

# **Appendix C**

## **Purpose and Rationale for Each Regulatory Provision**

### **Proposed Amendments to the Heavy- Duty Engine and Vehicle Omnibus Regulation and Associated Amendments**

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## **I. The Specific Purpose and Rationale of Each Adoption, Amendment, or Repeal**

This appendix summarizes the amendments and provides the rationale for each proposed amendment in Appendix A: Proposed Regulation Order to amend title 13, California Code of Regulations, section 1956.8 (13 CCR 1956.8) and Appendix B: Proposed Amendments to California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in 13 CCR 1956.8(b).

## **II. 13 CCR 1956.8. Exhaust Emissions Standards and Test Procedures - 1985 and Subsequent Model Heavy-Duty Engines and Vehicles, 2021 and Subsequent Zero-Emission Powertrains, and 2022 and Subsequent Model Heavy-Duty Hybrid Powertrains**

### **A. Subsection (a)(2)(C)3. Legacy Engine Option**

#### **1. Purpose**

The purpose of this subsection is to describe the legacy engine provision, which provides manufacturers flexibility to ease the transition to the new lower Omnibus oxides of nitrogen (NO<sub>x</sub>) standard for the first two years of its implementation, model years (MY) 2024 and 2025. The purpose of the proposed amendments is to give engine manufacturers one additional MY to use this flexibility provision by extending it through 2026 MY and to add a title to describe this subsection.

#### **2. Rationale**

The proposed amendment is necessary to extend the legacy engine flexibility provision to ensure adequate availability of engine models in 2026 MY. Although the technology needed for diesel-fueled engines to comply with the Omnibus regulation is available, manufacturers do not intend to produce such engines for some categories of trucks in California. The addition of the title to the subsection is necessary to increase clarity to identify this flexibility option as the legacy engine provision.

### **B. Subsection (a)(2)(C)3.b.iii. Procedure to Offset Deficit Balance**

#### **1. Purpose**

The purpose of this subsection is to describe the procedure to offset the NO<sub>x</sub> or particulate matter (PM) deficit balance generated by the use of the legacy engine provision. The manufacturer would first offset the legacy engine deficit balance using credits from the

heavy-duty zero-emission (HD-ZE) averaging set. If insufficient credits from the HD-ZE averaging set are available or if purchasing credits exceed the guidelines, the manufacturer may use credits from the same averaging set. If an insufficient number of same averaging set credits is available, the manufacturer may carry over the deficit balance until the 2026 MY. Finally, if by the end of the 2026 MY a deficit balance still remains, the manufacturer must offset the remaining deficit balance with projects targeted at California disadvantaged communities. The purpose of the proposed amendment to this subsection is to add a title to this subsection.

## **2. Rationale**

The proposed amendment is necessary to increase clarity by providing a title that summarizes this subsection as “Procedure to Offset Deficit Balance”. This title will help affected manufacturers more quickly and easily locate the procedures to offset excess emissions from legacy engines they produce.

### **C. Subsection (a)(2)(C)3.b.iii.1. Credits from the Same Averaging Set**

#### **1. Purpose**

The purpose of this subsection is to describe the use of credits from the same averaging set if HD-ZE credits are unavailable or if these credits cost more than \$4,000 for enough credits to offset one legacy medium heavy-duty diesel (MHDD) engine. The purpose of the proposed amendment is to add a title to this subsection.

#### **2. Rationale**

The proposed amendment is necessary to increase clarity by providing a title that summarizes this subsection as “Credits from the Same Averaging Set”. This title will help affected manufacturers more quickly and easily locate the procedures to offset excess emissions from legacy engines they produce using banked credits.

### **D. Subsection (a)(2)(C)3.b.iii.2. Carryover to the 2026 MY**

#### **1. Purpose**

The purpose of this subsection is to allow the carryover of the remaining NOx or PM deficit balance generated by legacy engines until the end of the 2026 MY. The proposed amendments are to add a title to the subsection and provide additional details to the example of the 1.25 multiplier usage.

#### **2. Rationale**

The proposed amendments are necessary to clarify the option to carry over the deficit balance to the 2026 MY. The proposed amendment to add the title is necessary to increase

clarity by providing a title that summarizes this subsection. The proposed amendment to provide additional details to the example gives useful information to the example to clarify how manufacturers would use the 1.25 times multiplier.

