

January 15, 2024

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

Subject: Proposed Amendments to On-Road Motorcycle Emissions Standards and Test Procedures and Adoption of New On-Board Diagnostics and Zero-Emission Motorcycle Regulations

Suzuki Motor USA, LLC, on behalf of Suzuki Motor Corporation (collectively, “Suzuki”), respectfully submits the following comments relating to CARB’s proposal to implement new regulations for on-highway motorcycles marketed in California. Suzuki Motor Corporation is a manufacturer of on-highway motorcycles, off-road recreational vehicles, and outboard motors that are certified and sold in California. These comments are specific to the products marketed by Suzuki that will be subject to the proposed regulatory revisions.

Suzuki has participated in several previous discussions with CARB staff on the proposed regulation and appreciates the outreach provided by CARB and its willingness to consider the concerns raised by Suzuki and others with respect to this proposal. Suzuki recognizes that CARB has made several important changes to its proposed regulation in response to comments, however Suzuki believes that certain aspects of the proposed regulation remain either overly severe or will impose unnecessary cost and complication to motorcycle certification in California.

Suzuki’s comments on these points of concern are as follows:

1. Proposed zero-emission motorcycle requirement

Suzuki has previously expressed its concerns over CARB’s plan to impose a phased-in requirement for zero-emission motorcycle (“ZEM”) credits as a requirement for certification. Suzuki believes that the timing of the phase-in is overly aggressive considering the unknown market acceptance of ZEM products in general, the substantial technical challenges that will need to be overcome to develop products that genuinely meet the needs of the consumer, and the cost to develop and bring ZEM products to market. Unlike the light-duty market, motorcycle manufacturers do not have the resource of high-margin gasoline powered products to offset the economic losses that are a part of current light-duty ZEM sales. For motorcycles, a business model of selling products at a loss to allow sale of profitable products will not work – all products must be economically viable on their own. Suzuki is concerned that the true cost to develop ZEM has not been fully accounted for in CARB’s economic analysis and is also concerned that future consumer demand and projected future cost reductions of ZEM technology have been overestimated.

Suzuki requests that CARB consider a delayed implementation of its ZEM phase-in to no earlier than the 2030 model year. Suzuki also requests that CARB include in regulation a technology and market review prior to introduction of the mandatory ZEM phase-in to ensure that technology has advanced to the state where products can be manufactured that are desirable to the consumer, are cost-effective relative to internal-combustion alternatives, and that market demand exists for the ZEM products that are to be produced under the proposed requirements.

2. Proposed requirement for a new California certification fuel

Suzuki believes that CARB's proposal to require use of a new formulation of certification fuel ("LEV IV fuel") conforming to the recently adopted Advanced Clean Cars II ("ACC II") will impose unnecessary facility cost increases without any corresponding benefit to the environment. Many motorcycle manufacturers produce both on-highway motorcycles and off-road recreations products and have already made investments in storage and dispensing facilities for California LEV III fuel that was required for 2020 and later off-road product certification. Adoption of a new California certification fuel for on-highway motorcycles. will require additional new facility investments, impose additional test fuel costs, and require expansion of fuel storage areas.

Suzuki does not believe that a singular requirement for the new CARB LEV IV fuel is necessary or reasonable considering the facility and other costs that will be imposed by the addition of the new fuel specification and lack of emissions benefit.

The principal difference between LEV III and LEV IV test fuels is the substitution of a specification for a defined volume of C7 hydrocarbons to replace a similar specification for multi-substituted alkyl aromatic hydrocarbons. As CARB explains in the Advanced Clean Cars II briefing package ¹ the reason that LEV III has been superseded by LEV 4 is mainly due to a perceived difficulty in measuring multi-substituted alkyl aromatic hydrocarbons and a lack of a specification for multi-substituted alkyl aromatic hydrocarbons in California's commercial gasoline regulations.

Critically, CARB acknowledges in the ACC II brief that "there is no difference in ozone impact from making this change to the certification gasoline specifications" ¹. There is also no discussion on any impact to combustion or evaporative emissions performance or increase in stringency resulting from the specification change.

Suzuki has already implemented the facility improvements that were required for the change to LEV III certification fuel, as required by California regulation, and uses the fuel routinely. LEV III fuel is also readily available from overseas suppliers, and Suzuki is not aware of any issues regarding blending from its supplier. The original purpose of development of LEV III fuel was to create a certification fuel that closely resembles in-use fuel ². As there has been no change to the Phase 3 California reformulated gasoline ("CaRFG3") requirement, presumably California LEV III fuel continues to perform its mission of for a test fuel that is similar to in-use pump fuel under CaRFG3 regardless of the point about multi-substituted alkyl aromatic hydrocarbons that is described in ACC II and remains a reasonable specification for a certification fuel. As LEV III fuel functions the same as LEV IV fuel from an emissions perspective and has also been determined by CARB to be representative of CaRFG3 fuel, Suzuki requests CARB allow the use of either LEV III fuel or LEV IV fuel for exhaust and evaporative emissions testing at the manufacturers option.

