

DATE: December 22, 2022

Manufacturers Advisory Correspondence (MAC) 2022-04

TO: All Manufacturers of 2024 through 2026 Model Year (MY) Heavy-Duty Diesel Engines (HDDE)

SUBJECT: Clean Idle Label (CIL) for 2024 and 2025 MY HDDEs Defined as Legacy Engines and 2024 through 2026 MY HDDEs at or above 525 Brake-horsepower Maximum Power

This letter transmits a MAC to provide guidance on California's CIL for 2024 and 2025 MY HDDEs defined as legacy engines in Title 13, California Code of Regulations, § 1956.8(a)(2)(C)3 and 2024 through 2026 MY HDDEs at or above 525 brake-horsepower maximum power. For questions related to this MAC, please contact Babak Pazokifard, Manager, Compression Ignition and Heavy-Duty Certification Section, at [babak.pazokifard@arb.ca.gov](mailto:babak.pazokifard@arb.ca.gov).

Sincerely,



Robin U. Lang, Chief  
Emissions Certification and Compliance Division

State of California (CA)

California Air Resources Board (CARB)

Manufacturers Advisory Correspondence (MAC) 2022-04

- Subject:** Clean Idle Label (CIL) for 2024 and 2025 Model Year (MY) Heavy-duty Diesel Engines (HDDE) Defined as Legacy Engines, and 2024 through 2026 MY HDDEs at or above 525 Brake-horsepower (bhp) Maximum Power
- Applicability:** 2024 and 2025 MY Legacy Engines and 2024 through 2026 MY HDDEs at or above 525 Bhp Maximum Power
- References:**
1. Title 13, California Code of Regulations (CCR), §§ 1956.8(a)(2)(C)2; (a)(2)(C)3
  2. Exhaust Emissions Standards and Test Procedures - 1985 and Subsequent Model Heavy-Duty (SMHD) Engines and Vehicles, 2021 and Subsequent Zero-Emission Powertrains, and 2022 and SMHD Hybrid Powertrains (13 CCR § 1956.8)
  3. Defects Warranty Requirements for 1979 Through 1989 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles; 1979 and Subsequent Model Motorcycles and HD Vehicles; and Motor Vehicle Engines Used in Such Vehicles; and 2020 and Subsequent MY Trailers (13 CCR § 2036)
  4. California Exhaust Emission Standards and Test Procedures (EESTP) for 2004 and Subsequent MY HDDEs and Vehicles, as last amended September 21, 2021, incorporated by reference in 13 CCR § 1956.8(b)

**Issue:**

In 2021, CARB adopted more stringent emission standards, durability requirements, emission warranty and useful life requirements, and in-use testing requirements for 2024 and subsequent MY HDDEs in the Omnibus Regulation.<sup>1</sup> Four states, Massachusetts, Oregon, Vermont, and Washington, have already adopted CA's Omnibus Regulation under Section 177 of the Clean Air Act. Engines that do not meet the new CA Omnibus standards could still be certified to federal standards for sale outside of CA and the aforementioned Section 177 states, but those engines would not be eligible for a CIL. Engine manufacturers have indicated concern that the lack of a CIL for these 2024 and subsequent MY HDDEs certified for sale in the other 45 states could present an issue in many municipalities, outside CA or Section 177 states, that have adopted truck idling restrictions, which allow extended idle only with a CIL. CARB's Omnibus regulation does, however, provide additional flexibilities to engine manufacturers to manage this transition in the 2024 through 2026 MYs.

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<sup>1</sup> <https://ww2.arb.ca.gov/rulemaking/2020/hdomnibuslownox>

## Background:

In CA since the 2008 MY, 13 CCR § 1956.8(a)6. has required a HDDE either (1) to be equipped with an engine shutdown system that would automatically turn off the engine after five minutes of continuous idling under most circumstances, or (2) to control idle emissions to comply with an oxides of nitrogen (NOx) idling emission standard. Compliance with the NOx idling emission standard allows the use of a CIL, which meets the specifications in section I.35.B.4 of the CA EESTP for 2004 and Subsequent MY HDDEs and Vehicles, to be affixed to the vehicle, and thus the vehicle may idle for more than five minutes. Many municipalities outside of CA have also adopted restrictions on truck idling, allowing extended idle only for vehicles identified with CA's CIL. Today, most HDDE engine families are certified by both CA and the United States Environmental Protection Agency (U.S. EPA), which means that they comply with both CARB's emission standards and certification requirements as well as federal requirements and are therefore eligible for CA's CILs.<sup>2</sup>

In 2021, CARB adopted the Omnibus Regulation, which establishes CA emission standards and other emission-related requirements for HDDEs and vehicles that are more stringent than the existing CA standards and comparable federal emission requirements beginning with the 2024 MY.<sup>3</sup> As a result, engine families designed and certified only to the less stringent federal HDDE requirements would not meet the CA Omnibus HDDE emission standards and requirements including the more stringent idle emission standard. Consequently, such engines would not qualify for the CIL, and trucks in which these engines are installed would be subject to local idling restrictions.

