**STATE OF CALIFORNIA**
**AIR RESOURCES BOARD**

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| **Proposed Zero-Emission Powertrain Certification Regulation, and Proposed Zero-Emission Airport Shuttle Regulation** | **)**<br>**)**<br>**)** | **Hearing Date: February 21, 2019**<br>**Agenda Items: 19-2-5 and 19-2-6** |

# COMMENTS OF THE TRUCK AND ENGINE MANUFACTURERS ASSOCIATION

February 19, 2019

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## Introduction

The Truck and Engine Manufacturers Association ("EMA") hereby submits its comments on the Proposed Zero-Emission Powertrain Certification Regulation and the Proposed Zero-Emission Airport Shuttle Regulation that the California Air Resources Board will consider for adoption at a public hearing scheduled for February 21, 2019. EMA is the trade association that represents the world's leading manufacturers of, among other products, heavy-duty on-highway ("HDOH") engines and vehicles, which is the market segment that CARB is targeting through the regulatory proposals at issue. As EMA's comments detail below, CARB lacks the statutory authority to adopt certification, warranty, defect reporting and recall requirements for HDOH zero-emission powertrains.

## CARB Lacks Statutory Authority To Establish Certification, Warranty, Defect Reporting And Recall Requirements For Zero-Emission Powertrains

Taken together, the proposed Zero-Emission Powertrain ("ZEP") Certification Regulation and the proposed Zero-Emission Airport Shuttle Regulation would establish mandatory certification, warranty, defect reporting and recall requirements for ZEPs. CARB does not have the statutory authority to establish or enforce those types of ZEP-related regulatory requirements.

While the Initial Statement of Reasons ("ISOR") for the ZEP Certification ("ZEPCert") Regulation asserts that the requirements at issue simply amount to a "new, optional certification pathway" (ZEPCert ISOR, p. ES-1), the Zero-Emission Airport Shuttle Regulation (hereinafter, the "ZEV Shuttle Regulation") would mandate the use of CARB-certified ZEPs, thereby eliminating the "optional" nature of ZEP certification. "Specifically, the proposed regulation, starting with model year 2026, will require heavy-duty airport shuttle ZEVs to contain powertrains certified to the new proposed Zero-Emission Powertrain standard." (ZEV Shuttle ISOR, pp VII-1, VIII-16.) The ZEV Shuttle ISOR (at page X-9) goes on to confirm the mandatory nature of CARB's ZEP certification requirements, as follows:

> The proposed ZEPCert regulation would establish new, enhanced certification procedures for heavy-duty electric and fuel-cell vehicles, and the zero-emission powertrains they use.
>
> This proposed regulation in section 95690.5(c)(1) *requires* heavy-duty Zero-Emission Airport Shuttles starting with model year 2026 *to be certified to the proposed ZEPCert regulation.*
>
> (Emphasis added.)

The referenced regulatory requirement — proposed section 95690.5(c)(1) — would mandate that:

> 2026 and later model year heavy-duty vehicles (GVWR of greater than or equal to 14,001 pounds) *must be certified and approved for sale in California* pursuant to the Enhanced Electric and Fuel-Cell Vehicle Certification Procedures contained in section 95663, of title 17 of the California Code of Regulations, incorporated by reference therein, in order to be counted as a ZEAS [zero-emission airport shuttles] when calculating the total fleet percentage.
>
> (Emphasis added.)

Thus, when the two pending rulemakings are read together, it is clear that the certification requirements at issue are not optional. It also is clear that CARB does not have the statutory authority to adopt mandatory ZEP certification requirements, which, as explained below, renders those proposed requirements invalid as a matter of law.

