6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 1036, 1037, and 1065

[EPA–HQ–OAR–2022–0985; FRL–8952–03–OAR]

RIN 2060–AV50

Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles—Phase 3; Correction

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; correction.

SUMMARY: The Environmental Protection Agency (EPA) is issuing a correction to a final rule published in the Federal Register of Monday, April 22, 2024, which will be effective June 21, 2024. The final rule established new emission standards for heavy-duty highway vehicles, along with several amendments for a wide range of highway and nonroad engines and vehicles. This document corrects inadvertent errors introduced in preparing the amendatory regulatory text for publication. These corrections do not include any substantives change to the final rule.

DATES: This correction is effective June 21, 2024.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2022–0985. Publicly available docket materials are available either electronically at *www.regulations.gov* or in hard copy at Air and Radiation Docket and Information Center, EPA Docket Center, EPA/DC, EPA WJC West Building, 1301 Constitution Ave. NW, Room 3334, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Jessica Brakora, Assessment and Standards Division, Office of Transportation and Air Quality, Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor, MI 48105; telephone number: (734) 214-4936; email address: *Brakora.Jessica@epa.gov*.

SUPPLEMENTARY INFORMATION: EPA is making several corrections for inadvertent errors in the regulatory text for the final rule:

- Two variables in the variable definitions and example of Eq. 1036.535-1 are formatted improperly in the *Federal Register*; we are correcting those variable formats in 40 CFR 1036.535(b)(8).
- The equation text of Eq. 1036.545-3 was included in the signed final rule but is missing in the *Federal Register*; we are restoring Eq. 1036.545-3 in 40 CFR 1036.545(f)(3).
- Two variables in the variable definitions of Eq. 1036.545-11 are formatted improperly in the *Federal Register*; we are correcting those variable formats in 40 CFR 1036.545(o)(4)(iii).
- Table 1 of paragraph (b)(1) of § 1037.105 incorrectly presents the tractor vehicle standards in place of the vocational vehicle standards; we are replacing the published table with the correct table for the vocational vehicle standards in 40 CFR 1037.105(b)(1).
- Table 1 of paragraph (b)(1) of § 1037.106 as published does not clearly present the heavy-haul standards that apply each model year; we are replacing the table with an image that more clearly differentiates heavy-haul standards in 40 CFR 1037.106(b)(1).
- Paragraphs (f)(5)(ii) and (iii) of 40 CFR 1065.510 are published as a single paragraph in the *Federal Register*; we are adding a line break to separate the paragraphs.
- The equation number for Eq. 1065.602-19 in 40 CFR 1065.602(m)(1)(ii) is placed below the example calculations in the *Federal Register*; we are moving the equation number to be directly below the equation text.
- Subscripts within the heading of table 3 to paragraph (e)(4) of § 1065.656 are improperly formatted in the *Federal Register*; we are replacing the table with an image to ensure that the characters render properly.

- The table note reference in the table caption of table 1 to paragraph (a)(1)(ii) of § 1065.750 is improperly formatted in the publication version; we are replacing the capital "A" with a lowercase "a" to match the table note format.

Section 553(b)(B) of the Administrative Procedure Act (APA), 5 U.S.C. 553(b)(B), provides that, when an agency for good cause finds that public notice and comment procedures are impracticable, unnecessary, or contrary to the public interest, the agency may issue a rule without providing notice and an opportunity for public comment. EPA has determined that there is good cause for making this technical correction final without prior proposal. Such notice and opportunity for comment is unnecessary as the technical corrections are for minor typographical and other non-substantive errors made to the signature version in preparation for publication.

