

Q&A on Roadside Study

The following are questions and answers developed to prepare for the release of the Sierra Research roadside audit report.

1. *What is the Sierra roadside report?*

The report¹ is an analysis performed by Sierra Research of data collected from 2000-2002 and again from 2003-2006. The study compares roadside inspection results for 1976-95 model year vehicles to Smog Check inspection results for the same vehicles. The report includes written findings and recommendations from that analysis.

2. *Why was the study conducted by Sierra?*

The Air Resources Board (ARB) and the Bureau of Automotive Repair (BAR) hired Sierra Research as an independent research group to assess the performance of the Smog Check Program.

3. *Why did ARB and BAR request the study?*

Although a number of analyses have been performed over the years, this study was unique in that it compared pass/fail results for vehicles from previous Smog Check inspections to roadside audits of the same vehicles.

4. *What are roadside audits?*

On an on-going basis, BAR conducts random roadside audits of vehicles. The results from these inspections are used to evaluate the performance of the Smog Check Program in achieving Clean Air Act requirements.

¹ Sierra Research, Inc., *Evaluation of the California Smog Check Program Using Random Roadside Data*, March 12, 2009, Report No. SR09-03-01.

5. *What are the key findings from the study?*

- ❑ Of the 1976-95 vehicles sampled, 19% of the vehicles initially passed a tailpipe inspection at a licensed Smog Check station, but failed a roadside inspection within a very short period of time, less than a year.
- ❑ The data also showed that 49% of the vehicles that failed a roadside inspection had failed, and then subsequently passed a tailpipe inspection at a Smog Check station.

6. *Could the refail rates be attributed to vehicle deterioration or emission control tampering following a Smog Check?*

- ❑ The report acknowledges that deterioration contributes to the roadside failure rate. However, the report also shows a relatively high failure at the roadside immediately following a passing Smog Check inspection.² This suggests that rapid deterioration did not substantially influence the roadside failure rate.³
- ❑ Likewise, tampering did not substantially influence the roadside failure rate. The tampering rate during roadside inspections was found to be 9%, similar to the rate of 8% identified by Smog Check stations.⁴
- ❑ Analysis of repair data indicates that use of aftermarket catalysts also was not a significant factor affecting the roadside failure rate.⁵

7. *What is the potential impact on air quality?*

- ❑ The study estimates that if all stations consistently performed inspections correctly on the 1976-95 model year vehicles, the emission benefits of the Smog Check Program would improve by nearly 70 tons per day⁶.
- ❑ The report estimates that this would constitute nearly a 30%⁷ increase in emission benefits (out of a potential total of 315.8 tons per day) targeted for the Smog Check Program for these model year vehicles.

8. *Why were so many vehicles (49%) that were supposedly repaired to a passing condition, failing again at roadside inspections so soon after they were certified?*

The scope of this study did not direct the contractor to evaluate the reasons for the failure rate at the roadside inspections. However, based on the analysis in the report, improper testing or falsified Smog Check test results appear to be contributing to the 49% tailpipe failure rate⁸.

² Ibid, page 4-6.

³ Ibid, page 4-7.

⁴ Ibid, page 4-9.

⁵ Ibid, page 1-7.

⁶ Ibid, page 5-4.

⁷ Ibid, page 5-4.

⁸ Ibid, page 7-1.

9. *What were the recommendations of the Sierra report?*

- ❑ Continue development of a station performance evaluation metric to identify low performing stations for increased enforcement and to create incentives for high performing stations.
 - *The BAR has assigned staff to do this.*
- ❑ Perform inspections of vehicles immediately following certification at Smog Check stations.
 - *Implementation of this recommendation would be extremely inconvenient for motorists. In addition, it is not clear if BAR has statutory authority to implement this.*
- ❑ Continue using roadside inspections to evaluate the Smog Check Program.
 - *The BAR continues to use the roadside audits as a program evaluation tool. A third roadside team was added to collect data statewide.*

10. *What can be done to improve the Smog Check Program?*

Within the existing framework of a decentralized program, the following measures would improve performance of the Smog Check Program. All require statutory changes.

- ❑ Require vehicles that cause most of the pollution to have their inspections performed at Smog Check stations that meet high performance standards.
- ❑ Adopt a more stringent fine structure to respond to stations and technicians that perform improper inspections.
- ❑ Require that only the On Board Diagnostic (OBD) computer system be checked on newer model year vehicles using a new, stand alone emission inspection system (EIS).
 - OBD II equipped vehicles have a much lower failure rate than older vehicles.
 - Potential consumer savings can be realized.
 - Will align California with the approach that all but one other state has already taken.
 - Approved by the USEPA in May, 2001.

11. *Is legislation needed to implement these program improvements?*

Yes, all of the proposals in #10 would require statutory changes.

12. *What steps has BAR taken to address the problems identified in the study?*

- ❑ As mentioned in the Sierra study⁹, BAR has been working to develop a metric that strengthens its ability to identify stations and technicians that perform improper inspections, and the various techniques they use to pass high emitting vehicles that have a high probability of failing an inspection.
- ❑ BAR has recently pursued court issued Interim Suspension Orders (ISO) and Penal Code 23 orders to immediately suspend stations and technicians from continuing to perform Smog Check inspections where violations, such as clean-piping, are identified.
- ❑ BAR has teamed up with District Attorneys, who file criminal actions, in conjunction with BAR's license revocation actions, to make the penalty for violating BAR laws and regulations even more significant.

13. *How will the effects of any program improvements be evaluated?*

- ❑ BAR has expanded roadside audit inspections statewide, including sampling of all vehicles subject to the Smog Check Program.
- ❑ BAR will analyze roadside test results to determine if program corrections are improving inspections and repairs of vehicles.
- ❑ BAR plans to have those analyses validated by an independent third party.

⁹ Ibid, page 1-5.