WHEREAS, sections 39002 and 39003 of the Health and Safety Code charge the California Air Resources Board (CARB or the Board) with the responsibility for systematically attacking the serious air pollution problem caused by motor vehicles;

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Board to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in sections 43000 and 43000.5(a) of the Health and Safety Code, the Legislature declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the State and that despite significant reductions in vehicle emissions in recent years, continued growth in population and vehicle miles traveled throughout California have the potential not only to prevent attainment of the state standards, but in some cases, to result in worsening of air quality;

WHEREAS, in section 43000.5(b) of the Health and Safety Code, the Legislature declared that the attainment and maintenance of the state air quality standards necessitates achieving substantial reductions in new vehicle emissions and substantial improvements in the durability of vehicle emissions systems;

WHEREAS, sections 43013(a) and (b) of the Health and Safety Code authorize the Board to adopt emission standards and in-use performance standards and other regulations for light-duty, medium-duty, and heavy-duty engines and vehicles that it finds to be necessary, cost-effective, and technologically feasible;
WHEREAS, section 43013(h) of the Health and Safety Code states that it is the intent of the Legislature that the Board act as expeditiously as feasible to reduce oxides of nitrogen (NOx) emissions from diesel vehicles and other categories of vehicular sources which significantly contribute to air pollution problems;

WHEREAS, section 43018(a) of the Health and Safety Code directs the Board to achieve the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to accomplish the attainment of state standards at the earliest practicable date;

WHEREAS, section 43018(c) of the Health and Safety Code further directs the Board that in carrying out the directives of section 43018(a), the Board shall adopt standards and regulations that will result in the most cost-effective combination of control measures on all classes of motor vehicles, including, but not limited to, reductions in in-use emissions through improvements in motor vehicle emission system durability and performance;

WHEREAS, sections 43100 and 43101 of the Health and Safety Code authorize and direct the Board to adopt and implement emission standards for new motor vehicles and new motor vehicle engines for the control of emissions therefrom that are necessary and technologically feasible;

WHEREAS, section 43102 of the Health and Safety Code provides that the Board shall not certify a new motor vehicle or motor vehicle engine unless the vehicle or engine meets the emission standards adopted by the CARB pursuant to Part 5 of the Health and Safety Code under test procedures adopted pursuant to section 43104;

WHEREAS, section 43104 of the Health and Safety Code provides that the Board shall adopt test procedures and any other procedures necessary to determine whether vehicles and engines are in compliance with the emissions standards established under Part 5 of the Health and Safety Code;

WHEREAS, section 43105 of the Health and Safety Code provides that no new motor vehicle or engine required under Part 5 of the Health and Safety Code to meet emission standards shall be sold to the ultimate purchaser, ordered or delivered for sale to the ultimate purchaser, or registered in this state if the manufacturer has violated emission standards or test procedures and has failed to take corrective action, which may include recall of vehicles or engines, specified by the Board in accordance with its regulations; and provides that the Board shall establish procedures for determining, and the facts constituting, compliance or failure of compliance pursuant to section 43105;

WHEREAS, section 43106 of the Health and Safety Code requires each new motor vehicle or new motor vehicle engine required under Part 5 of the Health and Safety Code to meet the emission standards established pursuant to section 43101 to be, in all
material respects, substantially the same in construction as the test motor vehicle or engine that has been certified by the Board [in accordance with Article 1, Chapter 2, of Part 5 of the Health and Safety Code];

WHEREAS, section 43205.5 of the Health and Safety Code requires manufacturers to warrant to ultimate purchasers and subsequent purchasers of their heavy-duty vehicles and engines that the vehicles and engines are designed, built, and equipped to conform to applicable emission standards for a period of use determined by the Board, and that such vehicles and engines are free from defects in materials and workmanship which cause the engines and vehicles to fail to conform to applicable emission standards for the same, or lesser, period of usage;

WHEREAS, section 43806 of the Health and Safety Code directs the Board to adopt emission standards and procedures applicable to new engines used in publicly owned and privately owned public transit buses;

WHEREAS, section 43018 of the Health and Safety Code directs the Board to endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of state ambient air quality standards at the earliest practicable date;

