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

Air Resources Board Members:

Subject: Over-the-Air (OTA) Reprogramming - On-Board Diagnostic (OBD) Proposed Regulations

This letter offers a few minor comments on the new over-the-air (OTA) reprogramming requirements proposed in Section 1968.2(g)(8) as described in the “Staff Report: Initial Statement of Reasons”:

“Staff is proposing changes related to the preservation of vehicle operation tracking data when OTA reprogramming technology is used. Specifically, if any of the data stored pursuant to sections 1968.2(g)(5) and (g)(6) would be erased as a result of an OTA reprogramming event on 2022 and subsequent model year vehicles, the manufacturer would be required to first collect all of the data required to be stored by the sections. The manufacturer would further be required to submit a data record to CARB indicating the average value and standard deviation of each required parameter for each affected certified test group. The proposal would require manufacturers to submit the report within 60 calendar days of the availability of the update. Details on how the data records are to be created, formatted, and submitted are included in a separate document incorporated by reference in section 1968.2(g)(8), entitled, “Data Record Reporting for Over-the-Air Reprogrammed Vehicles and Engines.””

Applicable model year

We request to change the applicable model year from 2022MY to 2024 MY.

2020MY certification has begun and 2021MY software/hardware is close to final, so we think more lead time is needed for potential additional OTA infrastructure and hardware for data collection accumulation.

Data reporting due date

Appendix D Data Record Reporting Procedures for Over-the-Air Reprogrammed Vehicles and Engines states: “Manufacturers are required to collect and submit the data within 60 days of the release of the software update over the air. The data should not be aggregated until after 45 days from the release of the software.”

We request to change the data reporting due date from 15 calendar days after aggregation to 30 (i.e., data submission due date changes from 60 to 75 days).

Various checking steps (and correction steps if needed) are necessary for regulatory submissions; 15 days may not be enough considering weekends and cases where holidays occur during the 15 day period.

In-Use Monitoring Performance Ratio (IUMPR) data collection period

In-Use Monitoring Performance Ratio (IUMPR) data is included in the data required to report. We request to limit inclusion of IUMPR data to a period of 6 to 12 months after introduction into commerce of a test group subject to OTA reprogramming.

The ISOR states: "Based on the relative simplicity in updating vehicle programming with OTA technology, the potential for more frequent updates of on-board computer programming clearly exists. Staff is concerned that the average vehicle designed to support OTA reprogramming might, at any given time, have accumulated only minimal vehicle activity tracking data since the last reprogramming event if the data are cleared during such events ... The availability of these data records would assist CARB staff in analyzing the vehicle performance characteristics the parameters address when they would otherwise be lost at possibly an unacceptably high frequency."

This rationale applies to vehicle operation tracking data, e.g., fuel consumption data thrown out could have been used for analysis but is now lost. But IUMPR data needs some time to accumulate sufficient general denominator incrementing /mileage, so too-early collection is not necessarily usable for analysis like the fuel consumption data might be. Also, manufacturers are already required to report IUMPR by one year after sales begin, so reporting after one year appears unnecessary.

Toyota appreciates the opportunity to comment on the proposed regulations and look forward to continuing to work with CARB as the rule is finalized. If you have any questions or need additional information, please feel free to contact us.

Sincerely,



Will Meschievitz
Group Manager
Powertrain Certification and Compliance

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