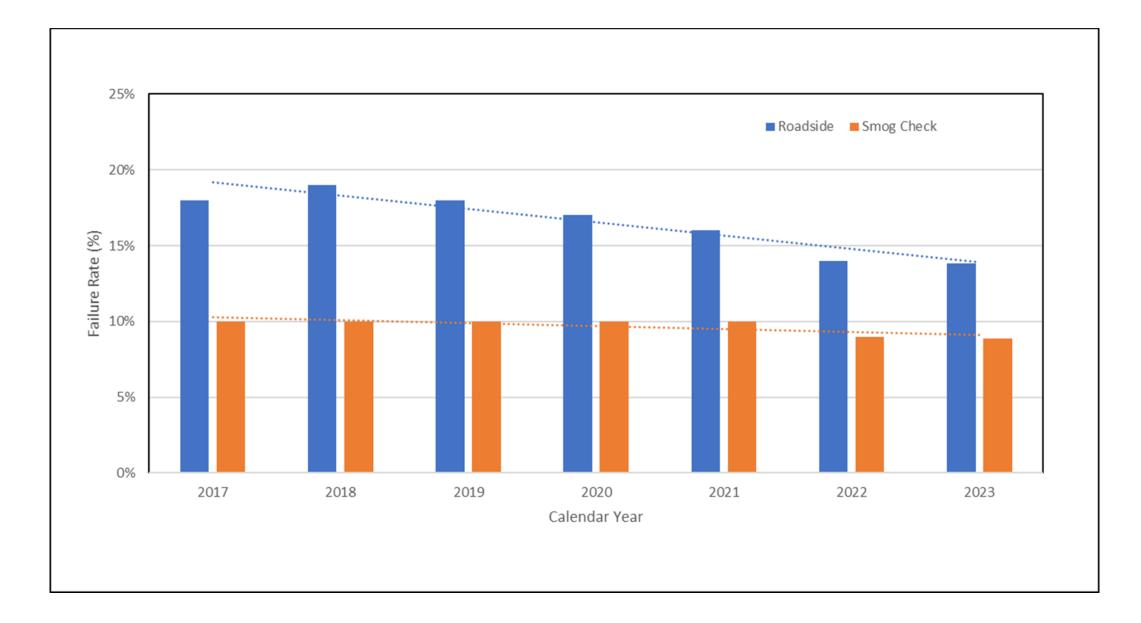


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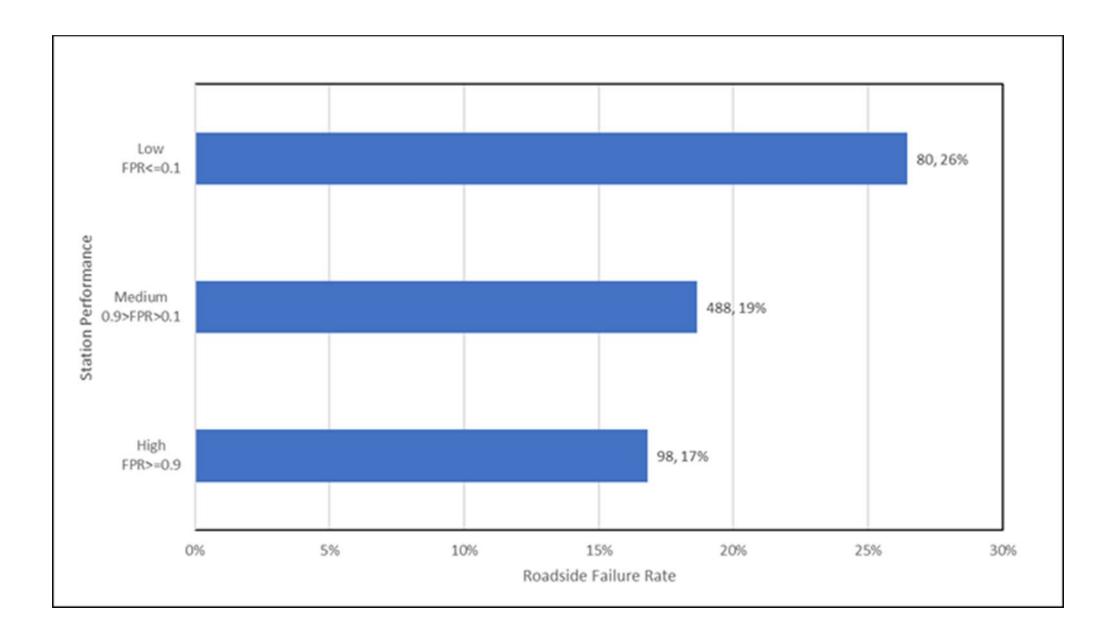
2024 SCPR Findings

- The 2022-2023 roadside failure rate was 14%, which remains unchanged from the 2021-2022 vehicle sample
- Vehicles certified by "high performing" Smog Check stations failed at a lower rate at roadside compared to "low performing" stations
- Incremental improvements to the program are evidenced by:
 - Declining overall failure rate
 - Narrowing difference between roadside and Smog Check failure rates
 - Increased enforcement actions against stations and technicians engaging in fraudulent practices.

