§ 86.1816–05 Emission standards for complete heavy-duty vehicles.

This section applies to 2005 and later model year complete heavy-duty vehicles (2003 model year for manufacturers choosing Otto-cycle HDE option 1 in § 86.005–1(c)(1), or 2004 model year for manufacturers choosing Otto-cycle HDE option 2 in § 86.005–1(c)(2)) fueled by gasoline, methanol, natural gas and liquefied petroleum gas fuels except as noted. This section does not apply to Medium-duty Passenger Vehicles, which are covered under § 86.1811. This section also applies to 2000 and later model year complete heavy-duty vehicles participating in the early banking provisions of the averaging, trading and banking program as specified in § 86.1817–05(n). Multi-fueled vehicles, references in this section to hydrocarbons or total hydrocarbons shall mean total hydrocarbon equivalents and references to non-methane hydrocarbon equivalents shall mean non-methane hydrocarbon equivalents.

(1) Exhaust emissions from 2005 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 pounds Gross Vehicle Weight Rating shall not exceed the following standards at full useful life:

- (a) Exhaust emission standards. (1) Exhaust emissions from gasoline-fueled, natural gas-fueled, liquefied petroleum gas-fueled, and methanol-fueled complete heavy-duty vehicles shall not exceed the following standards for the full three-diurnal test sequence, diurnal plus hot soak measurements:
  - 3.0 grams per test.
  - 3.5 grams per test.
  - 0.05 grams per mile.
  - 1.0 grams per test.

- (b) Evaporative emissions. (1) Evaporative emissions from gasoline-fueled, natural gas-fueled, liquefied petroleum gas-fueled, and methanol-fueled complete heavy-duty vehicles shall not exceed the following standards for certification and in-use vehicles. The spiltback standard also applies to newly assembled vehicles:
  - 3.0 grams per test.
  - 3.5 grams per test.
  - 0.05 grams per mile.
  - 1.0 grams per test.

- (c) Refueling emissions—(1) Standards. Refueling emissions from Otto-cycle complete heavy-duty vehicles equal to or less than 10,000 pounds Gross Vehicle Weight Rating shall be phased in, in
accordance with the schedule in Table S01–5 in §86.1810–01 not to exceed the following emission standards:

(i) For gasoline-fueled and methanol-fueled vehicles: 0.20 grams hydrocarbon per gallon (0.053 gram per liter) of fuel dispensed.

(ii) For liquefied petroleum gas-fueled vehicles: 0.15 grams hydrocarbon per gallon (0.04 gram per liter) of fuel dispensed.

(2) Phase-in. Complete heavy-duty vehicles subject to refueling standards must comply with the phase-in requirements found in Table S01–5 in §86.1810–01, and must be grouped with HLDTs and MDPVs to determine phase-in compliance.

(3) Alternate timing. (i) For manufacturers choosing Otto-cycle HDE option 3 under §86.005–1(c)(3), the refueling emissions standards are optional for 2004 model year complete heavy-duty vehicles.

(ii) For manufacturers choosing Otto-cycle HDE option 3 under §86.005–1(c)(3), the manufacturer may exempt 2005 model year HDE test groups whose model year begins before July 31, 2004. Only 2005 model year HDE test groups whose model year begins on or after July 31, 2004 shall be considered (together with all 2005 model year HLDTs and MDPVs) for purposes of calculating the sales percentage for phase-in as outlined in §86.1810–01(k).

(iii) For complete heavy-duty vehicles which have total fuel tank capacity of greater than 35 gallons, or which do not share a common fuel system with a light-duty truck or medium-duty passenger vehicle configuration, the refueling emissions standards are optional for the 2004 and 2005 model years.

(4) Exceptions. The provisions of this §86.1816–05(e) do not apply to incomplete heavy-duty vehicles optionally certified to complete heavy duty vehicle standards under the provisions of §86.1801–01(c)(2).

§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:

(1) [Reserved]

(b) Idle exhaust emission standards. Complete heavy-duty vehicles. Exhaust emissions of carbon monoxide from 2005 and later model year gasoline, methanol, natural gas and liquefied petroleum gas-fueled complete heavy-duty vehicles shall not exceed 0.50 percent of exhaust gas flow at curb idle for a useful life of 11 years or 120,000 miles, whichever occurs first. This does not apply for vehicles certified to the requirements of §86.1806–05.