WHEREAS, in 2016 on a statewide mobile source basis, on-road heavy-duty vehicles were responsible for approximately 45 percent of statewide mobile source emissions of NOx, 19 percent of emissions of particulate matter less than or equal to 2.5 microns in diameter (PM 2.5), and 14 percent of emissions of hydrocarbons (HC);

WHEREAS, the San Joaquin Air Basin and the South Coast Air Basin are designated nonattainment areas for both the federal annual and the 24-hour National Ambient Air Quality Standards for PM 2.5;

WHEREAS, NOx emissions are a precursor to the formation of ozone and secondary PM 2.5, which are threats to public health and the environment;

WHEREAS, the South Coast Air Basin has the highest levels of ozone in the nation;

WHEREAS, CARB’s Mobile Source Strategy states that an 80 percent overall reduction in NOx emissions in the South Coast Air Basin is necessary to attain federal ambient air quality standards by 2031;

WHEREAS, California manufacturers have been required since the 2004 model year to provide emissions defect warranty coverage for on-road heavy-duty diesel vehicles and
the engines that power them for a period of 100,000 miles in service, five years in
service, or 3,000 hours of operation, whichever first occurs;

WHEREAS, many modern on-road heavy-duty diesel vehicles with a gross vehicle
weight rating (GVWR) greater than 14,000 pounds have service lives exceeding
1,000,000 miles before a major engine overhaul is required;

WHEREAS, recent CARB on-road heavy-duty diesel vehicle In-Use Surveillance
monitoring, In-Use Not-To-Exceed testing, and Emissions Warranty Information
Reporting indicate high rates of failures for some emissions-related systems and parts,
such as exhaust gas recirculation (EGR) systems and turbochargers, on certain engine
families during the warranty period, implying that real-world durability may not be
sufficient for these parts;

WHEREAS, on-road heavy-duty diesel vehicles and engines operating with
malfunctioning emissions-related parts or systems may emit substantially more NOx
and diesel PM than properly functioning vehicles and engines;

WHEREAS, on-road heavy-duty diesel vehicle and engine owners are more likely to
repair emissions-related part malfunctions when the manufacturer is liable for the repair;

WHEREAS, on-road heavy-duty diesel vehicle owners are less likely to tamper with,
and more likely to properly maintain their vehicles, during the warranty period to prevent
the warranty from being voided;

WHEREAS, longer warranty periods reduce emissions by minimizing tampering,
mal-maintenance, and by promoting timely repairs that keep emission levels in
compliance with applicable standards longer in-use;

WHEREAS, longer heavy-duty vehicle warranty periods are both feasible and desirable,
as evidenced by manufacturers and third-party vendors offering extended warranty
periods up to 1,000,000 miles at additional cost to vehicle owners;

WHEREAS, approximately 15 percent of on-road heavy-duty diesel vehicles and
engines are not covered beyond the mandatory 5 year/100,000 mile warranty period;

WHEREAS, longer warranty periods may incentivize the production of more durable
emissions-related parts, resulting in decreased downtime, in cases where parts are
frequently being replaced at the manufacturer’s expense during the warranty period;
WHEREAS, the engine and emission control technologies of low-mileage on-road heavy-duty diesel vocational vehicles sold in California are essentially identical to those of low-mileage on-road heavy-duty diesel vocational vehicles sold federally;

WHEREAS, manufacturers currently certify low-mileage on-road heavy-duty diesel vocational vehicles to federal warranty requirements without a 3,000-hour warranty period;

WHEREAS, the expiration of emissions defect warranty coverage for low-mileage on-road heavy-duty diesel vocational vehicles federally is determined by the five-year warranty age period, as would be the case in California if the California 3,000-hour warranty period were eliminated;

WHEREAS, elimination of the California 3,000-hour warranty period would better align stringency between California and federal warranty requirements;

WHEREAS, current minimum maintenance intervals have the potential to circumvent the incentives provided by lengthened warranty periods, and any resulting timely emissions-related repairs, by transferring the liability for emissions-related part replacement from the manufacturer to the vehicle owner during the lengthened warranty periods (thereby effectively shortening the lengthened warranty periods);

WHEREAS, in current practice engine manufacturers do not typically schedule maintenance that requires the replacement of critical emissions-related parts within the useful life of their heavy-duty engines, with a few exceptions, such as for DEF filters;