Current and Historic Failure Rates



Roadside Failure by Station Performance



7

BAR Enforcement Activities

- From 2016 to 2023, BAR filed 1,344 "data-only" cases with the Attorney General's Office, resulting in 1,198 license revocations and 352 suspensions or probations
- Continued administrative disciplinary action against stations suspected of clean-piping, clean-gassing, clean-plugging, and clean-tanking
 - On April 4, 2024, federal prosecutors indicted 12 individuals for the use of an electronic simulator (OBDNator) to falsify Smog Check inspection results
- Continued work with the Department of Motor Vehicles (DMV) to significantly curtail registration-based fraud

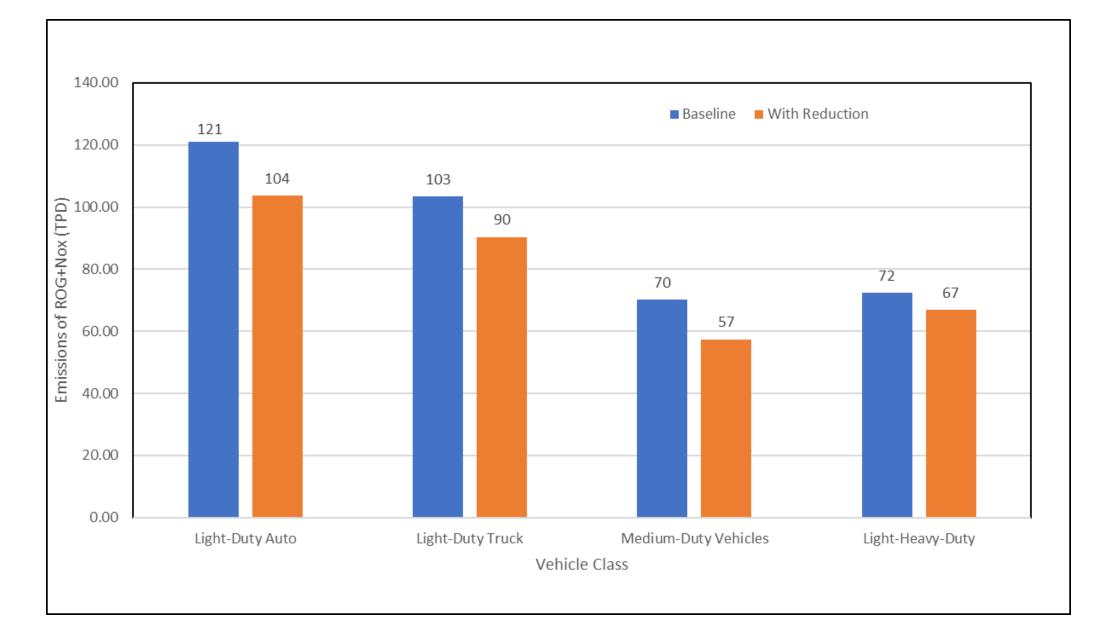
Indications of Program Performance

- Vehicles certified by stations with subsequently revoked licenses failed at consistently higher rates at roadside compared to those certified by stations in good standing
- Vehicles certified by stations with higher Follow-up Pass Rates (FPR) failed at a lower rate at roadside compared to those with lower FPR
- Vehicles certified by STAR stations failed at a lower rate at roadside compared to those certified at non-STAR stations

Estimation of Additional Benefits

 BAR and California Air Resources Board (CARB) staff estimate that the Smog Check Program could provide an additional 48 tons per day reduction of exhaust and evaporative emissions of reactive organic gases (ROG) and exhaust emissions of oxides of nitrogen (NOx) if all stations were high-performing.

Potential Reductions of ROG + NOx



Highlights of 50 State Review

- California operates the 3rd largest network behind New York and Pennsylvania
- Nationwide, the total number of stations decreased between 2022 and 2023
 - Licensed California stations declined by 230 to 7,774
- Five state inspection and maintenance contractors
 - Opus/Gordon Darby 18 states and Washington, D.C.
 - Applus+ Technologies 4 states
 - Parsons Engineering 3 states
 - Worldwide Environmental 2 states
 - Voyatek 1 state (California)
- 12 States and Washington, D.C. conduct safety inspections along with emissions

2024 SCPR Program Recommendations

- Tighten criteria for STAR certification
- Streamline process of taking enforcement actions
- Institute automatic test system lock-out (software fraud triggers)
- Coordinate with California Highway Patrol (CHP) to enforce Vehicle Code Section 27156 violations (modified emissions controls)
- Reassess criteria for directing vehicles to STAR stations
- Expand the Continuous Testing Program (CTP) to non-governmental fleets
- Allow official tests and pre-tests at On-board Diagnostics (OBD) kiosks
- Coordinate with CARB to:
 - Conduct surveillance programs
 - Estimate emissions benefits of the Smog Check Program
 - Update CARB's emissions estimation model

2024 SCPR Roadside Recommendations

- End Acceleration Simulation Mode (ASM) testing at roadside
- Eliminate testing of diesel-powered vehicles
- Increase participation/limit refusal
- Use remote sensing to supplement inspection
- Conduct special project to assess diesels/evaporative emissions failures
- Expand testing of age-exempted vehicles

US EPA Report

- This report is a compilation of statistics on the Smog Check Program required by federal regulation to be submitted to United States Environmental Protection Agency (US EPA) every year.
 - Data for the report is assembled by BAR and transmitted by CARB to US EPA
- The report is used by US EPA to examine regional differences in vehicle inspection and maintenance programs.
- Every other year the report also includes a summary of changes in program design, procedures, regulations, etc.
- This year's report was sent to US EPA on June 17, 2024
 - A copy is available upon request

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