



Air Resources Board



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Edmund G. Brown Jr.
Governor

DATE: June 9, 2017

Mail-Out #MSC-17-12

TO: All Interested Parties

SUBJECT: PUBLIC WORKSHOP TO DISCUSS PROPOSED AMENDMENTS TO THE CALIFORNIA EMISSION CONTROL SYSTEM WARRANTY REGULATIONS FOR ON-ROAD HEAVY-DUTY VEHICLES WITH GROSS VEHICLE WEIGHT RATINGS GREATER THAN 14,000 LBS.

The California Air Resources Board (CARB or Board) invites you to participate in a public workshop to discuss staff's proposed regulatory amendments to Title 13, California Code of Regulations, Section 2036, regarding Heavy-Duty Vehicle (HDV) emission warranty requirements. Specifically, staff's presentation will focus on the need for longer HDV warranty periods in California to help achieve attainment with National Air Quality Standards.

The workshop will be held at the following location and time:

Date: Wednesday, July 12, 2017

Time: 10:00 a.m. – 1:00 p.m.

Location: South Coast Air Quality Management District, Auditorium
21865 Copley Drive
Diamond Bar, California 91765

The workshop will be available via webcast for those unable to attend in person. The broadcast can be accessed on the day of the workshop at http://www.aqmd.gov/home/calendar_v2/webcasts. Information on submitting questions and comments will be provided during the webcast for remote participants. Staff's presentation and any associated documents will be posted prior to the workshop on CARB's website at: <https://www.arb.ca.gov/msprog/hdlownox/hdlownox.htm>.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Background

In 1978, CARB initially adopted emission warranty regulations for passenger cars, light-duty trucks, and medium-duty vehicles to clarify the rights of individual motor vehicle and engine owners, motor vehicle and engine manufacturers, and the service industry. The emission warranty is used to cover any repairs needed to correct defects in materials or workmanship that would cause an engine or vehicle not to meet its applicable emission standards.

In 1982, CARB adopted regulations that established California's first in-use recall program. These regulations were intended to reduce vehicular emissions by ensuring that noncompliant vehicles are identified, recalled, and repaired to comply with the applicable emission standards and regulations during customer use, and to encourage manufacturers to improve the design and durability of emission control components to avoid the expense of a recall.

In 1982 and 1984, the United States Environmental Protection Agency (U.S. EPA) promulgated HDV useful-life and warranty requirements identical to those adopted in California. Both CARB and U.S. EPA require that HDVs meet emission standards throughout their useful-life periods.

Finally, in 1988, CARB adopted the Emission Warranty Information Reporting (EWIR) regulations for tracking emission control component defects affecting on-road vehicles. The EWIR regulations require manufacturers to review all emission-related warranty claims on a quarterly basis to determine the number of repairs or replacements made for each component.

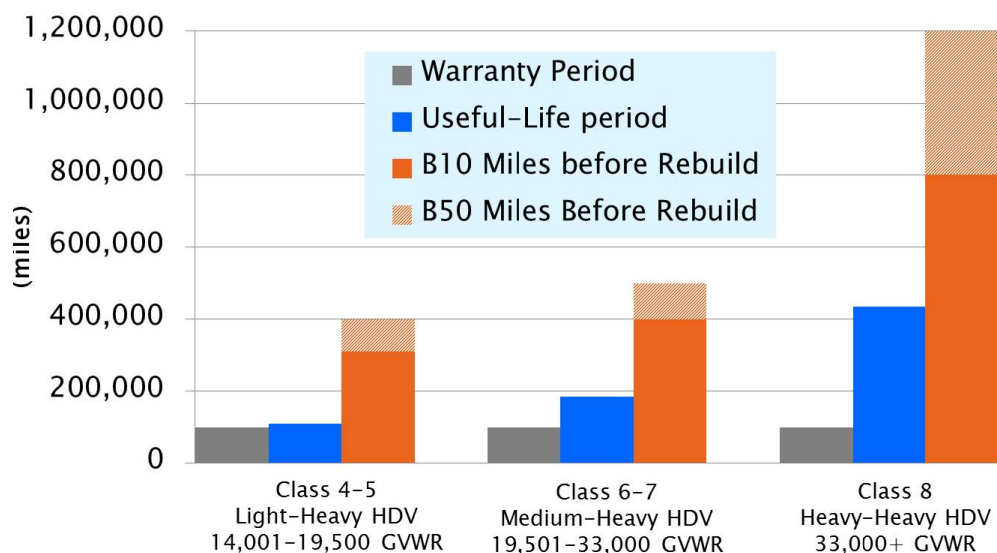
Recent and ongoing CARB studies have identified numerous HDVs with mileages within their applicable useful-life periods, but beyond their warranty period, that have oxides of nitrogen (NOx) emission levels significantly above their applicable certification standards. Also, recent CARB reviews of manufacturer warranty claims show high warranty claim rates for both diesel- and natural gas-fueled HDVs. Interviews with fleets, retrofit installers, and equipment dealers confirm these findings, and suggest that some fleets are experiencing significant vehicle downtime.