## **E. Subsection (a)(2)(C)3.b.iii.3. Projects Targeted at California Disadvantaged Communities**

### **1. Purpose**

The purpose of this subsection is to describe the process for manufacturers to offset the remaining NOx or PM legacy engine deficit balance at the end of the 2026 MY with projects targeted at California disadvantaged communities. The proposed amendments are to provide an example of how to determine the amount of deficit balance using the 1.25 multiplier. The proposed amendments also allow manufacturers the option to use such projects to offset the legacy engine deficit balance earlier than 2026 MY, i.e., in 2024 and 2025 MYs, with a 1.25 deficit balance multiplier.

### **2. Rationale**

The proposed amendment is necessary to explain how the 1.25 multiplier is to be used by providing an example. The proposed amendment to allow the use of projects targeted at disadvantaged communities in 2024 and 2025 MYs is necessary to provide additional flexibility to manufacturers to offset the legacy engine deficit balance earlier than MY 2026. Such flexibility would be beneficial in that it may encourage manufacturers to complete projects in California disadvantaged communities earlier than they would if they waited until 2026 to begin.

## **F. Subsection (a)(2)(C)3.b.iii.4. Carryover to the 2025 MY**

### **1. Purpose**

The purpose of this new subsection is for the carryover of the NOx or PM deficit balance generated by legacy engines from the 2024 MY to the 2025 MY and to require the offset of the carryover deficit balance with credits from the HD-ZE averaging set only.

### **2. Rationale**

The proposed amendment is necessary to provide additional flexibility to manufacturers and additional incentive for manufacturers to generate and utilize HD-ZE credits. The proposed carryover from 2024 to 2025 MY provides flexibility to manufacturers during the first year of the Omnibus regulation should there be insufficient 2024 MY credits from the HD-ZE averaging set or from the same averaging set to offset the 2024 legacy engine deficit balance. The manufacturer would be allowed to offset the remaining 2024 MY deficit balance in the 2025 MY without penalty so long as the credits are from the HD-ZE averaging set.

## **G. Subsection (a)(2)(C)3.b.iv. Legacy Engine Sales Limits**

### **1. Purpose**

The purpose of this new subsection is to describe the legacy engine sales limits that apply when a manufacturer uses the legacy engine provision. The proposed amendments provide additional flexibility by adding a new option, Option 2, for compliance and require the manufacturer to remain in the same option for all three MYs, 2024 through 2026. Option 1, available to all engine manufacturers, keeps the existing Omnibus legacy engine sales limits for MYs 2024 and 2025 and extends the use of the legacy engine provisions for one more year to 2026 MY. The new option, Option 2, is only available to manufacturers that produce both MHDD engines and HDDEs in another primary intended service class for MYs 2024 and 2025. For example, a certifying engine manufacturer that produces both MHDD engines and heavy heavy-duty diesel (HHDD) engines in 2024 MY may choose Option 2 and will continue to use Option 2 for MY 2025. The legacy engine sales limits in both Options 1 and 2 are based on the total actual California sales of HDDEs, which is defined as the combined total of all light heavy-duty diesel (LHDD) (including medium-duty engines), MHDD, and HHDD engines that are sold in California.

### **2. Rationale**

The proposed amendments to the sales limits of Option 1 and the proposed addition of Option 2 are necessary to address some unanticipated changes to manufacturers' product lines and to avoid market disruption as manufacturers begin implementation of the new lower Omnibus NOx emission standards. Extending the use of the legacy engine provision for another year, to MY 2026, in Option 1 is necessary to provide additional time for engine manufacturers to fully transition to the Omnibus regulation. Option 2 is necessary to provide an additional compliance path with higher sales limits than Option 1 in the MHDD engine service class but lower sales limits in the other two HDDE service classes. The proposed amendment to add the definition of total actual California sales of HDDEs is necessary to identify the types of engines that are included in this total.

## **H. Subsection (a)(2)(C)3.b.iv.1 Option 1**

### **1. Purpose**

The purpose of this new subsection is to describe the legacy engine sales limits required for a manufacturer that chooses Option 1. Option 1 maintains the current Omnibus legacy engine sales limits for MYs 2024 and 2025 and extends the use of the legacy engine provision for one more year to MY 2026. The proposed legacy engine sales limit for MY 2026 is 10 percent of a manufacturer's total actual California sales of HDDEs. Furthermore, if a manufacturer exceeds the legacy sales limits, up to one percent sales volume of legacy engines above the Option 1 sales limits would be allowable without being considered non-compliant. The excess emission deficits from this percentage of sales volume above the sales limits must be remediated at four times the deficit balance. For example, if the deficit balance of the

