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September 18, 2015

Clerk of the Board
Air Resources Board
1001 I Street
Sacramento, California 95814

Subject: Proposed On-Board Diagnostic (OBD) Regulations

Air Resources Board Members:

We are writing on behalf of the Alliance of Automobile Manufacturers (Alliance)¹ and Association of Global Automakers, Inc. (Global Automakers)² representing nearly every car and light-truck manufacturer in the United States. In California, our combined members represent about 99% of the new vehicle market.

This letter addresses only the traditional on-board diagnostic (OBD) requirements – i.e., those that detect malfunctions that could increase emissions, illuminate the malfunction indicator light (MIL or “Check Engine” light) to alert the operator of a problem, and then store the information necessary to allow the repair technician to quickly diagnose and repair the vehicle. The proposed regulations also contain new “Vehicle Operation Tracking requirements” in Sections (g)(6.3) through (g)(6.6) unrelated to malfunction detection, MIL illumination, or repair. The Alliance and Global Automakers are submitting separate comments on the Vehicle Operation Tracking requirements.

Subject to the recommendations provided in this letter and the attachments, we support the proposed changes to the traditional OBD regulations. Despite the differences that remain, ARB staff has worked tirelessly with the industry to understand and consider our concerns. Over the past 18 months, industry and ARB have easily spent 100+ hours in dozens of meetings, conference calls, and web meetings, in addition to engaging in discussions in 100s of emails and phone calls. ARB staff have also made themselves available, many times on relatively short notice, to discuss and debate modifications they have proposed as well as changes we have recommended. We sincerely appreciate the professional and transparent process and the hard work that ARB staff put into these regulations.

Automakers have long supported traditional OBD requirements and began installing OBD devices before ARB adopted the first OBD regulations for 1991 and newer vehicles. The OBD system monitors for malfunctions during every second of vehicle operation, and, for some monitors, even when the vehicle is parked and turned off. As a result, every state that has an emissions inspection program has

¹ Alliance members are BMW Group, FCA U.S., Ford Motor Company, General Motors, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen, and Volvo.

² Global Automakers’ members include Aston Martin, Ferrari, Honda, Hyundai, Isuzu, Kia, Maserati, McLaren, Nissan, Subaru, Suzuki, and Toyota.

replaced the very limited, costly, and time-consuming dynamometer or idle test with a more efficient, effective, and comprehensive check provided by the OBD system.

Current OBD systems are exceptionally sensitive, detecting malfunctions at emissions levels that could not be measured in the sophisticated industry and agency laboratories just a few years ago. The result is that current OBD systems are highly complex computers, governed by regulatory requirements that have grown exponentially over the past two decades. The current regulations require vehicle systems with massive computing power and an army of engineers to interpret, design, develop, and certify these systems. In fact, the OBD system currently consumes about half of the vehicle's engine and transmission computing power – that is, monitoring the emission control system is as complicated as actually controlling the emissions.

The OBD regulations, both current and proposed, require automakers to scrutinize virtually every component or system added to a vehicle to determine how the OBD system can monitor it or how it might affect the OBD system. The intent, which automakers support, is to ensure that near-zero emission vehicles remain near-zero emission throughout their lives.

There are, of course, tradeoffs for ARB developing the regulatory requirements and for automakers developing OBD systems. Turning on the Check Engine light prematurely or when no malfunction is present will quickly result in consumers ignoring the light. Moreover, just detecting a malfunction and turning on the Check Engine light is only half of the problem. If the malfunction cannot be repaired or the repair is cost prohibitive, again, consumers will lose confidence in the system, ignore the Check Engine light, and/or seek political changes to the emissions inspection programs. These are real concerns that could ruin a very effective program.

Additionally, the all-encompassing nature of the OBD regulations means that manufacturers leave some innovative technologies on the table because the OBD system cannot effectively monitor the technology. Without a clear path to OBD monitoring for a technology, there is no reason for a manufacturer to spend the resources to explore a technology that can never be implemented.

As noted above automakers and ARB staff have worked very closely for the past 18 months developing the proposed traditional OBD regulations. Automakers still have concerns with the implementation of the requirements and believe that some requirements do not provide a benefit commensurate with the cost. In fact, no system can detect every possible malfunction or deliberate attempt to circumvent the OBD system for the purpose of inappropriately passing a Smog Check. We are concerned that this is the standard being set.

We have attached detailed technical comments on the proposed changes. All of these have been provided to and discussed with staff.

Finally, we would like to highlight our concerns with the cost analysis provided in the ISOR. We recognize that ARB staff and industry rarely agree on costs; ARB staff typically use more optimistic assumptions resulting in lower costs than those projected by automotive engineers. In addition, we recognize that differences in costs are unlikely to persuade the Board to approve or disapprove the recommendations contained in the ISOR. Nonetheless, the Board should recognize that the costs of developing, testing, documenting, and certifying vehicles to the OBD regulations are far from trivial,

and the ISOR should contain an honest and thorough evaluation of costs associated with changes. In the current proposal, we do not believe the costs analysis reflects the appropriate level of due diligence.

The only costs thoroughly analyzed in the ISOR were those associated with changes to PCV system monitoring. For PCV system monitoring, there should be little reason to speculate on the costs, since at least one manufacturer has implemented the proposed changes and could provide the actual costs. Yet, to our knowledge, ARB staff did not contact that manufacturer for the cost assessment, and that manufacturer reports that the actual cost to implement the PCV monitor was almost three times those reported in the ISOR.

Furthermore, in considering the cost of the OBD regulations, there are additional metrics that have real and important impacts on the overall cost and effectiveness of the OBD system, for instance the cost to the consumer, which includes the cost to repair a vehicle relative to a vehicle's age and worth, and the ability to repair a vehicle. Thus, we recommend that going forward ARB consider additional costs that would affect the overall costs-benefit analysis of the regulation.

We appreciate the opportunity to comment on the regulations and look forward to working with you as we implement the changes. If you have any questions or need additional information, please feel free to contact us. As always, we look forward to continuing to work with you.

Sincerely,



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Attachments