

Attachment 5: Reporting Default Actions as Auxiliary Emissions Control Devices (AECDs)

CARB Proposal and comments in Proposed Revisions to the On-Board Diagnostic System Requirements

CARB is proposing to add the following language to 13 Cal. Code Regs. § 1968.2(h)(6.4.1) (new text underlined):

Except as provided for in section (h)(6.4.3), if the MIL first illuminates after emissions exceed the applicable emission threshold malfunction criteria specified in sections (e) and (f), the test vehicle shall be retested with the tested system or component adjusted so that the MIL will illuminate without emissions exceeding the applicable emission threshold malfunction criteria specified in sections (e) and (f). If the system or component cannot be adjusted to meet this criterion because a default fuel or emission control strategy is used when a malfunction is detected (e.g., open loop fuel control used after an O2 sensor malfunction is determined, etc.) and the strategy is an AECD that is disclosed in the application for emissions certification (as required in Part I, section H.4. of the "California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" as incorporated by reference in section 1961.2, title 13, CCR), the test vehicle shall be retested with the system or component adjusted to the worst acceptable limit (i.e., the applicable monitor indicates the system or component's performance is passing but at the closest possible value relative to the monitor threshold value at which a fault would be detected that would invoke the default strategy and illuminate the MIL).¹

To justify the revision, in its Initial Statement of Reasons, CARB staff explains, among other reasoning, that:

CARB staff is concerned that manufacturers in some cases have conveniently, but inappropriately, calibrated the monitors to activate the default action at the performance level aligned with the OBD malfunction criteria set forth in sections (e) or (f) even though the detected level of malfunction would not damage the engine or component of concern. When the United States Environmental Protection Agency (U.S. EPA) and CARB review AECDs for compliance, the approval criteria generally used include the determination that the AECD activation is limited to only the conditions necessary and the modulation of the emission control system is limited to the minimum necessary to achieve the stated purpose. Additionally, CARB staff has discovered that many manufacturers have not readily disclosed or justified the default actions as an AECD within the application for emissions certification. As a result, CARB staff is proposing to amend the language of this subsection to ensure that retesting to show compliance with the

¹ CALIFORNIA AIR RESOURCES BOARD, APPENDIX A: PROPOSED REGULATION ORDER, OBD II REGULATION TITLE 13, CALIFORNIA CODE OF REGULATIONS, SECTION 1968.2, MALFUNCTION AND DIAGNOSTIC SYSTEM REQUIREMENTS--2004 AND SUBSEQUENT MODEL-YEAR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES AND ENGINES: PROPOSED REVISIONS TO THE ON-BOARD DIAGNOSTIC SYSTEM REQUIREMENTS AND ASSOCIATED ENFORCEMENT PROVISIONS FOR PASSENGER CARS, LIGHT-DUTY TRUCKS, MEDIUM-DUTY VEHICLES AND ENGINES, AND HEAVY-DUTY ENGINES (June 1, 2021), at 73-74.

requirements is limited to default strategies that are AECDs listed in the application for emissions certification.²

Auto Innovators disagrees with this characterization, and posits that the U.S. EPA review of AECDs has not ever included MIL-relevant fault active default actions. The difference between AECDs and MIL-relevant default actions is the very clear and visible ultimate indication to the driver and inspection/maintenance servicers that there is a fault present on the vehicle. Auto Innovators also observes that engine or component protection is not the sole reason manufacturers employ OBD default action software features. Additionally, not all OBD default actions increase emissions, and they are taken only when a relevant OBD component has malfunctioned, often to overcome or mitigate inferior or unsafe driving conditions, or preserve the functioning of the OBD system. CARB's explanation for this change—that it conditions its approval of AECDs by determining “that the AECD activation is limited to only the conditions necessary and the modulation of the emission control system is limited to the minimum necessary to achieve the stated purpose”—does not support an overbroad requirement that is not related to CARB's stated concern of manufacturers not fully disclosing their default action software features.