allowable percentage above a given legacy engine sales limit is one megagram (Mg) NO<sub>x</sub>, the manufacturer would need to offset the deficit with four Mg NO<sub>x</sub>. All legacy engine sales above the legacy engine sales limits in Option 1 plus the one percent sales exceedance will be considered non-compliant engine sales. For example, assume a manufacturer chooses Option 1 for the certification of legacy engine families in 2024 MY. At the end of 2024 MY, the manufacturer determines that it has sold 1,000 HDDEs in California of which 500 are legacy engines. The manufacturer must offset the deficit from 450 legacy engines at the normal rate plus the deficit from 10 legacy engines (which is 1,000 engines times one percent) at four times the normal rate. The remaining 40 legacy engines would be considered non-compliant. The normal rate is used in 13 CCR 1956.8(a)(2)(C)3.b.iii. Procedure to Offset Deficit Balance.

## **2. Rationale**

The proposed amendment is necessary to extend the legacy engine provision through 2026 MY to ensure adequate product availability of engine models in MY 2026. As 2024 model year certification approached, CARB staff became aware through manufacturer product plans for 2024 to 2026 that while the technology needed for diesel-fueled engines to comply with the Omnibus regulation was available, manufacturers did not intend to produce such engines for some categories of trucks in California. The proposed amendment for the additional one percent sales volume is necessary to further provide additional flexibility should the legacy engine sales limits be exceeded and would require the deficit balance be offset at four times the normal rate, resulting in greater emission reductions. Since this one percent exceedance is in addition to the legacy engine limits, additional percentages higher than the one percent would result in unnecessary flexibility and reduce the number of Omnibus-compliant engines. Any engines sold above the legacy sales limits plus the one percent additional allowance would be considered non-compliant with the provisions of Option 1.

### **I. Subsection (a)(2)(C)3.b.iv.2 Option 2**

#### **1. Purpose**

The purpose of this new subsection is to describe Option 2 for the legacy engine sales limits. The proposed Option 2 provides sales limits on separate engine primary intended service classes: one for MHDD engines and one for the combined LHDD and HHDD engines. The proposed legacy MHDD engine sales limit would be 60 percent in 2024 MY and in 2025 MY. The proposed sales limits for the combined LHDD and HHDD engines would be 15 percent in 2024 MY and eight percent in 2025 MY. Unlike Option 1, Option 2 does not extend into 2026 MY. For example, a certifying engine manufacturer that sells a total of 1,000 HDDEs in California in 2024 MY would be allowed to sell up to 600 MHDD legacy engines and 150 combined LHDD and HHDD legacy engines for that MY in California.

Furthermore, if a manufacturer exceeds the legacy sales limits for a given MY, up to a certain percent sales volume of legacy engines above the Option 2 sales limits would be allowable

without being considered non-compliant: five percent for MHDD engines and one percent for the combined LHDD and HHDD engines. The excess emission deficits from the allowable percentage of sales volume above the legacy engine sales limit must be remediated at four times the deficit balance. For example, if the deficit balance of the allowable percentage above a given legacy engine sales limit is one Mg NO<sub>x</sub>, the manufacturer would need to offset the deficit with four Mg NO<sub>x</sub>. Rather than the one percent exceedance proposed for Option 1 and for Option 2 LHDD and HHDD engines, for MHDD engines the percent exceedance proposed is five percent since the legacy engine limit for these engines are much higher at 60 percent compared to the other legacy engine limits. Since these percent exceedances are in addition to the legacy engine limits, additional percentages higher than the proposed percentages would result in unnecessary flexibility and reduce the number of Omnibus-compliant engines. All legacy engine sales above the legacy engine sales limits in Option 2 plus the allowable percent sales exceedance will be considered non-compliant engine sales. For example, assume a manufacturer chooses Option 2 for the certification of legacy engine families in 2024 MY. At the end of 2024 MY, the manufacturer determines that it has sold 1,000 HDDEs in California of which 660 are MHDD legacy engines and 150 are the combined LHDD and HHDD legacy engines. The manufacturer must offset the deficit from 600 MHDD legacy engines and 150 LHDD and HHDD engines at the normal rate plus the deficit from 50 MHDD legacy engines (which is 1,000 engines times five percent) at four times the normal rate. The remaining 10 MHDD legacy engines would be considered non-compliant.

## 2. Rationale

The proposed Option 2 amendments are necessary to provide an additional compliance path for the legacy engine provision to give greater flexibility for engine manufacturers during the early years of the Omnibus regulation implementation. Option 2 achieves this by providing a higher legacy engine sales limit in the MHDD engine category than Option 1 where availability of certain engine models would likely be limited even though the technology for diesel-fueled Omnibus compliant engines is available, given that manufacturers have indicated that they do not intend to produce such engines for some categories of trucks in California. Manufacturers must offset any increases in NO<sub>x</sub> or PM emissions associated with the proposed Option 2 sales limits through the current pathway to offset emission increases with emission credits.