However, the Omnibus Regulation contains two flexibilities for engine manufacturers to help manage the transition to these new standards, and these flexibilities also affect eligibility for the CIL. First, the Omnibus Regulation contains an optional legacy engine provision.<sup>4</sup> The legacy engine provision was added to provide short-term flexibilities for manufacturers to certify HDDEs to the current less stringent federal exhaust emission standards for NOx and particulate matter (PM), provided manufacturers obtain sufficient credits to offset emission differences. Legacy engines are defined as engines rated below 525 bhp maximum power and certified to a NOx family emission limit of greater than 0.100 grams per brake-horsepower-hour (g/bhp-hr) and less than or equal to 0.20 g/bhp-hr on the Federal Test Procedure (FTP), a PM family emission limit of greater than 0.005 g/bhp-hr and less than or equal to 0.01 g/bhp-hr on the FTP, and a 30 gram per hour (g/hr) NOx idling standard.<sup>5,6</sup> In

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<sup>2</sup> Federal requirements do not contain a mandatory idling emission standard, and thus, engine families certified by both CA and U.S. EPA must comply with all the federal certification requirements as well as to the CA idling standard and other CA specific requirements.

<sup>3</sup> CA engine families that comply with the full Omnibus Regulation requirements (i.e., 0.050 g/bhp-hr NOx standard and other applicable requirements) will be eligible for the CIL.

<sup>4</sup> 13 CCR § 1956.8(a)(2)(C)3.

<sup>5</sup> The 2024 through 2026 MY FTP NOx and idling NOx emission standards adopted in the Omnibus Regulation are 0.050 g/bhp-hr and 10 g/hr, respectively.

<sup>6</sup> 13 CCR § 1956.8(a)(6)(C)1.a.

addition, the Omnibus' low-load cycle emission standard would not apply to a legacy engine, and compliance with the requirements for in-use testing (not-to-exceed testing), certification durability, and on-board diagnostics would be those applicable for the 2023 MY, which are almost identical to the comparable federal requirements for 2024 and 2025 MY engines. The manufacturer of a legacy engine must participate in the averaging, banking, and trading (ABT) program and offset NOx and PM emission deficits created by the legacy engine using emission credits earned from the sale of heavy-duty zero-emission powertrains (HD-ZEP) in the HD zero-emission averaging set, as described in the "CA EESTP for 2004 and Subsequent Model HDDEs and Vehicles".

The legacy engine provision is limited to only the 2024 and 2025 MYs with a maximum number of participating engines of 45 percent of the manufacturer's total actual CA sales of HDDEs for 2024 MY, and a maximum of 25 percent for 2025 MY. In addition, to qualify for the legacy engine provision, a manufacturer must also certify one or more HDDE families to the Omnibus emission standards<sup>7</sup> in the same MY. As with other HDDEs certified to the emission standards of 13 CCR § 1956.8(a), the applicable 2024 and 2025 MY warranty periods in 13 CCR § 2036 apply to legacy engines, which are the CA Step 1 warranty periods of 5 years or 110,000 miles for light HDDEs, 150,000 miles for medium HDDEs, and 350,000 miles for heavy HDDEs, whichever occurs first.<sup>8</sup>

A second flexibility provided to engine manufacturers in the Omnibus Regulation pertains to HDDEs rated at or above 525 bhp maximum power (heavy-haul engines or HHE) for the 2024 through 2026 MYs.<sup>9</sup> This optional provision allows these engines to be certified to applicable federal certification requirements for the given 2024 through 2026 MYs, except that the engine must also comply with the CA 30 g/hr NOx idling standard and the applicable CA Step 1 emission warranty periods of 5 years or 350,000 miles for heavy HDDEs, whichever occurs first. In addition, the maximum number of these engines that a manufacturer may sell in CA in each applicable MY under this provision is 1.10 times the manufacturer's 2018 or 2019 MY CA sales volume of HHEs, whichever is greater. Also, to qualify for this HHE provision, a manufacturer must have certified and sold HHEs in CA for the 2018 or 2019 MY.

### **Policy:**

The optional 2024 and 2025 MY legacy engine and 2024 through 2026 MY HHE provisions of the Omnibus Regulation provide the opportunity for manufacturers to continue to produce a limited number of engines compliant with existing 2023 MY CA and federal emission standards while transitioning to the new 2024 MY CA standards. These flexibilities allow the applicable engines to be certified to the existing CA NOx idling standard and continue to be certified by both CA and U.S. EPA, provided such engines demonstrate compliance with either the legacy engine or the HHE provisions discussed below. Engines that are certified under either of those provisions will qualify for the CIL. As a reminder, engine families that

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<sup>7</sup> 13 CCR § 1956.8(a)(2)(C)1.

<sup>8</sup> 13 CCR § 2036(c)(4)(B)

<sup>9</sup> 13 CCR § 1956.8(a)(2)(C)2. and (a)(6)(C)1.a.

are certified by both CA and U.S. EPA must show identical models and codes on their corresponding CA and U.S. EPA certification applications.