The specific provisions of the proposed ZEP certification requirements would include all of the following regulatory elements:

(i) Certified heavy-duty families of ZEVs would be required to use a ZEP that is certified in accordance with the "ZEPCert powertrain requirements," and would be required to submit a detailed "application package" for certification;

(ii) Manufacturers would be required to attest that the vehicle integration components are designed and developed to accommodate the expected output of the ZEP to be used;

(iii) Covered heavy-duty ZEV manufacturers would be required to include a ZEPCert "compliance statement" on their Phase 2 GHG labels;

(iv) Covered heavy-duty ZEV manufacturers would be required to provide vehicle purchasers with a "prescribed guidance statement identifying considerations that would be made when choosing a [heavy-duty electric vehicle]," including range, top speed, maximum grade, and impacts on performance, and also would be required to provide a detailed description of the manufacturer's diagnosis and repair process;

(v) Covered heavy-duty ZEV manufacturers would be required to make available their diagnostic and repair manuals, as well as any necessary service tools;

(vi) Covered heavy-duty ZEV manufacturers would be required to display or make available various vehicle-related information, including kilowatts used per trip and remaining usable battery-capacity;

(vii) Covered heavy-duty ZEV manufacturers would need to utilize a standardized battery-capacity test (the constant current battery depletion test) to "provide a useful reference point by which different battery-based powertrains could be compared;"

(viii) Covered heavy-duty ZEV manufacturers would be required to describe the monitoring, diagnostics and software strategies that they use;

(ix) Covered heavy-duty ZEV manufacturers would be required to provide ZEP warranties covering all powertrain components against workmanship and component defects for, at a minimum, 3-years or 50,000 miles of operation;

(x) Covered heavy-duty ZEV manufacturers would be required to submit periodic "screened" and unscreened" warranty information reports, and to initiate ZEV recalls when the number of screened failures of warranted ZEP components exceeds 4 percent or 25 failures, whichever is greater; and

(xi) Covered heavy-duty ZEV manufacturers would be required to affix a label on each certified ZEP providing, among other things, the manufacturer's name and a "compliance statement" confirming that the ZEP has been certified to CARB's requirements.

Significantly, none of the foregoing multiple regulatory requirements relate to engine or vehicle emissions standards or to engine vehicle emissions performance in-use. Rather, all of the foregoing requirements relate to consumer awareness or protection, all aimed at spurring consumers' purchases of and satisfaction with heavy-duty ZEVs. The relevant provisions of the pending ISORs confirm as much:

> Staff's proposal is intended to bring about greater transparency, consistency, and stability to the market by addressing some of the key concerns associated with the dynamic and evolving nature of the heavy-duty zero-emission industry. Specifically, staff's proposal would help reduce variability in the quality and reliability of HDEVs and HDFCVs, ensure information regarding HDEVs and HDFCVs and their powertrains are effectively and consistently communicated to purchasers, and accelerate progress toward greater vehicle repairability. Adding market transparency, consistency and stability will be a critical step towards broad market adoption of zero-emission technology in the heavy-duty sector.

> Given time, staff expects that the market forces would eventually lead to a ZEV industry that is self-sustaining. However, considering California's aggressive zero-emission goals, staff believes the market will need additional policy support to accelerate this process (ZEPCert ISOR, p. 10.)
>
> * * *
>
> Transparency about system capabilities, warranty, and recall provisions are all critically important protections for the consumer . . . . The proposed ZEPCert regulation would ensure fleet purchasers are provided with consistent and reliable information about zero-emission technology and the vehicles that use it, and that heavy-duty electric and fuel-cell vehicles are well supported once deployed. (ZEV Shuttle ISOR, pp. 1-3, X-9, and X-19.)

CARB's repeated statements in the ISORs at issue confirm that the proposed ZEP certification requirements are not intended to limit the quantity of specified emissions from heavy-duty vehicles or engines. To the contrary, CARB staff explicitly concede that the purpose of the proposed certification requirements is to enhance consumers' acceptance of and satisfaction with heavy-duty ZEVs — to promote the "broad market adoption of zero-emission technology in the heavy-duty sector." Those types of consumer-protection and market-promotion regulations, however, are beyond the scope of CARB's certification authority under the relevant California statutes.