The proposed amendment for the additional percent sales above the Option 2 sales limit is necessary to allow additional flexibility should the legacy engine sales limits be exceeded and would require deficit balance offsets at four times the normal rate. This allows for a balance of some additional compliance flexibility while achieving four times the emission reductions. Any engines sold above the legacy sales limits plus the additional exceedance allowance would be considered non-compliant with the provisions of Option 2.



## **J. Subsection (a)(2)(C)3.b.vi.**

### **1. Purpose**

The purpose of the subsection is to require the manufacturer to certify at least one diesel engine family to the Omnibus emission standards in order to participate in the legacy engine provision. The proposed amendment allows additional flexibility to engine manufacturers in MY 2024 by allowing them to certify legacy engine families before completing their certification of an Omnibus engine family. If a manufacturer chooses this option, failure to certify an Omnibus engine family in MY 2024 will result in revocations of all 2024 MY Executive Orders for legacy engine families.

### **2. Rationale**

The proposed amendment is necessary to allow manufacturers to sell their legacy engines in California while they are in the process of finalizing the certification application for the Omnibus compliant engine family during the first year the Omnibus standards apply. This proposed additional flexibility would help ensure availability of engines as manufacturers certify their first engines to the Omnibus standards and comply with the much longer durability aging requirements and other new requirements such as meeting a low-load cycle for the first time.

## **K. Subsection (a)(6)(C)1.a. Emission Standard**

### **1. Purpose**

The purpose of the subsection is to describe the optional NO<sub>x</sub> idling emission standard for engines certified to the legacy engine provision for MYs 2024 and 2025 and other applicable engines. The proposed amendment extends this optional NO<sub>x</sub> idling emission standard for legacy engines through 2026 MY.

### **2. Rationale**

The proposed amendment is necessary to ensure that this subsection of the regulation is consistent with the proposed changes in 13 CCR 1956.8(a)(2)(C)3 that extend the legacy engine provision through 2026 MY.

## **L. Subsection (b). Test Procedures**

### **1. Purpose**

The purpose of this amendment is to create a placeholder for the most recent date of incorporation for CARB staff's amended "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles".

## **2. Rationale**

This amendment is necessary to ensure that CARB staff's most recently amended version of the Heavy-Duty Diesel Test Procedures is properly referenced by the regulations. The proposed amended Test Procedures include modifications to CARB staff's proposed amended heavy-duty diesel vehicle certification and in-use compliance requirements.

### **III. 13 CCR 1971.1. On-Board Diagnostic System Requirements-- 2010 and Subsequent Model-Year Heavy-Duty Engines**

#### **A. Subsection (d)(8.4)**

##### **1. Purpose**

The purpose of this section is to describe on-board diagnostic (OBD) system requirements applicable to 2010 and subsequent MY heavy-duty engines. The purpose of this subsection is to allow legacy engines to certify to the OBD provisions applicable to MY 2023 rather than their applicable model year OBD requirements, and to allow these legacy engines to be excluded from the engine volume count in the required phase-in calculations for OBD requirements. The purpose of the proposed amendments is to align these OBD requirements with the proposed manufacturer flexibility to extend the legacy engine provision by one additional MY to MY 2026.

##### **2. Rationale**

The proposed amendments are necessary to align the OBD requirements with the proposed flexibility in 13 CCR 1956.8(a)(2)(C)3, which gives engine manufacturers one additional MY to use the legacy engine provision. The proposed amendments add the 2026 MY to the current legacy engine applicability of 2024 and 2025 MYs engines to comply with the OBD requirements of a 2023 MY engine in lieu of the applicable MY OBD requirements. The proposed amendment to exclude these legacy engines from the engine volume count of the phase-in calculations is necessary because these engines are certified to the 2023 MY OBD requirements rather than their applicable 2024, 2025, or 2026 MY OBD requirements.

## **B. Subsection (d)(8.5)**

### **1. Purpose**

The purpose of this new subsection is to allow engines certified to 13 CCR 1956.8(a)(2)(C)2 to comply with either the federal OBD provisions in 40 CFR 86.010-18<sup>1</sup>, as last amended January 24, 2023, or the California OBD requirements in 13 CCR section 1971.1. Currently, engines certified to 13 CCR 1956.8(a)(2)(C)2 may use the federal certification approval to comply with California requirements, which include the use of the federal OBD requirements. In addition, the purpose of the proposed amendment specifies that these engines would be excluded from the engine volume count in the required phase-in calculations for OBD requirements.