WHEREAS, the provision to limit manufacturer liability after scheduled maintenance contained in title 13, California Code of Regulations, section 2036 (d)(3), has the potential to circumvent the incentives of lengthened warranty periods and timely repairs by requiring the vehicle owner to pay for subsequent repairs during the lengthened warranty periods;

WHEREAS, vehicle owners are not liable for non-scheduled maintenance throughout the warranty period pursuant to title 13, California Code of Regulations, section 2036 (d)(1);

WHEREAS, California's current light- and medium-duty vehicle emissions defect warranty regulations require manufacturers to provide longer warranties for high-cost, emissions-related systems and parts capable of causing severe emission increases when malfunctioning;
WHEREAS, manufacturers are liable for replacing SCR beds and DPF filters during the useful life of the engine if the manufacturer schedules those parts to be replaced;

WHEREAS, failures of the Diesel Particulate Filter (DPF), Selective Catalyst Reduction (SCR) system, EGR system, and turbochargers have been shown to increase NOx emissions by over 280 percent, 300 percent, 100 percent, and 140 percent, respectively, and by over 4,700 percent for diesel PM in the case of the DPF;

WHEREAS, EGR systems and turbochargers can cause severe emission increases when malfunctioning, and are comparable in costs to SCR beds and DPF elements;

WHEREAS, on-road heavy-duty diesel engine manufacturers, as a matter of current practice, do not schedule EGR systems or turbochargers to be replaced during the useful life of their engines;

WHEREAS, the timely repair of malfunctioning turbochargers is necessary to ensure the reliable performance of downstream aftertreatment devices such as DPFs and SCR;

WHEREAS, the current definition of an “emissions-related part” contained in title 13, California Code of Regulations, section 1900 (b)(3) is defined as any part “which affects any regulated emissions from a motor vehicle…”

WHEREAS, emissions-related parts are warrantable parts as per the definition of a “warranted part” contained in title 13, California Code of Regulations, section 2035 (c)(2)(A);

WHEREAS, title 13, California Code of Regulations, section 1971.1 requires 2010 and newer model year on-road heavy-duty diesel engines (with a delayed compliance allowance for small-volume manufacturers) to be equipped with on-board diagnostics (HD OBD) systems;

WHEREAS, HD OBD systems are required to monitor all emissions-related parts and systems installed on heavy-duty vehicles;

WHEREAS, any part that enables or disables the monitoring of an emissions-related part is also an emissions-related part by virtue of its ability to mask the detection of emissions increases when those monitored parts malfunction;

WHEREAS, staff has proposed amending the California Emission Control System
Warranty Regulations and Maintenance Provisions for 2022 and Subsequent Model Year On-Road Heavy-Duty Diesel Vehicles and Heavy-Duty Engines with Gross Vehicle Weight Ratings Greater Than 14,000 Pounds and Heavy-Duty Diesel Engines in Such Vehilces, as set forth in Appendices A and B to the Staff Report, Initial Statement of Reasons for Proposed Rulemaking (ISR, or Staff Report), released to the public on May 8, 2018, to:

Lengthen the emissions defect warranty mileage periods for on-road heavy-duty diesel vehicles and engines beginning with 2022 model year engines greater than 14,000 pounds GVWR;

Retain the current five-year time in service period because the majority of vehicles exhaust their warranties by exceeding either the mileage period or time in service thresholds;

Eliminate the 3,000 hours of operation warranty period to better align with federal warranty provisions that do not include a 3,000 hours of operation warranty period;

Update the minimum allowable replacement maintenance intervals so that they do not inadvertently negate the proposed lengthened warranty periods;

Prohibit manufacturers from scheduling the replacement of EGR systems and turbochargers throughout an engine's useful life unless the manufacturer pays for all replacements;

Explicitly link the HD OBD system's Malfunction Indicator Light (MIL) illumination to the definition of a warranted part;

Revise existing regulatory language in title 13, California Code of Regulations, section 2036 (d)(3), that unintentionally shortens warranty periods;

Clarify manufacturers' liabilities for replacing emissions-related parts found to be defective as the result of a scheduled inspection;

WHEREAS, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000–60007);