Health and Safety Code ("HSC") section 39018 defines "certification" to mean "a finding by the state board that *a motor vehicle, motor vehicle engine, or motor vehicle pollution control device* has satisfied the criteria adopted by the state board *for the control of specified air contaminants from vehicular sources*." (Emphasis added.) HSC section 39040 defines "motor vehicle pollution control device" to mean "equipment designed for installation on a motor vehicle *for the purpose of reducing the air contaminants emitted* from the vehicle." HSC sections 43013(a) and 43101(a) provide that "the state board shall adopt motor vehicle emission standards . . . *for the control of air contaminants and sources of air pollution*," and shall "adopt and implement emission standards *for new motor vehicles for the control of emissions from new motor vehicles*." (Emphasis added.) In that regard, HSC section 39027 defines "emission standards" to mean "specified limitations on the discharge of air contaminants into the atmosphere." Finally, HSC section 43102(a) states that,

> No new motor vehicle or new motor vehicle engine shall be certified by the state board, *unless the vehicle or engine*, as the case may be, *meets the emission standards adopted by the state board* pursuant to Section 43101 . . . . (Emphasis assed.)

From all of the foregoing, it is evident that CARB's certification authority under the applicable statutes is limited to issuing findings that a new motor vehicle, new motor vehicle engine, or new motor vehicle pollution control device has satisfied CARB's prescribed limitations on the discharge of specified air contaminants into the atmosphere. As a result, it is equally clear

that CARB does not have the authority to certify specific powertrain components that have no capability to discharge any air contaminants into the atmosphere. CARB's certification authority is inherently tied to the assessment and verification that new motor vehicles and engines — not specific zero-emission powertrain components — are compliant with specified limitations on the discharge of air contaminants. Mandating that manufacturers provide "consistent and reliable information about zero-emission technology" simply does not fit within the scope of CARB's delegated certification authority as delineated by the relevant HSC statutes. Where a system for vehicle tractive effort is comprised of powertrain components that cannot and do not produce any emissions, those components, by definition and by law, are outside the ambit of CARB's certification authority for the control of specified air contaminants from motor vehicles and engines.

All of the foregoing statutory provisions support the conclusion that CARB does not have the authority to certify specific heavy-duty powertrains and powertrain components that have no capability to generate or discharge emissions of any air contaminants. Consequently, CARB's proposals to adopt detailed ZEP-related certification requirements pertaining to battery capacity, labeling, purchasing guidance, on-board information, diagnostics and repairs, are simply beyond the scope of CARB's legislatively delegated authority, and so are invalid.

The same holds true for CARB's specific proposals to prescribe warranties and recall requirements relating to ZEP components. Again, the plain reading of the relevant provisions of the HSC bears this out.

Those relevant statutory provisions are as follows:

> **HSC §43205.5. Manufacturer's warranty on vehicles or engines**
> Commencing with the 1990 model-year, the manufacturer of each motor vehicle and motor vehicle engine . . . shall warrant to the ultimate purchaser and each subsequent purchaser *that the motor vehicle or motor vehicle engine* meets all of the following requirements:
>
> (a) Is designed, built, and equipped *so as to conform with the applicable emission standards* specified in this part for a period of use determined by the state board.
>
> (b) Is free from defects in materials and workmanship which cause *the motor vehicle or motor vehicle engine* to fail to conform with the applicable requirements specified in this part.
>
> (Emphasis added.)
>
> * * *
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> **HSC §43105. Manufacturer's violation and failure to correct; recall**
> No *new motor vehicle, new motor vehicle engine,* or motor vehicle with a new motor vehicle engine required pursuant to this part to meet

> *the emission standards established pursuant to Section 43101* shall be sold to the ultimate purchaser . . . or registered in this state *if the manufacturer has violated emission standards and test procedures* and has failed to take corrective action, which may include recall of vehicles or engines . . .
>
> (Emphasis added.)