This final rule is effective June 21, 2024. APA section 553(d)(3), 5 U.S.C. 553(d), provides that final rules shall not become effective until 30 days after publication in the Federal Register "except . . . as otherwise provided by the agency for good cause." The purpose of this provision is to "give affected parties a reasonable time to adjust their behavior before the final rule takes effect." *Omnipoint Corp. v. Fed. Commc'n Comm'n*, 78 F.3d 620, 630 (D.C. Cir. 1996); see also *United States v. Gavrilovic*, 551 F.2d 1099, 1104 (8th Cir. 1977) (quoting legislative history). Thus, in determining whether good cause exists to waive the 30-day delay, an agency should "balance the necessity for immediate implementation against principles of fundamental fairness which require that all affected persons be afforded a reasonable amount of time to prepare for the effective date of its ruling." *Gavrilovic*, 551 F.2d at 1105. EPA has determined that there is good cause for making this final rule effective less than 30 days after publication in the Federal Register because the technical corrections are for minor typographical and other non-substantive errors made to the signature version in preparation for publication, these corrections will address potential confusion for regulated entities that could result if these errors introduced during preparation for publication are not corrected prior to the effective date of the final rule published in the Federal Register of Monday, April 22, 2024, and further time is not needed for regulated

entities to prepare for such corrections prior to the effective date given the nature of the corrections.

For these reasons, the agency finds that good cause exists under APA section 553(d)(3) to make this rule effective June 21, 2024.

Corrections

In FR Doc. 2024–06809, beginning on page 29440 in the *Federal Register* of Monday, April 22, 2024, the following corrections are made:

1. On page 29750, beginning in the third column, paragraph (b)(8) of §1036.535 is corrected to read as follows:

§ 1036.535 [Corrected]

* * * * *

(b) * * *

(8) If you determine fuel-consumption rates using emission measurements from the raw or diluted exhaust, calculate the mean fuel mass flow rate, $\overline{\dot{m}}_{\text{fuel}}$, for each point in the fuel map using the following equation:

$$\overline{\dot{m}}_{\text{fuel}} = \frac{M_C}{w_{\text{Cmeas}}} \cdot \left(\overline{\dot{n}} \cdot \frac{\overline{x}_{\text{Ccombdry}}}{1 + \overline{x}_{\text{H2Oexhdry}}} - \overline{\dot{m}}_{\text{CO2DEF}} \right)$$

Eq. 1036.535-1

Where:

$\overline{\dot{m}}_{\text{fuel}}$= mean fuel mass flow rate for a given fuel map setpoint, expressed to at least the nearest 0.001 g/s.
M_C = molar mass of carbon.
W_{Cmeas} = carbon mass fraction of fuel (or mixture of test fuels) as determined in 40 CFR 1065.655(d), except that you may not use the default properties in 40 CFR 1065.655(e)(5) to determine α, β, and w_C. You may not account for the contribution to α, β, γ, and δ of diesel exhaust fluid or other non-fuel fluids injected into the exhaust.
$\dot{n}$ = the mean exhaust molar flow rate from which you measured emissions according to 40 CFR 1065.655.
$\overline{x}_{\text{Ccombdry}}$ = the mean concentration of carbon from fuel and any injected fluids in the exhaust per mole of dry exhaust as determined in 40 CFR 1065.655(c).
$\overline{x}_{\text{H2Oexhdry}}$ = the mean concentration of H_2O in exhaust per mole of dry exhaust as determined in 40 CFR 1065.655(c).

$\overline{\dot{m}}_{CO2DEF}$= the mean CO_2 mass emission rate resulting from diesel exhaust fluid decomposition as determined in paragraph (b)(9) of this section. If your engine does not use diesel exhaust fluid, or if you choose not to perform this correction, set $\overline{\dot{m}}_{CO2DEF}$ equal to 0.
M_{CO2} = molar mass of carbon dioxide.

Example:

M_C = 12.0107 g/mol
$\underline{w}_{Cmeas}$ = 0.869
$\overline{\dot{n}}$ = 25.534 mol/s
$\overline{x}_{Ccombdry}$= 0.002805 mol/mol
$\overline{x}_{H2Oexhdry}$ = 0.0353 mol/mol
$\overline{\dot{m}}_{CO2DEF}$= 0.0726 g/s
M_{CO2} = 44.0095 g/mol

$$\overline{\dot{m}}_{fuel} = \frac{12.0107}{0.869} \cdot \left(25.534 \cdot \frac{0.002805}{1 + 0.0353} - \frac{0.0726}{44.0095}\right)$$

$$\overline{\dot{m}}_{fuel} = 0.933 \text{ g/s}$$

* * * * *

2. In § 1036.545:

a. On page 29755, in the second column, paragraph (f)(3) is corrected by adding Eq. 1036.545–3 immediately following the introductory text; and

b. On page 29761, beginning in the second column, in paragraph (o)(4)(iii), following Eq. 1036.545–11, the "Where" paragraph is corrected.