### **2. Rationale**

The proposed amendment is necessary to align the OBD requirements in the current 13 CCR 1956.8(a)(2)(C)2 with the OBD requirements in this section 1971.1. In the Omnibus rulemaking, this amendment was originally inadvertently omitted. The proposed amendment to exclude these engines from the engine volume count of the phase-in calculations is necessary because these engines are allowed to certify to the federal OBD requirements instead of the California OBD requirements.

## **IV. 13 CCR 1971.5. Enforcement of Malfunction and Diagnostic System Requirements for 2010 and Subsequent Model-Year Heavy-Duty Engines**

### **A. Subsection (a)(1)(C)**

#### **1. Purpose**

The purpose of this section is to describe enforcement provisions for OBD system requirements applicable to 2010 and subsequent MY heavy-duty engines. The purpose of this subsection is to specify the applicability of this section. The purpose of the proposed amendment is to align these OBD requirements with the proposed flexibility to give engine manufacturers one additional MY to use the legacy engine provision by extending the provision to MY 2026.

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<sup>1</sup> [40 CFR § 86.010-18 On-board Diagnostics for engines used in applications greater than 14,000 pounds GVWR](#), as last amended January 24, 2023.

## **2. Rationale**

The proposed amendment is necessary to align the OBD requirements with the proposed flexibility to give engine manufacturers one additional MY to use the legacy engine provision in MY 2026 (13 CCR 1956.8(a)(2)(C)3). The proposed amendment adds the 2026 MY to the current legacy engine applicability of 2024 and 2025 MY engines to comply with the OBD requirements of a 2023 MY engine in lieu of the applicable MY OBD requirements.

## **V. California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles**

### **A. Subparagraph I.11.B.5.3.5. Legacy Engine Option**

#### **1. Purpose**

The purpose of this subparagraph is to describe the legacy engine provision, which provides manufacturers flexibility to ease the transition to the new lower Omnibus NOx standard for the first two years of its implementation, MYs 2024 and 2025. The purpose of the amendments is to give engine manufacturers one additional MY to use this flexibility provision by extending it through 2026 MY and to add a title to describe this subparagraph.

#### **2. Rationale**

The proposed amendment is necessary to extend the legacy engine flexibility provision to ensure adequate availability of engine models through 2026 MY. As 2024 model year certification approached, CARB staff became aware through manufacturer product plans for 2024 to 2026 that while the technology needed for diesel-fueled engines to comply with the Omnibus regulation was available, manufacturers did not intend to produce such engines for some categories of trucks in California. The addition of the title to the subparagraph is necessary to increase clarity to identify this flexibility option as the legacy engine provision and to help affected manufacturers more quickly and easily locate the legacy engine provisions in the test procedures.

## **B. Subparagraph I.11.B.5.3.5.2.(c) Procedure to Offset Deficit Balance**

### **1. Purpose**

The purpose of this subparagraph is to describe the procedure to offset the NO<sub>x</sub> or PM emission deficit balance generated by the use of the legacy engine provision. The manufacturer would first offset the legacy engine deficit balance using credits from the HD-ZE averaging set. If insufficient credits from the HD-ZE averaging set are available or if purchasing credits exceed the guidelines, the manufacturer may use credits from the same averaging set. If an insufficient number of same averaging set credits is available, the manufacturer may carry over the deficit balance until the 2026 MY. Finally, if by the end of the 2026 MY a deficit balance still remains, the manufacturer must offset the remaining deficit balance with projects targeted at California disadvantaged communities. The purpose of the proposed amendment is to add a title to this subparagraph.

### **2. Rationale**

The proposed amendment is necessary to increase clarity by providing a title that summarizes this subparagraph as "Procedure to Offset Deficit Balance". This title will help affected manufacturers more quickly and easily locate the procedures to offset excess emissions from legacy engines they produce.

## **C. Subparagraph I.11.B.5.3.5.2.(c)(1) Credits from the Same Averaging Set**

### **1. Purpose**

The purpose of this subparagraph is to describe the use of credits from the same averaging set if HD-ZE credits are unavailable or if these credits cost more than \$4,000 for enough credits to offset one MHDD legacy engine. The purpose of the proposed amendment is to add a title to this subparagraph.

### **2. Rationale**

The proposed amendment is necessary to increase clarity by providing a title that summarizes this subparagraph as "Credits from the Same Averaging Set". This title will help affected manufacturers more quickly and easily locate the procedures to offset excess emissions from legacy engines they produce using banked credits.