The foregoing statutes make it clear that CARB's warranty authority under the HSC is limited to ensuring that manufacturers comply with the tailpipe emission standards and other emissions-related requirements that apply to motor vehicles and motor vehicle engines. CARB's statutorily-limited warranty authority does not extend to enhancing the "market transparency, consistency and stability" for the various components of ZEPs, or to promoting the "broad market adoption of zero-emission technology in the heavy-duty sector." The relevant provisions of HSC section 43205.5 do not by any stretch authorize regulations geared to provide "policy support to accelerate" the maturation of the heavy-duty ZEV/ZEP market. Nor do they cover powertrain components at all. Rather, the governing statutory provisions constrain and restrict CARB's warranty authority to regulations that help to ensure that new motor vehicles and new motor vehicle engines remain in compliance with quantitative emissions standards and related requirements for the period of use that the state board determines. CARB's proposal for ZEP warranties — which again is aimed at enhancing customers' acceptance of and satisfaction with the componentry of heavy-duty ZEPs, not at ensuring robust tailpipe emissions compliance — exceeds the bounds of CARB's statutory authority.

Similarly, CARB's proposal to establish defect reporting and recall requirements centered around the number of failures of ZEP components also is beyond the scope of CARB's delegated regulatory authority. Under HSC section 43105, CARB-mandated corrective actions, including recalls, are limited to circumstances where it can be demonstrated, through reported failure rates or otherwise, that a manufacturer's motor vehicles or motor vehicle engines are in violation of "emission standards" or related "test procedures." Accordingly, the corrective actions, along with the monitoring that might lead to corrective actions, that are permitted under HSC section 43103 do not encompass actions intended to promote the market for "zero-emission" powertrain component parts, such as generators, on-board chargers or battery management systems. Those types of non-emissions-related consumer-satisfaction issues are simply outside the boundaries of CARB's emissions-related mission and legislative grants of authority, especially as it pertains to warranties, defect reporting, and recall requirements.

For all the foregoing reasons, therefore, CARB's proposed mandatory requirements for ZEP-related certifications, warranties, defect reporting, and recalls are inconsistent with CARB's enabling statues, and so are invalid and unlawful.

## CARB Significantly Underestimated the Costs of the Proposed Zero-Emission Powertrain Certification Regulation

CARB projects that the total powertrain and vehicle certification costs of the ZEPCert regulations will be $166,560 in 2021, and less than one-half of that cost in subsequent years (ISOR, pages 36 & 37). Those CARB estimates are incredibly low. According to the ISOR, CARB's estimated costs include the collective costs of all sixteen manufacturers that build or may build

ZEPs and ZEVs, and assume that each manufacturer will certify one family of products. By contrast, EMA members estimate that the costs to comply with the proposed regulatory elements listed above could range from $500,000 to $5,000,000 for one powertrain and one vehicle certification family for the first year of production, declining after that. Depending on the annual sales of ZEVs, which EMA expects will be initially quite low (the ISOR assumes six vehicles for each powertrain/vehicle family in 2021), the certification costs that would be allocated to each powertrain or vehicle in the early years of the proposed ZEPCert regulations could exceed the cost of the vehicle! That unreasonable burden would be added to the costs of HDOH ZEVs, which already are two to three times more expensive than comparable vehicles with internal combustion engines. Additionally, the limited specialized ZEV personnel at each manufacturer would be diverted to working on achieving CARB certification and away from their current work of developing and improving zero-emission products. Such a diversion of limited dedicated resources would have an additional negative impact on the nascent heavy-duty ZEV market.

Although EMA member companies have no experience certifying zero-emission powertrains or vehicles to the proposed new requirements, they have a great deal of experience in achieving similar CARB certification of internal combustion engines and vehicles. Based on that extensive experience, EMA has estimated the above costs of complying with the proposed ZEPCert requirements, and separately we have evaluated the potential additional costs of recalls under the ZEPCert Rule. The elements of certification that would impose the unreasonable costs at issue include certification testing of new battery packs to SAE Recommended Practice J1798 – a standard that heavy-duty manufacturers have no experience with and for which CARB apparently has not conducted even a single test of battery packs suitable for a heavy-duty vehicle. The EMA-estimated costs also include designing products to comply with the malfunction information, trip meter, rated-capacity energy display, and labeling requirements; as well as for developing owner's, and diagnostic and repair, manuals as required by the ZEPCert requirements. Additionally, EMA's estimated costs include the significant administrative costs of ensuring that tools, software and training are available to third-party repair facilities, developing and providing extensive warranty claim reports, and developing and submitting the other necessary information to achieve CARB certification.

