



**MOTORCYCLE
INDUSTRY
COUNCIL®**

October 24, 2024

Jason McPhee P.E.
California Air Resources Board
1927 13th Street
Sacramento, CA 95811

RE: CARB Proposed On-Highway Motorcycle (HMC) Regulations (Euro 5/ZEM)

Dear Jason:

The Motorcycle Industry Council (MIC) represents manufacturers of non-zero and zero emission HMCs. We support CARB's efforts to harmonize with Euro 5 requirements, standards, and procedures of the European Union as well as increase sales of zero emission motorcycles (ZEM) in the California market. We need confirmation and clarification of a few items. We also have several concerns about CARB's proposed regulation for 2029 MY and later HMC.

We seek confirmation and clarification about the following items:

1. If the carbon canister vendor certifies that the carbon meets the performance criteria according to TP 934 Section 10.2.1, we understand that the vehicle manufacturer is not required to perform canister durability testing before performing evaporative emissions testing.
2. The blue line through the upper diagram of TP 934 Figure 2 is confusing. Our understanding is that evaporative components, including canisters and PRV, installed throughout a completed full useful life accumulation may be exempt from the vibration, canister, and PRV durability testing requirements. For partial mileage accumulation manufacturers must use the hybrid approach to complete all canister and PRV durability testing requirements. The proposed new Figure 2 only highlights the requirements for the hybrid approach.
3. We believe the ambient temperature around the evaporative system components will exceed 20°C during exhaust gas endurance. We would like to include the time as part of the evaporative emission system preconditioning fuel system components soak.

We urge CARB to address the following concerns with the proposed regulation which otherwise may have significant negative impacts on our members:

1. The proposed regulation continues to contain an error related to the TP-934 cooling fan distance.
2. The size and location of the recall repair label must consider the limited space available on motorcycles.
3. ZEM sales projections far exceed the market.

Proposed Regulation Errors

The proposed regulation contains, at a minimum, the following error or oversight:

- TP-934 includes a tolerance of +/- 0.05m in the cooling fan distance of 0.3m-0.45m which deviates from the CARB exhaust test procedure, CFR, and Euro 5 required cooling fan distance of 0.3m-0.45m. This added tolerance creates a cooling fan distance error and can significantly impact manufacturers having the cooling fan structure built into the floor as a part of the overall chassis dyno structure. It is important that CARB remove the added tolerance in TP-934 to restore the cooling fan distance to 0.3m-0.45m and correct any other errors in the proposed regulation to avoid confusion and unnecessary cost to manufacturers.

Recall Inspection and Repair Label

CARB's proposed requirements include the application of a CARB approved label in the event of a recall related inspection or repair. We understand the value of such a label but remind CARB that the size and application location approved by the Executive Officer must consider the small size of motorcycles and limited space for labels compared with light duty and other vehicles. We also request that CARB allow recall inspection and repair labels to be located under readily accessible panels and bodywork, like VECI labels, to reduce the likelihood of removal by customers.

Additionally, in the event of a recall which necessitates facilities, including OEM staff, to travel to the vehicle location for the inspection, the code designating the facility at which the inspection was performed needs flexibility to allow for inspections away from a dealership or other traditional inspection facility.

ZEM Sales Projections

Manufacturers are investing significant resources in the research and development of zero-emission technologies including battery-electric, hydrogen fuel cell, hydrogen internal combustion, as well as hybrid powertrains. Battery electric development is currently leading research and development activities due to the longer-term existence of battery electric vehicles and supporting infrastructure. Despite this investment, consumer interest in purchasing battery electric motorcycles consistently remains exceptionally low. In fact, it has been in decline recently, which is like the last few years before the pandemic.

Though CARB presents battery electric motorcycles as being equivalent to internal combustion motorcycles, consumers do not view them as equivalent or alternatives. Battery electric ZEM represent their own unique segment of the larger motorcycle industry. Many motorcyclists are passionate about and include the sound, vibration (or feel), ability to customize, number of transmission speeds, and other factors in their purchasing criteria. Motorcyclists are very particular about their vehicles. 1-2% of motorcyclists surveyed expressed an interest in purchasing a battery electric motorcycle. Similarly, 1-2% of motorcyclists surveyed indicated they would replace an internal combustion motorcycle with a battery electric motorcycle. CARB's ZEM sales proposal appears to not consider that motorcyclists interested in purchasing a particular drivetrain technology will drive market demand.

California has a mild climate compared to the rest of the U.S. California's mild climate is more favorable to battery electric motorcycles than the climate of other states where motorcycles typically spend months in storage every year. Seasonal operation and storage are critical considerations when the availability of on-site charging infrastructure and the need to maintain traction battery state of charge to avoid battery damage during long term and winter storage are factored in. CARB's sales mandates may force manufacturers to produce vehicles they cannot sell in California let alone other states. To meet CARB's proposed credit obligations, significant ZEM overproduction, low or declining sales, the unavailability of sufficient credits, and insufficient supporting infrastructure will force manufacturers to reduce production and sales of the low

emission Euro 5 based models introduced into the California market. This will result in CARB's claimed emission reduction benefits not being realized.

Manufacturers are concerned that CARB's proposed ZEM sales and credit requirements far exceed CA market capacity for these vehicles and place the industry at risk. This concern increases with California's concentration of charging infrastructure development towards commuter routes typically used for light-duty vehicles. Typical motorcycle use, in the U.S., is more recreational in nature and utilizes more rural and scenic routes. CARB's projected decrease in ZEM battery costs is questionable considering production volumes are far lower than those of light-duty vehicles and anticipated market demand. The motorcycle industry cannot endure incredible losses like those auto manufacturers faced in bringing ZEVs to the market under CARB's mandates. Several ZEM startups have appeared and joined MIC over the years and quickly disappeared from the market due to high market barriers which includes the development of products consumers are passionate about and willing to spend their hard earned and diminishing money on. These market barriers have also driven several established ZEM manufacturers to bankruptcy and shuttered doors. The motorcycle industry wants the ZEM segment to grow in a sustainable market driven manner not through risky mandates out of line with consumers, who are essential for growth, and available infrastructure.

Manufacturers support and call for the availability of more ZEM manufacturer, consumer, and infrastructure development incentives but request CARB to work with the industry and market on sales and credit requirements. This includes a request for CARB to review and consider market acceptance before setting annually increasing ZEM sales requirements.

CARB's proposal incorporates a considerable number of elements and has been under development for several years. It is important for CARB to ensure this proposal provides clear information manufacturers can use to ensure compliance with regulatory requirements. It is also important for CARB to avoid subjecting manufacturers and consumers to requirements based on overly optimistic projections. The motorcycle industry supports and is actively pursuing the development of lower and zero-emission technologies but must not be subject to initiatives and mandates that presents risk to that development by overstepping market demand and supporting infrastructure. We look forward to continuing to work with CARB on bringing the best motorcycle products to the California market.

Regards,



Eric Barnes, Vice President, Technical Programs
Motorcycle Industry Council, Inc.
2 Jenner, Suite 150
Irvine, California 92618-3806
Tel: 949 727-4211, ext. 3010
Fax: 949 727-3313
Email: ebarnes@mic.org