WHEREAS, staff has determined that the proposed amendments to the California
Emission Control System Warranty Regulations and Maintenance Provisions for 2022 and Subsequent Model Year On-Road Heavy-Duty Diesel Vehicles and Heavy-Duty Engines with Gross Vehicle Weight Ratings Greater Than 14,000 Pounds and Heavy-Duty Diesel Engines in Such Vehicles, are exempt from CEQA under California Code of Regulations, title 14, section 15308 ("Class 8" exemption: Actions Taken by Regulatory Agencies for Protection of the Environment), and California Code of Regulations, title 14, section 15061(b)(3) ("common sense" exemption) because the record evidence shows that the amendments will enhance the environment by better protecting the public from health impacts associated with exposure to ozone, toxic air contaminants, and PM, the regulatory process involves procedures for protection of the environment, and the amendments will not result in any significant adverse environmental impacts as described in Chapter VI of the Staff Report;

WHEREAS, written comments were received that raise significant environmental issues associated with the proposal, staff prepared written responses to those issues as set forth in Attachment C, and the Board has reviewed and considered the written responses along with the environmental analysis included in the Staff Report;

WHEREAS, a public hearing and other administrative proceedings have been held according to the provisions of Chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

WHEREAS, the Board finds that:

Despite advances in reducing emissions from mobile sources, stationary sources, and area sources, California still has the most severe air pollution problems in the United States;

To meet federal and California Clean Air Act emission reduction requirements, CARB must continue to seek reductions from all sources under its authority, including heavy-duty on-road vehicles;

On-road heavy-duty diesel vehicles in California remain significant sources of PM, NOx, and HC emissions, which are threats to public health and the environment;

The current on-road heavy-duty diesel vehicle and engine emissions defect warranty mileage period of 100,000 miles is disproportionately low compared to the service lives of the majority of modern heavy-duty diesel vehicles, and is therefore insufficient to promote compliance with stringent emissions standards
Longer emissions defect warranty periods reduce emissions by helping to minimize the occurrences of tampering, mal-maintenance, and by incentivizing the timely repair of emissions-related parts that heavy-duty vehicle owners might otherwise ignore or postpone due to cost concerns;

Timely emissions-related repairs help achieve and maintain the emission benefits of existing heavy-duty diesel engine emission standards by ensuring that emission levels continue to comply with such standards longer in-use;

Elimination of the California-specific 3,000-hour time in operation warranty period increases the stringency of California’s on-road heavy-duty vehicle warranty requirements, and better aligns California’s requirements with federal regulations;

Less frequent minimum maintenance intervals are appropriate, feasible, and necessary to ensure the effectiveness of lengthened emissions defect warranty periods, which reduce emissions;

Turbochargers and EGR systems are high-cost parts that can have severe effects on emissions performance when they fail; therefore, manufacturers shall not be allowed to schedule turbochargers and EGR systems for replacement unless the manufacturer agrees to pay for the replacement throughout the useful life of the engine;

Illumination of the HD OBD system’s MIL indicates the malfunctioning of an emissions-related part, and is therefore indicative of a warrantable condition that should be covered by emission defect warranty;

Manufacturers should not be able to shorten the practical applicable period of emissions defect warranty coverage for on-road heavy-duty diesel vehicles by scheduling maintenance;

Manufacturers are responsible for the repair or replacement of an emissions-related part found to be defective during a scheduled inspection within the emissions defect warranty period because the repair or replacement was not “scheduled” by the manufacturer;

Without the proposed amendments, a significant portion of the statewide on-road heavy-duty diesel vehicle population would continue to operate with insufficient warranty coverage resulting in higher incidences of tampering and
mal-maintenance, delayed repairs, and higher emissions;

The proposed amendments are necessary, cost-effective, and technologically feasible to carry out the purposes of the Health and Safety Code sections 43013 and 43018;

The economic and fiscal impacts of the proposed amendments have been analyzed as required by California law, and the conclusions and supporting documentation for this analysis are set forth in Chapter IX of the Staff Report, as supplemented by staff's presentation at the hearing of this item;

The proposed amendments were developed in an open public process, in consultation with affected parties, through numerous public workshops, individual meetings, and other outreach efforts, and these efforts are expected to continue;

No reasonable alternatives to the amendments considered to date, or that have otherwise been identified and brought to the attention of CARB, would be more effective at carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected entities than the proposed regulation; and

The proposed amendments are consistent with CARB's environmental justice policies, and do not disproportionately impact people of any race, culture, or income.