In addition to the potential costs associated with achieving CARB certification of ZEPs and ZEVs under the proposed ZEPCert requirements, manufacturers would face a significant risk of conducting recall campaigns to repair (on a proactive basis) vehicles in service. In the heavy-duty commercial vehicle sector, manufacturers must design and build a nearly infinite variety of vehicles that are each customized to suit a fleet's unique operational needs. Accordingly, trucks are built in very low volumes, and fleets will continuously demand new configurations. Developing new ZEP technologies for that highly variable and constantly evolving market is sure to result in a number of field issues.

To address those inevitable field issues, manufacturers and their dealerships already have in place highly trained engineers and other personnel engaged in regional field service, fleet service and call centers. However, the proposed ZEPCert regulations would impose the additional risk that the manufacturer may need to conduct recall campaigns to proactively repair significant populations of vehicles in service. Conducting recall campaigns involves a great deal of administrative work to complete all the customer notification and CARB reports, technical work to develop repair instructions, costs to supply repair parts to all dealerships, and costs to pay the

dealerships for the labor and administrative work involved with repairing the vehicles. If a manufacturer exceeds the four percent failure threshold and CARB orders a recall campaign, the manufacturer may need to proactively repair the other 96% of similar vehicles in service. For relatively simple field issues, such as a software reflash or wiring connector change, the costs of the recall could be in the tens of thousands of dollars. For a more significant recall, such as to replace battery packs, the costs to the manufacturer could be in the millions of dollars.

To properly assess and account for the costs of those potential recalls, manufacturers must estimate the number of different recalls that CARB may require them to conduct and the probability of each occurrence. While extremely difficult to predict, the potential costs of the ZEPCert recall requirements could be very high. Unfortunately, on top of their high costs, those recalls are very likely to create more customer dissatisfaction, not less. Commercial vehicle fleet customers are sophisticated enterprises that frequently interact with their heavy-duty powertrain and vehicle providers. Under existing business relationships, fleet customers know very well how to ensure that the manufacturer remedies field issues, because, if not, they will find another supplier. Requiring a fleet to remove a working vehicle from service to complete a recall repair, that may or may not ever be needed for the specific vehicle's application, presents an unwelcome disruption to the business of the fleet. In short, recall campaigns are the most expensive, and least effective, mechanism for addressing field problems with commercial vehicles.

## CARB Must Modify Several Aspects of the Proposed Zero-Emission Powertrain Certification Regulation to Make the Rule Workable and Implementable

### Applicability

The ZEPCert rule would establish an "optional" certification scheme for Model Year (MY) 2021 and later zero-emission powertrains and vehicles. Despite labeling the regulations as "optional," CARB lists six different heavy-duty zero-emission incentive programs that could include the ZEP certification requirements as mandatory in the near future (ISOR pages 19-21). Since battery-electric and fuel-cell vehicles currently may cost two or three times their internal combustion engine counterparts, government incentives are necessary in a commercial vehicle marketplace in which fleets demands a return on their financial investments in new vehicles. When those various incentive programs incorporate the ZEPCert requirements, as the ISOR predicts they will, the certification requirements will essentially become mandatory. That type of mandatory adoption of the ZEPCert requirements, as prerequisites to incentive funding, likely will occur in advance of the 2026 effective date in the proposed ZEV Shuttle Regulation.