It is also clear to Auto Innovators that this is an effort to promote and memorialize in regulations and regulatory justification the position CARB first formally articulated to the industry in October 2020 that OEMs must report MIL-relevant default actions as AECDs.³ Auto Innovators maintains and raises again here the points our November 25, 2020 letter.

CARB's test procedures for light-duty vehicles currently do not require default actions⁴ to be disclosed as AECDs. CARB's suggestion in its October 2020 letter and in these proposed regulations that fault active default actions should be disclosed as AECDs is not consistent with decades of industry and agency practice.

Guidance and Regulations

The definitions of and disclosure requirements for AECDs and defeat devices date back 48 years, when U.S. EPA issued Mobile Source Pollution Control (MSPC) Circular A/C No. 24 (Dec. 11, 1972). This circular defines the terms “AECD” and “defeat device” and states that “[a]ll AECDs must be described in the manufacturer's application for certification.” The current AECD and defeat device definitions in 40 CFR §1803-01,⁵ copied below, have not changed from the original 1972 definitions in any way relevant to this rulemaking:

² CALIFORNIA AIR RESOURCES BOARD, PUBLIC HEARING TO CONSIDER THE PROPOSED REVISIONS TO THE ON-BOARD DIAGNOSTIC SYSTEM REQUIREMENTS AND ASSOCIATED ENFORCEMENT PROVISIONS FOR PASSENGER CARS, LIGHT-DUTY TRUCKS, MEDIUM-DUTY VEHICLES AND ENGINES, AND HEAVY-DUTY ENGINES: STAFF REPORT: INITIAL STATEMENT OF REASONS (June 1, 2021), at 95.

³ California Air Resources Board, Mail-Out #ECC 2020-06, Alert: Self-Disclosure of Non-Compliant Software and Other Violations by December 31, 2020 (Oct. 14, 2020).

⁴ The phrase “default actions” is used to refer to direct actions taken in response to a malfunction identified in a manufacturer's OBD certification application, including malfunctions that store a pending or confirmed emission-related MIL illuminating fault code.

⁵ These definitions have been adopted by CARB, e.g. in “California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and

Auxiliary Emission Control Device (AECD) means any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system.

Defeat device means an auxiliary emission control device (AECD) that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and use, unless:

- (1) Such conditions are substantially included in the Federal emission test procedure;
- (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident;
- (3) The AECD does not go beyond the requirements of engine starting

Industry and Agency Practice

CARB, EPA, and the industry have implemented the above-referenced AECD provisions for nearly 50 years. Similarly, for more than 20 of those years, CARB and the industry have implemented OBD systems and associated default actions as part of OBD certification. In that time, both CARB and EPA have routinely issued emissions certifications for vehicles that take default actions in the presence of a MIL-relevant fault, without requiring those default actions to be disclosed as AECDs. Default actions taken in conjunction with a MIL-relevant fault are typically designed to maintain safe vehicle operation and emissions/diagnostic controls to the extent feasible when the OBD system senses a fault. The illumination of the MIL alerts the driver that the emission control system may not be functioning properly and that the vehicle needs to be serviced. Presumably, neither the regulatory agencies nor the industry believed it necessary to disclose default actions as AECDs because MIL-relevant default actions cannot be a defeat device,⁶ the fault condition is known and disclosed (the MIL is illuminated, fault code set, or DTC fault criteria is maturing), and the default action sometimes improves emissions and/or diagnostic performance. This long-standing understanding has served as the basis for manufacturer compliance planning.

Rather than treating default actions as AECDs, manufacturers have largely reported on some default actions (monitor disablement, emissions neutral default actions, etc.) in their OBD system certification documentation, per 13 CCR § 1968.2(i). Indeed, AECDs and default actions should not be treated the same. AECDs are software features that sense inputs and, as a result of accurate information under

Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles,” incorporated by reference in 13 Cal. Code Regs. § 1961.2(d) and last amended Dec. 19, 2018.