## **D. Subparagraph I.11.B.5.3.5.2.(c)(2) Carryover to the 2026 MY**

### **1. Purpose**

The purpose of this subparagraph is to allow the carryover of the remaining NO<sub>x</sub> or PM deficit balance generated by legacy engines until the end of the 2026 MY. The proposed amendments are to add a title to the subparagraph and provide additional details to the example of the 1.25 multiplier usage.

### **2. Rationale**

The proposed amendments are necessary to clarify the option to carry over the deficit balance to the 2026 MY. The proposed amendment to add the title is necessary to increase clarity by providing a title that summarizes this subparagraph. The proposed amendment to provide additional details to the example gives useful information to the example to clarify how manufacturers would use the 1.25 times multiplier.

## **E. Subparagraph I.11.B.5.3.5.2.(c)(3) Projects Targeted at California Disadvantaged Communities**

### **1. Purpose**

The purpose of this subparagraph is to describe the process for manufacturers to offset the remaining legacy engine NO<sub>x</sub> or PM deficit balance at the end of the 2026 MY with projects targeted at California disadvantaged communities. The proposed amendments are to provide an example of how to determine the amount of deficit balance using the 1.25 multiplier. The proposed amendments also allow manufacturers the option to use such projects to offset the legacy engine deficit balance earlier than 2026 MY, i.e., in 2024 and 2025 MYs, with a 1.25 deficit balance multiplier.

### **2. Rationale**

The proposed amendment is necessary to explain how the 1.25 multiplier is to be used by providing an example. The proposed amendment to allow the use of projects targeted at disadvantaged communities in 2024 and 2025 MYs is necessary to provide additional flexibility to manufacturers to offset the legacy engine deficit balance earlier than MY 2026. Such flexibility would be beneficial in that it may encourage manufacturers to complete projects in California disadvantaged communities earlier than they would if they waited until 2026 to begin.

## **F. Subparagraph I.11.B.5.3.5.2.(c)(4) Carryover to the 2025 MY**

### **1. Purpose**

The purpose of this new subparagraph is to allow the carryover of the NO<sub>x</sub> or PM deficit balance generated by legacy engines from the 2024 MY to the 2025 MY and to require the offset of the carryover deficit balance with credits from the HD-ZE averaging set only.

### **2. Rationale**

The proposed amendment is necessary to provide additional flexibility to manufacturers and additional incentive for manufacturers to generate and utilize HD-ZE credits. The proposed carryover from 2024 to 2025 MY provides flexibility to manufacturers during the first year of the Omnibus regulation should there be insufficient 2024 MY credits from the HD-ZE averaging set or from the same averaging set to offset the 2024 legacy engine deficit balance. The manufacturer would be allowed to offset the remaining 2024 MY deficit balance in the 2025 MY without penalty so long as the credits are from the HD-ZE averaging set.

## **G. Subparagraph I.11.B.5.3.5.2.(d) Legacy Engine Sales Limits**

### **1. Purpose**

The purpose of this new subparagraph is to describe the legacy engine sales limits that apply when a manufacturer uses the legacy engine provision. The proposed amendments provide additional flexibility by adding a new option, Option 2, for compliance and require the manufacturer to remain in the same option for all three MYs, 2024 through 2026. Option 1, available to all engine manufacturers, keeps the existing Omnibus legacy engine sales limits for MYs 2024 and 2025 and extends the use of the legacy engine provisions for one more year to 2026 MY. The new option, Option 2, is only available to manufacturers that produce both MHDD engines and HDDEs in another primary intended service class for MYs 2024 and 2025. For example, a certifying engine manufacturer that produces both MHDD and HHDD engines in 2024 MY may choose Option 2 and will continue to use Option 2 for MY 2025. The legacy engine sales limits in both Options 1 and 2 are based on the total actual California sales of HDDEs, which is defined as the combined total of all LHDD (including medium-duty engines), MHDD, and HHDD engines that are sold in California.

### **2. Rationale**

The proposed amendments to the sales limits of Option 1 and the proposed addition of Option 2 are necessary to address some unanticipated changes to manufacturers' product lines and to avoid market disruption as manufacturers begin implementation of the new lower Omnibus NO<sub>x</sub> emission standards. Extending the use of the legacy engine provision for another year, to MY 2026, in Option 1 is necessary to provide additional time for engine manufacturers to fully transition to the Omnibus regulation. Option 2 is necessary to provide an additional compliance path with higher sales limits than Option 1 in the MHDD engine

service class but lower sales limits in the other two HDDE service classes. The proposed amendment to add the definition of total actual California sales of HDDEs is necessary to clarify the types of engines that are included in this total.