The ZEPCert requirements are completely new, and propose to apply certification requirements for the purposes of customer awareness and protection, not for the purpose of reducing emissions of air contaminants. Additionally, the zero-emission technologies at issue are in their infancy in commercial vehicles and their myriad customized in-use applications. Given the novelty of the proposed certification requirements for zero-emission powertrains and vehicles, and the emerging nature of the zero-emission heavy-duty marketplace, EMA believes that the ZEPCert rule should remain truly optional until at least MY 2026, the effective date of the ZEV Shuttle Regulation. Specifically, CARB should prohibit the adoption of the ZEPCert requirements

as elements of any incentive program until at least MY 2026. Providing an extended amount of time for truly optional application would enable CARB and the affected manufacturers to gain the necessary experience to ensure the ZEPCert requirements are achieving their intended benefits, without harming the market by adding unnecessary product costs and needlessly consuming manufacturers' limited resources.

**System Monitoring and Diagnostics Information**

The proposed ZEPCert regulations appropriately clarify that while manufacturers must describe their ZEP monitoring and diagnostic system, that requirement does not dictate the design of the manufacturer's system. That clarification is important to distinguish the proposed ZEPCert requirement from CARB's complicated, expansive, expensive and resource-intensive on-board diagnostic requirements for internal combustion engines. Nonetheless, the *System Monitoring and Diagnostic Information* section in the proposed ZEPCert Rule would require manufacturers to supply CARB a tremendous amount of information. That section requires manufacturers to provide in their certification application a range of detailed information including: (i) a list of the monitoring components in a range of systems, and a description of the function of each; (ii) the range of outputs being monitored and the thresholds at which each will indicate a malfunction; and, (iii) a description and other details of the method of monitoring and calculating the state of battery health. Moreover, the section would require manufacturers to report to CARB any changes to their monitoring and diagnostics systems. In short, the *System Monitoring and Diagnostic Information* section would require manufacturers to report voluminous detailed information to CARB, and to further report on any changes to the information. More than other aspects of the proposed ZEPCert Rule, those reporting requirements will consume a great deal of time from manufacturers' zero-emission experts -- taking them away from their primary responsibility of developing and improving heavy-duty zero-emission powertrains and vehicles.

On top of all the time-consuming reporting requirements in the *System Monitoring and Diagnostic Information* section of the ZEPCert rule, there is one proposed requirement that would be especially disruptive to the process of certifying and deploying ZEPs. The requirement for manufacturers to create a new certification family whenever they make a major change to their monitoring and diagnostics systems would not only establish yet another enormous administrative burden, but it would also significantly delay the deployment of product improvements. Moreover, that proposed requirement conflicts with the part of the ZEPCert Rule on establishing certification families because the *Certification Families* provisions do not even include the monitoring and diagnostic system as a certification family differentiator. It may take a manufacturer several months to gain approval from CARB for a new certification family, and during that time they would not be permitted to deploy the major improvement to the affected ZEP monitoring and diagnostic system. To avoid such an unintended negative consequence, CARB should revise the requirement to instead allow manufacturers to submit running changes to their existing certification when they make a major change to a ZEP monitoring or diagnostic system. In addition to streamlining the ZEPCert requirements, allowing running changes in those situations would be consistent with existing certification requirements for internal combustion engines.

**Owner's, and Diagnostic and Repair, Manuals**

The heavy-duty commercial vehicle marketplace consists of specialized and highly customized vehicles each built to suit the specific needs of a particular fleet's operation. With low sales volumes of each vehicle configuration, developing complete owner's and diagnostic and repair manuals can be a very expense undertaking, particularly on a per-vehicle basis. Developing the manuals takes a significant amount of time from the same technically-proficient experts that are otherwise assigned to developing and improving ZEV products. Moreover, in the commercial vehicle environment, fleet owners may not find much utility in the manuals. When fleets do not understand something about the equipment they purchased, they have multiple ways of getting the information directly from the manufacturer.