### **Legacy Engine Provision**

To qualify to use the legacy engine provision, a manufacturer must have first certified at least one CA engine family to the new Omnibus emission standards in the same MY. Alternatively, an Omnibus-compliant engine family and a legacy engine family may be certified at the same time. As stated earlier, the total CA sales volume of legacy engines may not exceed 45 percent of the manufacturer's total actual CA sales of HDDEs for 2024 MY and may not exceed 25 percent for 2025 MY. Once a legacy engine family is certified by both CA and U.S. EPA, it would be eligible for the CIL and can be sold outside CA and the Section 177 states that have adopted the Omnibus Regulation without being subject to CA's 25 and 45 percent sales volume limits.

To qualify for CA's CIL, legacy engine families would need to be certified to the existing 30 g/hr idling NO<sub>x</sub> emission standard and must comply with the CA Step 1 emission warranty periods regardless of the state in which the vehicle would be registered or sold. At the time of certification, the engine manufacturer must submit for review the legacy engine family nationwide emission warranty language in the owner's manual. As noted earlier, the manufacturer must also offset its NO<sub>x</sub> and PM deficit generated by legacy engines sold in CA by using credits from HD-ZEPs through the ABT program. The projected ABT calculations, or the plan to offset the deficits from legacy engine families, must also be included in the certification application.

For engines sold in Section 177 states that have adopted the Omnibus Regulation, the manufacturer may contact the state to determine its obligations for emission deficit offsets, sales limits, and other state regulatory requirements. The CA regulation also does not require ABT offsets nor legacy engine sales limits for engines sold in states that have not adopted the Omnibus Regulation. The table below summarizes the legacy engine provision requirements for engine families certified by both CA and U.S. EPA that are sold in CA, in Section 177 states that have adopted the Omnibus Regulation, and in other states.

Legacy Engine Provision Requirements for CARB Certification of Engine Families Certified by Both CA and U.S. EPA

Engines Sold in	Idling Standard (g/hr)	Warranty	ABT HD-ZEP Credit Offset	Sales Limit
California	30	CA Step 1*	Required for CA sales	Required for CA sales
177 states that adopted Omnibus	30	CA Step 1*	Contact state for details	Contact state for details
Other states	30	CA Step 1*	Not required by CA regulation	Not required by CA regulation

\* Emission warranty periods of 5 years or 110,000 miles for light HDDE/150,000 miles for medium HDDE/350,000 miles for heavy HDDE, whichever occurs first, regardless of the state in which the vehicle would be registered or sold.

**HHE Provision**

To qualify for the HHE provision, a manufacturer must have certified and sold HHEs in CA in the 2018 or 2019 MY. Such a manufacturer may obtain a federal certification of its HHE family for the 2024 through 2026 MYs and submit the engine family’s Certificate of Compliance as part of CARB’s certification, along with demonstrating the HHE family’s compliance with the CA 30 g/hr NOx idling emission standard and CA Step 1 emission warranty period requirements. As noted earlier, the maximum CA engine sales limit of HHEs in a given MY must not exceed 1.10 times the manufacturer’s 2018 or 2019 MY HHE CA sales volume, whichever is greater. By meeting CA’s NOx idling standard, all such HHEs that are certified by both CA and U.S. EPA are eligible for CA’s CIL if they also comply with the CA Step 1 emission warranty periods, regardless of the state in which the vehicle is registered or sold. The manufacturer may contact the Section 177 state that has adopted the Omnibus Regulation to determine its obligations for sales limits and any other state regulatory requirements. Engines sold in states other than CA and the Section 177 states that have adopted the Omnibus Regulation would not be subject to CA’s HHE sales limits.

**Requirements for Engine Labels and CA Sales Volume Reporting**

The engine label on legacy and HHEs sold in CA and Section 177 states that have adopted the Omnibus Regulation must include the statement specified in sections I.35.B.8<sup>10</sup> and I.35.B.7<sup>11</sup>, respectively, of the CA EESTP for 2004 and Subsequent MY HDDEs and Vehicles. The engine label on legacy and HHEs sold in states outside CA and Section 177 states that have adopted the Omnibus Regulation may also include the aforementioned statements.

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<sup>10</sup> The added statement reads “This legacy engine is certified under the provisions of 13 CCR 1956.8(a)(2)(C)3 applicable to XXXX MY.”

<sup>11</sup> The added statement reads “This engine conforms to the 525 horsepower and above exemption specified in 13 CCR 1956.8(a)(2)(C)2 applicable to XXXX MY.”

CA sales volumes for both legacy and HHEs are capped at specific limits, which are described previously and in the Omnibus Regulation. At the time of certification, manufacturers must specify the projected CA sales for legacy and HHEs in the corresponding statement of compliance for each engine family. At the end of the model year, the actual CA sales volumes for both legacy and HHE families must be reported in the manufacturer's end-of-year production report. The end-of-year CA sales volume would be used to determine compliance with the sales limits in CA.