## **H. Subparagraph I.11.B.5.3.5.2.(d)(1) Option 1**

### **1. Purpose**

The purpose of this new subparagraph is to describe the legacy engine sales limits required for a manufacturer that chooses Option 1. Option 1 maintains the current Omnibus legacy engine sales limits for MYs 2024 and 2025 and extends the use of the legacy engine provision for one more year to MY 2026. The proposed legacy engine sales limit for MY 2026 is 10 percent of a manufacturer's total actual California sales of HDDEs. Furthermore, if a manufacturer exceeds the legacy sales limits, up to one percent sales volume of legacy engines above the Option 1 sales limits would be allowable without being considered non-compliant. The excess emission deficits from this percentage of sales volume above the sales limit must be remediated at four times the deficit balance. For example, if the deficit balance of the allowable percentage above a given legacy engine sales limit is one Mg NO<sub>x</sub>, the manufacturer would need to offset the deficit with four Mg NO<sub>x</sub>. All legacy engine sales above the legacy engine sales limits in Option 1 plus the one percent sales exceedance will be considered non-compliant engine sales. For example, assume a manufacturer chooses Option 1 for the certification of legacy engine families in 2024 MY. At the end of 2024 MY, the manufacturer determines that it has sold 1,000 HDDEs in California of which 500 are legacy engines. The manufacturer must offset the deficit from 450 legacy engines at the normal rate plus the deficit from 10 legacy engines (which is 1,000 engines times one percent) at four times the normal rate. The remaining 40 legacy engines would be considered non-compliant. The normal rate is used in subparagraph I.11.B.5.3.5.2.(c) *Procedure to Offset Deficit Balance*.

### **2. Rationale**

The proposed amendment is necessary to extend the legacy engine provision through 2026 MY to ensure adequate availability of engine models in MY 2026. As 2024 model year certification approached, CARB staff became aware through manufacturer product plans for 2024 to 2026 that while the technology needed for diesel-fueled engines to comply with the Omnibus regulation was available, manufacturers did not intend to produce such engines for some categories of trucks in California. The proposed amendment for the additional one percent sales volume is necessary to further provide additional flexibility should the legacy engine sales limits be exceeded and would require the deficit balance be offset at four times the normal rate, resulting in greater emission reductions. Any engines sold above the legacy sales limits plus the one percent additional allowance would be considered non-compliant with the provisions of Option 1.



## **I. Subparagraph I.11.B.5.3.5.2.(d)(2) Option 2**

### **1. Purpose**

The purpose of this new subparagraph is to describe Option 2 for the legacy engine sales limits. The proposed Option 2 provides sales limits on separate engine primary intended service classes: one for MHDD engines and one for the combined LHDD and HHDD engines. The proposed legacy MHDD engine sales limit would be 60 percent in 2024 MY and in 2025 MY. The proposed sales limits for the combined LHDD and HHDD engines would be 15 percent in 2024 MY and eight percent in 2025 MY. Unlike Option 1, Option 2 does not extend into 2026 MY. For example, a certifying engine manufacturer that sells a total of 1,000 HDDEs in California in 2024 MY would be allowed to sell up to 600 MHDD legacy engines and 150 combined LHDD and HHDD legacy engines for that MY in California.

Furthermore, if a manufacturer exceeds the legacy sales limits for a given MY, up to a certain percent sales volume of legacy engines above the Option 2 sales limits would be allowable without being considered non-compliant: five percent for MHDD engines and one percent for the combined LHDD and HHDD engines. The excess emission deficits from the allowable percentage of sales volume above the legacy engine sales limit must be remediated at four times the deficit balance. For example, if the deficit balance of the allowable percentage above a given legacy engine sales limit is one Mg NO<sub>x</sub>, the manufacturer would need to offset the deficit with four Mg NO<sub>x</sub>. All legacy engine sales above the legacy engine sales limits in Option 2 plus the allowable percent sales exceedance will be considered non-compliant engine sales. For example, assume a manufacturer chooses Option 2 for the certification of legacy engine families in 2024 MY. At the end of 2024 MY, the manufacturer determines that it has sold 1,000 HDDEs in California of which 660 are MHDD legacy engines, 100 are LHDD legacy engines and 50 are HHDD legacy engines (i.e., 150 combined LHDD and HHDD legacy engines). The manufacturer must offset the deficit from 600 MHDD legacy engines and 150 LHDD and HHDD engines at the normal rate plus the deficit from 50 MHDD legacy engines (which is 1,000 engines times five percent) at four times the normal rate. The remaining 10 MHDD legacy engines would be considered non-compliant.