CARB should revise the owner's, and diagnostic and repair, manual requirements for both zero-emission powertrain and vehicles to take into account the high cost-per-powertrain or vehicle of developing complete manuals, the counter-productive nature of diverting limited product-development technical experts to developing the manuals, and the limited utility of the manuals in a commercial vehicle environment. To make the manuals more cost-effective, and instead of requiring complete published manuals, CARB should allow powertrain and vehicle manufacturers to provide a compilation of information that addresses the required elements. Additionally, where the required information is provided with the powertrain, the regulations should not require the vehicle manufacturer to repeat it in the vehicle manuals.

**Repairability**

The need for manufacturers to provide repair tools and software to third-party repair facilities at a fair and reasonable cost, and potentially with required training, is well understood. However, the proposed ZEPCert Rule twists that accepted industry practice into an unreasonable requirement that manufacturers must make available any tools and software used by "its internal repair personnel" (section 3.1.6, *Availability of Tools*, and section 3.3.3 under *Diagnostic and Repair Manual*). Under that language, manufacturers would have to make available to third-party repair facilities prototype and product development tools and software. Providing such prototype and unvalidated tools and software to repair personnel at dealerships (who are not "internal personnel," but rather employees of an independent franchised businesses) could be ineffective, or worse, unsafe. CARB seems to recognize those potential unintended consequences in the regulatory language for powertrains where the regulation requires manufacturers to provide third-party repair facilities the same tools that it "makes available to its dealers" (section 4.1, *Availability of Tools*).

CARB should avoid significant potential unintended consequences, and should follow accepted industry practice, by revising the powertrain and vehicle regulatory language to consistently require that a manufacturer provide to third party repair facilities only the tools and software that it provides to its dealerships.

**Warranty Period**

In the business-to-business transaction of manufacturers selling commercial vehicles to

fleet customers, often they will offer an extended warranty on top of the base warranty period. Extended warranties come in many shapes and sizes, but always include shifting the risk of product failure after the base warranty from the customer to the manufacturer. In other words, in exchange for an up-front payment by the purchaser, the manufacturer will assume the risk of breakdowns later in the life of the product. Under an extended warranty, the manufacturer will agree to honor warranty claims beyond the base warranty.

The proposed ZEPCert regulation requires that powertrain manufacturers provide a base warranty against defects in materials and workmanship of three years or 50,000 miles, whichever occurs first (section B.2., *Warranty Period*). During that period, the manufacturer must provide CARB reports of warranty claims and potentially be required to conduct a recall campaign when the number of failures exceed a certain threshold. EMA believes that extending, by regulation, ZEP warranty reporting and recall requirements in circumstances where the manufacturer and customer already can agree to a voluntary extended warranty would negatively interfere with the business-to-business transaction between a manufacturer and their fleet customer by making extended warranties prohibitively expensive. That negative consequence is recognized by the requirements for internal combustion engines, which do not include claims made under extended warranties. Accordingly, CARB should clarify in the ZEPCert rule that the warranty reporting and recall provisions only include claims made during the three-year or 50,000 mile regulatory warranty period.

**Warranty Reports**

Under the proposed ZEPCert Rule, manufacturers must provide extensive reports to CARB regarding the warranty claims they receive for any powertrain component. Developing and providing those reports could consume a significant amount of time of the technical experts that would otherwise be focused on developing and improving ZEPs. Additionally, warranty claims can be a misleading indicator of actual component failures. In a commercial vehicle environment, warranty claims through a dealer can be later denied by the manufacturer, can be used to generate goodwill with a fleet customer by proactivity repairing powertrains that have not yet failed, and can be misleading without knowing whether there are irregularities in how the fleet is using the vehicle.

Considering the burden of supplying warranty reports, and the often-misleading nature of tallying-up warranty claims, CARB should streamline the proposed requirements in the ZEPCert Rule. Specifically, CARB should eliminate the redundant *Field Information Report*, and leave only *Unscreened and Screened Warranty Information Reports*. Additionally, to avoid excessive information, CARB should require an *Unscreened Warranty Information Report* only after claims for a warranted part reach four percent or 25, whichever is greater, and manufacturers should be required to provide the reports 45 days after the close of each quarter rather than after the claims reach one of those thresholds. Finally, to avoid providing excess information that may be superfluous to the ZEPCert goals of providing customer satisfaction and protection, the *Screened Warranty Information Report* should include only manufacturer-validated failures that would render the vehicle inoperable.