Improving engine durability is critical to preventing component failures that can damage emission control components and result in excess emissions. Increasing the emission warranty periods would encourage manufacturers to improve the durability of their

engines and emission control systems through the development and use of higher quality parts and materials. In addition, a lengthened warranty period would result in fewer incidences of tampering and mal-maintenance because the cost of repairs would be covered longer by the manufacturer, which in turn would result in a reduction of HDV emissions.

The current HDV required emission warranty period, 100,000 miles, is reached relatively early in vehicle lives and well before rebuild typically occurs. Figure 1 provides a comparison of warranty and useful-life to real-world HDV longevity.

Figure 1
Comparison of Warranty and Useful-Life to Real-World Longevity



Warranty is 50,000 miles / 5 years for Otto-cycle engines.
 Hourly warranty limits do not apply to Otto-cycle engines or engines certified to the greenhouse gas emission standards in 17 CCR 95663.
 Mileage before rebuild data obtained from online industry publications (mixture of B10, B50, and other sources including manufacturers' websites).
 Classes 4-5 warranty is 50,000 miles / 5 years for diesel engines certified to the greenhouse gas emission standards in 17 CCR 95663.

On November 3, 2016, CARB held a workshop in Diamond Bar, California to introduce its upcoming control measures for reducing NOx emissions. CARB staff presented an overview of staff's warranty lengthening proposal, and formation of a warranty workgroup was announced. The workgroup is meant to help staff better understand industry's concerns and to facilitate the sharing of data. The first warranty workgroup meeting occurred on January 31, 2017, at which time CARB staff requested data from stakeholders, including, but not limited to, warranties currently offered, fail rates for emissions-related parts, and anticipated costs of lengthening the emissions warranty to

various levels. CARB staff continues to seek such data; for example, we are aware some manufacturers offer commercial warranties that go beyond 100,000 miles, but are seeking further information regarding exactly what current warranties cover. We hope to continue dialogue with stakeholders at the workshop and beyond, and expect to refine our proposal based on data and insights gathered.

Proposal

Table 1 provides a summary of staff’s proposal to amend existing warranty periods for Class 4-8 HDVs. In addition to the longer minimum warranty periods shown below, CARB staff proposes that the 3,000 hour limit no longer be applicable under California’s amended warranty period provisions for HDVs. Staff welcomes discussion on its proposal, and is soliciting comments and questions from interested stakeholders.

Table 1
Proposed Amended Warranty Periods

HEAVY-DUTY CATEGORY	CURRENT ^{1,2} WARRANTY (miles)	PROPOSED ⁴ “FIRST STEP” WARRANTY (miles)
Class 8 Heavy-Heavy GVWR > 33,000 lbs.	100,000 5 years/3,000 hours	435,000 5 years
Class 6-7 Medium-Heavy 19,500 lbs. < GVWR ≤ 33,000 lbs.	100,000 5 years/3,000 hours	185,000 5 years
Class 4-5 Light-Heavy 14,000 lbs. < GVWR ≤ 19,500 lbs.	100,000 ³ 5 years/3,000 hours	110,000 ⁵ 5 years

¹ Current Warranty is 50,000 miles / 5 years for Otto-cycle engines.
² Hourly limits are not applicable to Otto-cycle engines or the GHG emissions standards in 17 CCR 95663.
³ Current Warranty is 50,000 miles / 5 years for compliance with the GHG emission standards of 17 CCR 95663.
⁴ Proposed “First Step” Warranty limits are identical for both diesel and Otto-cycle engines.
⁵ Proposed “First Step” Warranty limits are not applicable to the GHG emission standards of 17 CCR 95663.

Contact

If you have questions about the proposed workshop agenda or the topics to be discussed, please submit them to Mr. Jeff Lowry, Staff Air Pollution Specialist, at (626) 575-6841 or by email at jeffrey.lowry@arb.ca.gov, or to Mr. Ronald Haste, Manager of the Off-Road Control Section, at (626) 575-6676 or by email at ron.haste@arb.ca.gov.

Special Accommodations

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Please note that under the California Public Records Act (Government Code section 6250 et seq.), your written and verbal comments, submitted attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request.

Consecuente con la sección 7296.2 del Código de Gobierno de California, una acomodación especial o necesidades lingüísticas pueden ser suministradas para cualquiera de los siguientes:

- Un intérprete que esté disponible en la audiencia.
- Documentos disponibles en un formato alternativo u otro idioma.
- Una acomodación razonable relacionados con una incapacidad.

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Sincerely,

/s/

Michael Carter
Assistant Chief
Mobile Source Control Division

cc: See next page.

All Interested Parties

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cc: Ron Haste, Manager
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