The corrections read as follows:

§ 1036.545 [Corrected]

* * * * *

(f) * * *

(3) * * *

$$v_{refi} = \left(\frac{k_a \cdot T_{i\text{-}1}}{r} \cdot (Eff_{axle}) - \left(M \cdot g \cdot C_{rr} \cdot \cos(\operatorname{atan}(G_{i\text{-}1})) + \frac{\rho \cdot C_d A}{2} \cdot v_{ref,i\text{-}1}^2\right) - F_{brake,i\text{-}1} - F_{grade,i\text{-}1}\right) \cdot \frac{\Delta t_{i\text{-}1}}{M + M_{rotating}} + v_{ref,i\text{-}1}$$

* * * * *

(o) * * *

(4) * * *

(iii) * * *

Where:

$\overline{f}_{\text{nengine}}$ = average engine speed when vehicle speed is at or above 0.100 m/s.
$\overline{v}_{\text{ref}}$ = average simulated vehicle speed at or above 0.100 m/s.

* * * * *

3. On page 29766, starting in the third column, paragraph (b)(1) of § 1037.105 is corrected to read as follows:

§ 1037.105 [Corrected]

* * * * *

(b) * * *

(1) Except as specified in paragraph (b)(2) of this section, model year 2027 and later vehicles are subject to Phase 3 CO_2 standards corresponding to the selected subcategories as shown in the following table:

TABLE 1 OF PARAGRAPH (b)(1) OF § 1037.105—PHASE 3 CO_2 STANDARDS FOR MODEL YEAR 2027 AND LATER VOCATIONAL VEHICLES

Model Year	Subcategory	CO_2 standard by vehicle service class (g/ton·mile)				
		CI Light Heavy	CI Medium Heavy	CI Heavy Heavy	SI Light Heavy	SI Medium Heavy
2027	Urban	305	224	269	351	263
	Multi-Purpose	274	204	230	316	237
	Regional	242	190	189	270	219
2028	Urban	286	217	269	332	256
	Multi-Purpose	257	197	230	299	230
	Regional	227	183	189	255	212
2029	Urban	268	209	234	314	248
	Multi-Purpose	241	190	200	283	223
	Regional	212	177	164	240	206
2030	Urban	250	201	229	296	240
	Multi-Purpose	224	183	196	266	216
	Regional	198	170	161	226	199
2031	Urban	198	178	207	244	217
	Multi-Purpose	178	162	177	220	195
	Regional	157	150	146	185	179
2032 and later	Urban	147	155	188	193	194
	Multi-Purpose	132	141	161	174	174
	Regional	116	131	132	144	160

* * * * *

4. On page 29770, starting in the third column, paragraph (b)(1) of § 1037.106 is corrected to read as follows:

§ 1037.106 [Corrected]

* * * * *

(b) * * *

(1) Except as specified in paragraph (b)(2) of this section, model year 2027 and later tractors are subject to Phase 3 CO_2 standards corresponding to the selected subcategories as shown in the following table:

TABLE 1 OF PARAGRAPH (b)(1) OF § 1037.106— PHASE 3 CO_2 STANDARDS FOR MODEL YEAR 2027 AND LATER TRACTORS

Model Year	Roof Height	CO_2 standard by regulatory subcategory (g/ton·mile)			
		Class 7 all cab styles	Class 8 day cab	Class 8 sleeper cab	Heavy-haul
2027	Low Roof	96.2	73.4	64.1	48.3
	Mid Roof	103.4	78.0	69.6	
	High Roof	100.0	75.7	64.3	
2028	Low Roof	88.5	67.5	64.1	48.3
	Mid Roof	95.1	71.8	69.6	
	High Roof	92.0	69.6	64.3	
2029	Low Roof	84.7	64.6	64.1	47.8
	Mid Roof	91.0	68.6	69.6	
	High Roof	88.0	66.6	64.3	
2030	Low Roof	80.8	61.7	60.3	47.8
	Mid Roof	86.9	65.5	65.4	
	High Roof	84.0	63.6	60.4	
2031	Low Roof	69.3	52.8	56.4	46.9
	Mid Roof	74.4	56.2	61.2	
	High Roof	72.0	54.5	56.6	
2032 and Later	Low Roof	57.7	44.0	48.1	45.9
	Mid Roof	62.0	46.8	52.2	
	High Roof	60.0	45.4	48.2	

* * * * *

5. On page 29805, in the second column, paragraph (f)(5) of § 1065.510 is corrected to read as follows:

§ 1065.510 [Corrected]

* * * * *

(f) * * *

(5) *Optional declared torques*. You may use declared torque instead of measured torque as follows:

(i) For variable-speed engines you may declare a maximum torque over the engine operating range. You may use the declared value for measuring warm high-idle speed as specified in this section.

(ii) For constant-speed engines you may declare a maximum test torque. You may use the declared value for cycle generation if it is within (95 to 100)% of the measured value.

(iii) For variable-speed engines, you may declare a nonzero torque for idle operation that represents in-use operation. For example, if your engine is connected to a hydrostatic

transmission with a minimum torque even when all the driven hydraulic actuators and motors are stationary and the engine is at idle, you may use this minimum torque as the declared value. As another example, if your engine is connected to a vehicle or machine with accessories, you may use a declared torque corresponding to operation with those accessories. You may specify a combination of torque and power as described in paragraph (f)(6) of this section. Use this option when the idle loads (e.g., vehicle accessory loads) are best represented as a constant torque on the primary output shaft. You may use multiple warm idle loads and associated idle speeds in cycle generation for representative testing. As an example, see the required deviations for cycle generation in § 1065.610(d)(3) for improved simulation of idle points for engines intended primarily for propulsion of a vehicle with an automatic or manual transmission where that engine is subject to a transient duty cycle with idle operation.

(iv) For constant-speed engines, you may declare a warm minimum torque that represents in-use operation. For example, if your engine is typically connected to a machine that does not operate below a certain minimum torque, you may use this minimum torque as the declared value and use it for cycle generation.

* * * * *

6. On page 29807, in the second column, paragraph (m)(1)(ii) of § 1065.602 is corrected to read as follows:

§ 1065.602 [Corrected]

* * * * *

(m) * * *

(1) * * *

(ii) Determine the median as the average of the data point *i* and the data point *i* + 1 as follows:

$$M = \frac{y_i + y_{i+1}}{2}$$

Eq. 1065.602-19

Example:

$y_2 = 41.780$
$y_3 = 41.861$

$$M = \frac{41.780 + 41.861}{2}$$

$M = 41.821$

* * * * *

7. On page 29818, starting in the third column, paragraph (e)(4) of § 1065.656 is corrected to read as follows:

§1065.656 [Corrected]

* * * * *

(e) * * *

(4) Table 3 to this paragraph (e)(4) follows:

TABLE 3 TO PARAGRAPH (e)(4) OF § 1065.656–DEFAULT VALUES OF τ, χ, φ, ξ, AND ω

Fuel	**Atomic carbon, oxygen, and nitrogen-to-hydrogen ratios $C_\tau H_\chi O_\varphi S_\xi N_\omega$**
Hydrogen	$C_0H_2O_0S_0N_0$
Ammonia	$C_0H_3O_0S_0N_1$

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§ 1065.750 [Corrected]

8. On page 29823, table 1 to paragraph (a)(1)(ii) of § 1065.750 is corrected by removing the table heading "TABLE 1 TO PARAGRAPH (a)(1)(ii) OF § 1065.750–GENERAL SPECIFICATIONS FOR PURIFIED GASES [A]" and adding in its place "TABLE 1 TO PARAGRAPH (a)(1)(ii) OF § 1065.750–GENERAL SPECIFICATIONS FOR PURIFIED GASES [a]".

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