**Recalls**

As stated earlier, recall campaigns are the most expensive and least effective mechanism for addressing field issues with commercial vehicles. If CARB insists on burdening the heavy-duty ZEV market in California with regulatory requirements for conducting recall campaigns, it should at least streamline the proposed requirements to make them as workable and implementable as possible. To streamline the requirements, CARB should eliminate the redundant *Influenced Recall* provisions. Additionally, the regulatory language should specify that CARB may order a recall when failures *that render the vehicle inoperative* reach four percent or 25, whichever is greater. As part of that streamlining, CARB should clarify in section X, *Failure Levels Triggering Recall*, that the Executive Officer retains discretion and judgement regarding when to order a recall. To do so, CARB should modify the regulatory language in that section to read that when ZEPs exceed the stated thresholds they "may be subject to an ordered recall," instead of "shall be subject to a recall."

As also noted earlier, recall campaigns involve a great deal of administrative work to complete the specified customer notifications, repair instructions and CARB reports, and to supply repair parts to dealerships, and pay the dealerships for the labor and administrative costs of repairing the powertrains. Among the reporting burdens in the ZEPCert Rule are up-front notification reporting to CARB and the *Recordkeeping and Reporting Requirements* after the recall has been initiated. Those recordkeeping and reporting requirements appear to have been borrowed from the regulations for emissions-related recalls of internal combustion engines, where the goal of the recall is to reduce the amount of air contaminants emitted from the engine. Such extensive Recordkeeping and Reporting are inappropriate for ZEP recalls, that are intended only for consumer satisfaction and protection purposes. As such, CARB should changes the ZEPCert requirements to include only one recall campaign progress report for voluntary or ordered recalls, and that report should be submitted one-year after the manufacturer initiates the recall. Additionally, when supplying a listing of the vehicle identification numbers (VINs) of unrepaired powertrains in the progress report for voluntary or ordered recalls, the manufacture should not be required to provide the VINs more than once or provide them in a "standardized computer data storage device" (sections J. 1.10 and T. 1.10). Accordingly, CARB should remove those requirements.

The ZEPCert Rule would require that manufacturers provide several layers of proof that a recall has been successfully performed on the powertrain of a vehicle. In addition to maintaining proof in the manufacturer's internal systems, the manufacturer must ensure that the repair facilities also affix a label on the vehicle and provide the owner a certificate (in a format to be prescribed by CARB) (section H. for *Voluntary Recalls* and section Q. for *Ordered Recalls*). In addition to the manufacturer's internal recordkeeping, and a mandatory recall progress report to CARB, those label and certificate requirements represent redundant and excessive administrative burdens that are likely to provide limited value. The additional requirements are particularly excessive when the manufacturer will always have a record of repaired and unrepaired vehicles subject to the recall, and that information would be available directly from the manufacturer or through a dealership. Moreover, labels affixed to the vehicle may be illegible, and covered or removed; and the yet-to-be defined, and potentially ever-changing certificate is most likely to end up being lost. Even with the excessive and redundant label and certification requirements, the best way to confirm whether

a vehicle has been repaired under a recall most likely will be to contact the manufacturer directly or through one of its dealerships. Accordingly, CARB should completely remove the Repair Label and *Proof of Correction Certification* sections for both voluntary and ordered recalls from the ZEPCert Rule. Alternatively, CARB should only require a label *or* a certificate -- not both.

## Conclusion

CARB does not have the legal authority to adopt certification, warranty, defect reporting and recall requirements for ZEPs. Thus, the proposed regulations are invalid as a matter of law. In addition, there are multiple substantive aspects of the proposed regulations that require amendments or deletion, as detailed above. EMA looks forward to continuing its work with CARB staff to address those issues.

Respectfully submitted,

TRUCK & ENGINE
MANUFACTURERS ASSOCIATION

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