As LEV III fuel continues to be the required test fuel for off-road engine certification, CARB clearly maintains the fuel at its own test facilities so availability by CARB for compliance testing should not be an issue for the foreseeable future. Therefore, Suzuki believes that vehicles subject to

1. Ref. Appendix F-1 : "Purpose and Rational for Proposed Changes to Title 13, CCR and Incorporated Test Procedures"

2. Ref. "California Certification Fuel" : <https://ww2.arb.ca.gov/resources/documents/california-certification-fuel>

compliance testing by CARB that were originally certified using LEV III fuel should also be tested by CARB on the same fuel and requests that CARB make the appropriate revisions to the exhaust and evaporative test procedure documents for this allowance.

3. Proposed chassis dynamometer cooling fan placement for evaporative testing

The cooling fan placement distance in TP-934 9.1 Appendix A is specified as 0.3m +/- 0.05m from the front wheel of the test vehicle. This deviates with EU5 and US EPA which specify 0.3m-0.45m. Suzuki previously requested CARB to harmonize with the EU and EPA distance of 0.3m-0.45m in earlier comments. This alignment appears to have been implemented in the new exhaust test procedure but not carried over to the TP-934 evaporative test procedure.

The maximum fan placement distance requirement of 0.35m proposed in TP-934 creates a serious problem for test facilities where the cooling fan is built into the floor (part of the overall chassis dyno structure) and the fan outlet moves with vehicle wheelbase adjustment with the distance basically fixed. For these cases, unless the fan physical design has been set to the low end of the distance allowed by EPA and the EU, infrastructure changes must be made to conform to the specified distance for the new proposed evaporative testing.

To harmonize with EU, EPA, and CARB's own exhaust test procedure, Suzuki requests that CARB revise TP-934 allow placement of the variable-speed cooling fan within 0.3m to 0.45 from the test vehicle front wheel.

4. Proposed in-use monitoring performance reporting

The reporting time period for the model year in-use monitoring performance reporting ("IUMPR") is currently specified as 12 months from introduction into commerce (or start of normal production, whichever is the later). The 12-month period CARB is proposing aligns with the light-duty IUMPR report submission requirement, however the EU5 motorcycle regulation allows 18 months for its similar reporting requirement.

Suzuki requests CARB align with EU rather than their own passenger car regulation. Allowing the extra 6 months would improve the chance that statistically valid IUMPR data will be obtained from in-use vehicles by allowing the extra vehicle driving cycles that an additional 6 months of operation would provide. Although it is understandable that CARB would want to follow the same reporting standards that are now in place for other on-highway categories, the usage pattern for motorcycles is very different than for passenger cars and other 4-wheel vehicles, with motorcycles having much lower annual mileages and unique operational patterns. Suzuki believes that harmonizing with EU is reasonable and will not impact CARB's data collection (other than to delay the reporting) or its enforcement authority in the case of a noncompliance. Further, allowing the additional 6 months will also likely reduce the number of instances that manufacturers will need to request sample size relief under § 1958.2(e)(2)(D) as it will be more likely that an adequate sample will be able to be procured due to the additional time available.

5. Proposed production motorcycle evaluation testing

Suzuki believes the proposed requirement for up to 2 test motorcycles per model year for production motorcycle evaluation testing ("PVE testing") is overly burdensome considering the limited engineering staff resources that must also be used to develop new models compliant with

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EU5/CARB regulations. Performing a PVE test on an individual vehicle is a complicated process that requires substantial amounts of time and resources. Suzuki believes that a PVE testing should be limited to a single test motorcycle per model year. Regardless of how many or how few PVE tests are conducted, manufacturers have compliance liability if an OBD system fails to function properly and will be motivated to design robust systems. As CARB has the ultimate authority for which OBD group is to be tested, manufacturers will also not have the opportunity to game the results by picking a "good" OBD system therefore any single OBD system that is tested for PVE for each model year will provide a fair and accurate representation of a manufacturer's overall OBD functional performance.

Suzuki appreciates your consideration of these comments. Suzuki also supports the comments presented by the Motorcycle Industry Council on this proposed regulation.

Sincerely,

A handwritten signature in black ink that reads "Robert Alsip". The signature is written in a cursive, slightly slanted style.

Robert Alsip
Senior Department Manager
Government Relations