### **2. Rationale**

The proposed Option 2 amendments are necessary to provide an additional compliance path for the legacy engine provision to give greater flexibility for engine manufacturers during the early years of the Omnibus regulation implementation. Option 2 achieves this by providing a higher engine sales limit in the MHDD engine category than Option 1 where availability of certain engine models would likely be limited, even though the technology for diesel-fueled Omnibus compliant engines is available, given that manufacturers have indicated that they do not intend to produce such engines for some categories of trucks in California. Manufacturers must offset any increases in NO<sub>x</sub> or PM emissions associated with the proposed Option 2 sales limits through the current pathway to offset emission increases with emission credits.

The proposed amendment for the additional percent sales above the Option 2 sales limit is necessary to allow additional flexibility should the legacy engine sales limits be exceeded and would require deficit balance offsets at four times the normal rate. This allows for a balance of some additional compliance flexibility while achieving four times the emission reductions. Any engines sold above the legacy sales limits plus the additional exceedance allowance would be considered non-compliant with the provisions of Option 2.

## **J. Subparagraph I.11.B.5.3.5.2.(f)**

### **1. Purpose**

The purpose of the subparagraph is to require the manufacturer to certify at least one diesel engine family to the Omnibus emission standards in order to participate in the legacy engine provision. The proposed amendment allows additional flexibility to engine manufacturers in MY 2024 by allowing them to certify legacy engine families before completing their certification of an Omnibus engine family. If a manufacturer chooses this option, failure to certify an Omnibus engine family in MY 2024 will result in revocations of all 2024 MY Executive Orders for legacy engine families.

### **2. Rationale**

The proposed amendment is necessary to allow manufacturers to sell their legacy engines in California while they are in the process of finalizing the certification application for the Omnibus compliant engine family during the first year the Omnibus standards apply. This proposed additional flexibility would help ensure availability of engines as manufacturers certify their first engines to the Omnibus standards and comply with the much longer durability aging requirements and other new requirements such as meeting a low-load cycle for the first time.

## **K. Subparagraph I.11.B.6.3.1.1**

### **1. Purpose**

The purpose of the subparagraph is to describe the optional NOx idling emission standard for engines certified to the legacy engine provision for MYs 2024 and 2025 and other applicable engines. The proposed amendment extends this optional NOx idling emission standard for legacy engines through 2026 MY.

### **2. Rationale**

The proposed amendment is necessary to ensure that this subparagraph of the regulation is consistent with the proposed changes in subparagraph I.11.B.5.3.5 of these test procedures that extend the legacy engine provision through 2026 MY.

## **L. Subparagraph I.15.B.3.(i)(1)(C)**

### **1. Purpose**

The purpose of the subparagraph is to identify the maximum FTP NO<sub>x</sub> family emission limit allowable for MY 2026. The purpose of the proposed amendment is to add the FTP NO<sub>x</sub> family emission limit for legacy engines, which is 0.20 g/bhp-hr.

### **2. Rationale**

The proposed amendment is necessary to be consistent with the proposed change in subparagraph I.11.B.5.3.5 that extends the use of the legacy engine provision to 2026 MY and to declare the maximum allowable FTP NO<sub>x</sub> family emission limit to be 0.20 g/bhp-hr for legacy engines rather than the family emission limit of 0.100 g/bhp-hr for engine families that are certified to the Omnibus regulation.

## **M. Subparagraph I.35.B.8**

### **1. Purpose**

The purpose of the subparagraph is to specify the requirements for the legacy engine statement on the engine label. The purpose of the proposed amendment is to require 2026 MY legacy engines to use the legacy engine labeling requirements. In addition, the purpose of the proposed amendment to add the word "CA" is to identify legacy engines that are sold in California, which require emission offsets.

### **2. Rationale**

The proposed amendment is necessary to be consistent with the proposed change in subparagraph I.11.B.5.3.5. of these test procedures that extends the use of the legacy engine provision to 2026 MY by requiring the use of the legacy engine statement on 2026 MY legacy engine labels. In addition, the proposed amendment to add the word "CA" is necessary to indicate that the legacy engines are certified and sold in California, which will have higher emissions than comparable 2024 through 2026 MY Omnibus engines and will have their increased NO<sub>x</sub> or PM emissions to be offset (according to the provisions in 13 CCR 1956.8(a)(2)(C)3)). This is especially important for enforcement of California specific regulations that require emission offsets.