§ 86.1816–08 Emission standards for complete heavy-duty vehicles.

Section 86.1816–08 includes text that specifies requirements that differ from those specified in §86.1816–05. Where a paragraph in §86.1816–05 is identical and applicable to §86.1816–08, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For guidance see §86.1816–05.”. This section applies to 2008 and later model year complete heavy-duty vehicles (excluding MDPVs) fueled by gasoline, methanol, natural gas and liquefied petroleum gas fuels except as noted. Multi-fueled vehicles shall comply with all requirements established for each consumed fuel. For methanol fueled vehicles, references in this section to hydrocarbons or total hydrocarbons shall mean total hydrocarbon equivalents and references to non-methane hydrocarbons shall mean non-methane hydrocarbon equivalents.

(a) Exhaust emission standards. (1) Exhaust emissions from 2008 and later model year complete heavy-duty vehicles at and above 8,500 pounds Gross Vehicle Weight Rating but equal to or less than 10,000 Gross Vehicle Weight Rating pounds shall not exceed the following standards at full useful life:

(i) Non-methane hydrocarbons. (A) 0.195 grams per mile; this requirement may be satisfied by measurement of non-methane organic gas or total hydrocarbons, at the manufacturer's option. For alcohol-fueled vehicles, this standard is 0.195 grams per mile NMHCE.

(ii) [Reserved]

(b) Alternate test groups. Manufacturers may request to group complete heavy-duty vehicles into the same test group as vehicles subject to more stringent standards, so long as those complete heavy-duty vehicles meet the most stringent standards applicable to any vehicle within that test group, as provided at §86.1827–(a)(5) and (d)(4).

[65 FR 59970, Oct. 6, 2000, as amended at 66 FR 5190, Jan. 18, 2001]
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(B) A manufacturer may elect to include any or all of its test groups in the NMHC emissions ABT programs for heavy-duty vehicles, within the restrictions described in §86.1817–05, or §86.1817–08. If the manufacturer elects to include test groups in any of these programs, the NMHC FEL may not exceed 0.28 grams per mile. This ceiling value applies whether credits for the family are derived from averaging, banking, or trading.

(iii) Carbon monoxide. 7.3 grams per mile.

(iv) Oxides of nitrogen. (A) 0.2 grams per mile.

(B) A manufacturer may elect to include any or all of its test groups in the NOX emissions ABT programs for heavy-duty vehicles, within the restrictions described in §86.1817–05 or §86.1817–08. If the manufacturer elects to include test groups in any of these programs, the NOX FEL may not exceed 0.9 grams per mile. This ceiling value applies whether credits for the family are derived from averaging, banking, or trading.

(v) Particulate. 0.02 grams per mile.

(vi) Formaldehyde. 0.032 grams per mile.

(b)–(c) [Reserved]

(d) Evaporative emissions. Evaporative hydrocarbon emissions from gasoline-fueled, natural gas-fueled, liquefied petroleum gas-fueled, and methanol-fueled complete heavy-duty vehicles shall not exceed the following standards. The standards apply equally to certification and in-use vehicles. The spillback standard also applies to newly assembled vehicles.

(1) For the full three-diurnal test sequence, diurnal plus hot soak measurements: 1.4 grams per test.

(2) Gasoline and methanol fuel only. For the supplemental two-diurnal test sequence, diurnal plus hot soak measurements: 1.75 grams per test.

(3) Gasoline and methanol fuel only. Running loss test: 0.05 grams per mile.

(4) Gasoline and methanol fuel only. Fuel dispensing spillback test: 1.0 grams per test.

(e) through (h) [Reserved]. For guidance see §86.1816–05.

(i) Phase-in options. (1)(i) For model year 2008, manufacturers may certify some of their test groups to the standards applicable to model year 2008 vehicles under §86.1816–05, in lieu of the exhaust standards specified in this section. These vehicles must comply with all other requirements applicable to model year 2007 vehicles. The combined number of vehicles in the test groups certified to the 2008 standards may not exceed 50 percent of the manufacturer's
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U.S. heavy-duty vehicle sales of complete heavy-duty Otto-cycle motor vehicles for model year 2008, except as explicitly allowed by paragraph (i)(2) of this section.

(ii) For model year 2008, manufacturers may certify some of their test groups to the evaporative standards applicable to model year 2007 engines under § 86.1816–05, in lieu of the evaporative standards specified in this section. These vehicles must comply with all other requirements applicable to model year 2008 vehicles, except as allowed by paragraph (i)(1)(i) of this section. The combined number of vehicles in the test groups certified to the 2007 standards may not exceed 50 percent of the manufacturer’s U.S. heavy-duty vehicle sales of complete heavy-duty Otto-cycle motor vehicles for model year 2008.

(3) Manufacturers certifying vehicles to all of the applicable standards listed in paragraph (i)(3)(i) or (ii) of this section (without using credits) and the evaporative standards listed in paragraph (d) of this section prior to model year 2008 may reduce the number of vehicles that are required to meet the standards listed in paragraph (a) of this section in model year 2008 and/or 2009, taking into account the phase-in option provided in paragraph (i)(1)(i) of this section. For every such vehicle that is certified early with sufficiently low emissions, the manufacturer may reduce the number of vehicles that are required by paragraph (i)(1)(i) of this section to meet the standards listed in paragraph (a) of this section by two vehicles. The applicable standards are:

(i) For complete heavy-duty vehicles at and above 8,500 pounds Gross Vehicle Weight Rating but equal to or less than 10,000 Gross Vehicle Weight Rating:

- 0.100 g/mi NMHC,
- 0.10 g/mi NO\textsubscript{X},
- 3.2 g/mi CO,
- 0.008 g/mi formaldehyde,
- and 0.02 g/mi PM.

(ii) For complete heavy-duty vehicles at or above 10,000 pounds Gross Vehicle Weight Rating but equal to or less than 14,000 Gross Vehicle Weight Rating:

- 0.117 g/mi NMHC,
- 0.20 g/mi NO\textsubscript{X},
- 3.7 g/mi CO,
- 0.008 g/mi formaldehyde,
- and 0.02 g/mi PM.

(j) (1) For model years prior to 2012, for purposes of determining compliance after title or custody has transferred to the ultimate purchaser, for vehicles meeting the applicable emission standards of this section, the applicable compliance limits shall be determined by adding the applicable adjustment from paragraph (j)(2) of this section to the otherwise applicable standard or FEL.

(ii) Manufacturers certifying vehicles to all of the applicable evaporative standards listed in paragraph (d) of this section prior to model year 2008 may reduce the number of vehicles that are required to meet the standards listed in paragraph (d) of this section in model year 2008 and/or 2009, taking into account the phase-in option provided in paragraph (i)(1)(i) of this section. For every vehicle that is certified early, the manufacturer may reduce the number of vehicles that are required by paragraph (i)(1)(i) of this section to meet the evaporative standards listed in paragraph (d) of this section by one vehicle.

(2) The in-use adjustments are:

- (i) 0.1 g/mi for NO\textsubscript{X},
- (ii) 0.100 g/mi NMHC,
- (iii) 0.01 g/mi for PM.

[66 FR 5190, Jan. 18, 2001, as amended at 70 FR 40443, July 13, 2005]