Environmental Protection Agency

§ 86.1810–09

General standards; increase in emissions; unsafe condition; waivers.

Section 86.1810–09 includes text that specifies requirements that differ from §86.1810–01. Where a paragraph in §86.1810–01 is identical and applicable to §86.1810–09, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For guidance see §86.1810–01.” Where a corresponding paragraph of §86.1810–01 is not applicable, this is indicated by the statement “[Reserved].” This section applies to model year 2009 and later light-duty vehicles and light-duty trucks fueled by gasoline, diesel, methanol, ethanol, natural gas and liquefied petroleum gas fuels. This section also applies to MDPVs and complete heavy-duty vehicles certified according to the provisions of this subpart. Multi-fueled vehicles (including dual-fueled and flexible-fueled vehicles) must comply with all requirements established for each consumed fuel (or blend of fuels in the case of flexible fueled vehicles). The standards of this subpart apply to both certification and in-use vehicles unless otherwise indicated. This section also applies to hybrid electric vehicles and zero emission vehicles. Unless otherwise specified, requirements and provisions of this subpart applicable to methanol fueled vehicles are also applicable to Tier 2 and interim non-Tier 2 ethanol fueled vehicles.

(a) through (e) [Reserved] For guidance see §86.1810–01.

(f) Altitude requirements. (1) All emission standards apply at low altitude conditions and at high altitude conditions, except for supplemental exhaust emission standards, cold temperature NMHC emission standards, and the evaporative emission standards as described in §86.1811–09(e). Supplemental exhaust emission standards, as described in §86.1811–04(f), apply only at low altitude conditions. Cold temperature NMHC emission standards, as described in §86.1811–10(g), apply only at low altitude conditions. Tier 2 evaporative emission standards apply at high altitude conditions as specified in §§86.1810–01(f) and (j), and 86.1811–04(e).

(2) For vehicles that comply with the cold temperature NMHC standards, manufacturers must submit an engineering evaluation indicating that common calibration approaches are utilized at high altitudes. Any deviation from low altitude emission control practices must be included in the auxiliary emission control device (AECD) descriptions submitted at certification. Any AECD specific to high altitude must require engineering emission data for EPA evaluation to quantify any emission impact and validity of the AECD.

(g) through (p) [Reserved] For guidance see §86.1810–01.

[72 FR 8562, Feb. 26, 2007]

Effective Date Note: At 75 FR 25685, May 7, 2010, §86.1810–09 was amended by revising paragraph (f), effective July 6, 2010. For the convenience of the user, the revised text is set forth as follows:

§ 86.1810–09 General standards; increase in emissions; unsafe condition; waivers.

* * * * * * *

(f) Altitude requirements. (1) All emission standards apply at low altitude conditions and at high altitude conditions, except for
the following standards, which apply only at low altitude conditions:

(i) The supplemental exhaust emission standards as described in §86.1811–04(f);

(ii) The cold temperature NMHC emission standards as described in §86.1811–10(g);

(iii) The evaporative emission standards as described in §86.1811–09(e).

(2) For vehicles that comply with the cold temperature NMHC standards described in §86.1811–10(g) and the CO₂, N₂O, and CH₄ exhaust emission standards described in §86.1813–12, manufacturers must submit an engineering evaluation indicating that common calibration approaches are utilized at high altitudes. Any deviation from low altitude emission control practices must be included in the auxiliary emission control device (AECD) descriptions submitted at certification. Any AECD specific to high altitude must require engineering emission data for EPA evaluation to quantify any emission impact and validity of the AECD.

* * * * *

§ 86.1811–01 Emission standards for light-duty vehicles.

This section applies to 2001 and later model year light-duty vehicles fueled by gasoline, diesel, 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 total hydrocarbons shall mean total hydrocarbon equivalents and references to non-methane hydrocarbons shall mean non-methane hydrocarbon equivalents. This section does not apply to 2004 and later model year vehicles, except as specifically referenced by §86.1811–04.

(a) Exhaust emission standards. (1) Exhaust emissions shall not exceed the following standards at intermediate useful life:

(i) Total hydrocarbons: 0.41 grams per mile, except natural gas, which has no standard.

(ii) Non-methane hydrocarbons: 0.25 grams per mile.

(iii) Carbon monoxide: 3.4 grams per mile.

(iv) Oxides of nitrogen: 0.4 grams per mile except diesel fuel which has a 1.0 gram per mile standard.

(v) Particulate matter: 0.08 grams per mile.

(2) Exhaust emissions shall not exceed the following standards at full useful life:

(i) [Reserved]

(ii) Non-methane hydrocarbons: 0.31 grams per mile.

(iii) Carbon monoxide: 4.2 grams per mile.

(iv) Oxides of nitrogen: 0.6 grams per mile except diesel fuel which has a 1.25 gram per mile standard.

(v) Particulate matter: 0.10 grams per mile.

(b) Supplemental exhaust emission standards. (1) Supplemental exhaust emissions from gasoline-fueled and diesel-fueled light-duty vehicles shall not exceed the following standards at intermediate useful life:

(i) Nonmethane hydrocarbon and oxides of nitrogen composite: 0.65 grams per mile except diesel-fueled which has a 1.48 gram per mile standard.

(ii) Carbon monoxide. Regulated vehicles shall meet at least one of the following two sets of standards:

(A) Individual US06 and SC03 Air Conditioning compliance. Comply with both the following standards:

(1) 3.0 grams per mile on the A/C test, not applicable to diesel fueled vehicles; and

(2) 9.0 grams per mile on the US06 test; or

(B) Composite Carbon Monoxide Standard: 3.4 grams per mile.

(2) Supplemental exhaust emissions from gasoline-fueled and diesel-fueled light-duty vehicles shall not exceed the following standards at full useful life:

(i) Nonmethane hydrocarbon and oxides of nitrogen composite: 0.91 grams per mile except diesel-fueled which have a 2.07 gram per mile standard.

(ii) Carbon monoxide. Regulated vehicles shall meet at least one of the following two sets of standards:

(A) Individual US06 and SC03 Air Conditioning compliance. Comply with both the following standards:

(1) 3.7 grams per mile on the A/C test, not applicable to diesel fueled vehicles; and

(2) 11.1 grams per mile on the US06 test; or

(B) Composite Carbon Monoxide Standard: 4.2 grams per mile.

(c) Cold temperature emission standards. Exhaust emissions from gasoline-