⁶ The definition of a “defeat device,” which flows from the definition of an AECD, has never been understood to encompass default actions. As noted earlier, a defeat device is defined as an AECD “that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in *normal vehicle operation and use*” (emphasis added). “Normal vehicle operation and use” does not include circumstances in which a vehicle is operating with a malfunction. Consequently, default actions fall outside the definition of a defeat device. This issue was previously discussed further in Auto Innovators’ November 25, 2020 letter to CARB responding to the October 2020 letter.

normal, non-malfunctioning operating conditions, command some part of the emission control system in order to achieve (among other things) a purposeful emission control or vehicle protection action.

Conversely, default actions are taken after the OBD system detects a malfunction, stores a fault code or is maturing to set a fault code, notifies the vehicle operator and technician of a malfunction by illuminating the MIL and/or storing a fault code, and may take action to start the process of addressing the malfunction. There was never an industry-wide understanding that these portions of manufacturers' OBD certification documentation needed to be separately duplicated and/or augmented in the AECD section of the certification application as the Mail-Out now seems to suggest.⁷

Recommendation for Standardized Default Actions Information

Automakers recognize CARB's desire for additional information to better understand and evaluate default actions, and could potentially support providing this information as part of the OBD certification submission, provided there is defined clarity and uniformity in what and how to report. However, until such time, we believe it is premature to incorporate regulatory language into 13 Cal. Code Regs. § 1968.2(h)(6.4.1.) concluding what, if any, requirements apply to fault active default actions. We ask that CARB work with manufacturers to develop standardized means, including defining scope and content, for reporting fault active default actions.

Discussions with CARB Following the Dear Manufacturer Letter

Although Auto Innovators has had continued discussions with CARB on the matter of reporting default actions as AECDs since the issuance of CARB's October 2020 letter, little has changed. Manufacturers continue to request that an obligation to report default actions as AECDs be fully legally justified and outlined, so that manufacturers have clear guidance on how this reporting should be conducted in terms of form and scope. We continue to reiterate that a new requirement of this sort must be phased in to allow manufacturers appropriate time to analyze and generate the documentation CARB may seek. More specifically, we seek clarity from CARB on the specific model years to which clear guidance would apply. Auto Innovators and its manufacturers hope for continued discussions with CARB on this

⁷ Even assuming that the definition of an AECD could arguably be interpreted broadly to include default actions, there has not been transparent or consistent messaging from CARB or EPA requiring that default actions be disclosed as AECDs, and, as mentioned above, many automakers have been disclosing default actions in their OBD certifications and not as AECDs with no objection from CARB.

CARB can, of course, adopt a new interpretation of a regulatory requirement so long as it "explains and rationally justifies the change." *Spanish Speaking Citizens' Foundation, Inc. v. Low* (2000) 85 Cal. App. 4th 1179, 1215 (quoting Asimow, *The Scope of Judicial Review of Decisions of California Administrative Agencies* (1995) 42 UCLA L. Rev. 1157, 1196-1198). Manufacturers also need a reasonable amount of lead time to implement any new requirements that may flow from a revised interpretation. The rationale for the change in the language of the regulation is essentially to memorialize an interpretation that CARB has purportedly maintained for some time, but only recently disclosed—i.e., "manufacturers have not readily disclosed or justified the default actions as an AECD within the application for emissions certification." INITIAL STATEMENT OF REASONS at 95. It is not appropriate for an agency to issue a communication announcing a new regulatory interpretation imposing additional obligations on the regulated community, especially in circumstances where it claims that the regulated community's past and present failure to comply with the new interpretation represents a systemic violation potentially resulting in significant sanctions. This is especially the case where manufacturers have relied on the agency's previous, longstanding practice to the contrary. See *Butts v. Bd. of Trs. of the Cal. State Univ.* (2014) 225 Cal. App. 4th 825, 840.

subject, and request that a change of this magnitude be given proper, separate regulatory development instead of being incorporated as a minor point in a broader regulatory revision.