The proposed amendments are exempt from CEQA under California Code of Regulations, title 14, section 15308 because substantial evidence in the record shows that they will enhance the environment by better protecting the public from health impacts associated with exposure to ozone, toxic air contaminants, and PM, the regulatory process involves procedures for the protection of the environment, and the proposal will not result in any significant adverse environmental impacts. Additionally, the proposed amendments are exempt from CEQA under California Code of Regulations, title 14, section 15061(b)(3) because substantial evidence in the record shows with certainty that there is no possibility that the proposal may result in a significant adverse impact on the environment.

NOW, THEREFORE, BE IT RESOLVED that the Board approves the response to environmental comments set forth in Attachment C to this resolution;

BE IT FURTHER RESOLVED that the Board hereby approves for adoption
amendments to sections 1956.8, 2035, 2036, and 2040, Title 13, California Code of Regulations, as set forth in Attachment A, and amendments to the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” last amended on [insert date of GHG Ph2 Amendments], incorporated by reference herein, as set forth in Attachment B.

BE IT FURTHER RESOLVED that if there is a possibility that any modifications to the regulations made available for one or more 15-day public comment periods may affect the conclusion of the environmental analysis, the Executive Officer shall prepare and circulate any additional environmental analysis to the extent required by CARB's regulations pursuant to California Code of Regulations, title 17, sections 60000–60007, and prepare written responses to any comments received raising significant environmental issues as necessary, to present to the Board for approval along with the final regulation.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to determine if additional conforming modifications to the regulations are appropriate. If no additional modifications are appropriate, the Executive Officer shall take final action to adopt the regulatory amendments and test procedures, as set forth in Attachments A and B. If the Executive Officer determines that additional conforming modifications are appropriate, the modified regulatory language shall be made available for public comment, with any additional supporting documents and information. The Executive Officer shall consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days. The Executive Officer may present the regulation to the Board for further consideration if warranted, and if not, the Executive Officer shall take final action to adopt the regulation after addressing all appropriate conforming modifications.

BE IT FURTHER RESOLVED that the Executive Officer shall, upon adoption, submit the proposed regulatory action to the United States Environmental Protection Agency (U.S. EPA) for approval as a revision to the California State Implementation Plan (SIP) as required by the federal Clean Air Act (CAA). The adopted regulatory action would be submitted as a SIP revision because it amends regulations intending to reduce emissions of air pollutants to attain and maintain the National Ambient Air Quality Standards promulgated by the U.S. EPA under the federal CAA.

BE IT FURTHER RESOLVED that the Board hereby finds that pursuant to section 209(b) of the federal CAA, the approved amendments to sections 1956.8, 2035, 2036 and 2040 of California Code of Regulations, title 13, as set forth in Attachment A, and to the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” last amended on [insert
date of GHG Ph2 Amendments], incorporated by reference in section 1956.8 of California Code of Regulations, title 13, as set forth in Attachment B, will not cause California's motor vehicle emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards.

BE IT FURTHER RESOLVED that the Board hereby finds that separate California emission standards and test procedures are necessary to meet compelling and extraordinary conditions.

BE IT FURTHER RESOLVED that the Board finds that the approved amendments to sections 1956.8, 2035, 2036 and 2040 of California Code of Regulations, title 13, as set forth in Attachment A, and to the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," last amended on [insert date of GHG Ph2 Amendments], incorporated by reference in section 1956.8 of California Code of Regulations, title 13, as set forth in Attachment B, will not cause the California requirements to be inconsistent with section 202(a) of the CAA and will not raise new issues affecting previous waiver determinations of the Administrator of the U.S. EPA pursuant to section 209(b) of the CAA.

BE IT FURTHER RESOLVED that, to the extent such action is necessary, the Executive Officer shall, upon adoption, forward the approved amendments to U.S. EPA with a request for a waiver or confirmation that the amendments are within the scope of an existing waiver of federal preemption pursuant to section 209(b) of the federal CAA, as appropriate.

I hereby certify that the above is a true and correct copy of Resolution 18-24 as adopted by the Air Resources Board.

Rana McReynolds, Clerk of the Board
Resolution 18-24

June 28, 2018

Identification of Attachments to the Board Resolution


Attachment C*: Response to Environmental Comments, released at the public hearing June 28, 2018.

*Attachments A, B, and C are NOT attached to the proposed resolution; they are simply described on this page.