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Upper limit means the emission level for a specific pollutant above which a certificate of conformity may not be issued or may be suspended or revoked.

[50 FR 35388, Aug. 30, 1985, as amended at 55 FR 46628, Nov. 5, 1990; 79 FR 23703, Apr. 28, 2014]

§86.1103–87 Criteria for availability of nonconformance penalties.

(a) EPA shall establish for each subclass of heavy-duty engines and heavyduty vehicles (other than motorcycles), an NCP for a motor vehicle pollutant, when any new or revised emission standard is more stringent than the previous standard for the pollutant, or when an existing standard for that pollutant becomes more difficult to achieve because of a new or revised standard, provided that EPA finds:

(1) That for such subclass of engines or vehicles, substantial work is required to meet the standard for which the NCP is offered, and

(2) That there is likely to be a technological laggard.

(b) Substantial work, as used in paragraph (a)(1) of this section, means the application of technology that was not generally used in an engine or vehicle class or subclass to meet standards prior to the implementation of the new or revised standard, or the significant modification of existing technology or design parameters, needed to bring the vehicle or engine into compliance with either the more stringent new or revised standard or an existing standard which becomes more difficult to achieve because of a new or revised standard. Substantial work is determined by the total amount of work required to meet the standard for which the NCP is offered, compared to the previous standard, irrespective of when EPA establishes the NCP.

[77 FR 54401, Sept. 5, 2012]

§86.1104–91 Determination of upper limits.

EPA shall set a separate upper limit for each phase of NCPs and for each service class.

(a) Except as provided in paragraphs (b), (c), and (d) of this section, the upper limit shall be set as follows:

(1) The upper limit applicable to a pollutant emission standard for a sub-

class of heavy-duty engines or heavyduty vehicles for which an NCP is established in accordance with §86.1103– 87, shall be the previous pollutant emission standard for that subclass.

(2) If a manufacturer participates in any of the emissions averaging, trading, or banking programs, and carries over certification of an engine family from the prior model year, the upper limit for that engine family shall be the family emission limit of the prior model year, unless the family emission limit is less than the upper limit determined in paragraph (a) of this section.

(b) If no previous standard existed for the pollutant under paragraph (a) of this section, the upper limit will be developed by EPA during rulemaking.

(c) EPA may set the upper limit during rulemaking at a level below the level specified in paragraph (a) of this section if we determine that a lower level is achievable by all engines or vehicles in that subclass.

(d) EPA may set the upper limit at a level above the level specified in paragraph (a) of this section if we determine that the such level will not be achievable by all engines or vehicles in that subclass.

[77 FR 54401, Sept. 5, 2012]

§86.1105–87 Emission standards for which nonconformance penalties are available.

(a)–(b) [Reserved]

(c) Effective in the 1991 model year, NCPs will be available for the following additional emission standards:

(1) [Reserved]

(2) Petroleum-fueled diesel heavyduty engine oxides of nitrogen standard of 5.0 grams per brake horsepowerhour.

(i) For petroleum-fueled light heavyduty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$830.

(2) COC₉₀: \$946.

(3) MC_{50} : \$1,167 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with §86.1113–87(h): 0.12.

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(ii) For petroleum-fueled medium heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$905.

(2) COC₉₀: \$1,453.

(3) MC_{50} : \$1,417 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with §86.1113–87(h): 0.11.

(iii) For petroleum-fueled heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$930.

(2) COC₉₀: \$1,590.

(3) MC_{50} : \$2,250 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with §86.1113-87(h): 0.11.

(3) Petroleum-fueled diesel light-duty trucks (between 6,001 and 14,000 lbs GVW) particulate matter emission standard of 0.13 grams per vehicle mile.

(i) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(A) COC₅₀: \$711.

(B) COC₉₀: \$1,396.

(C) MC_{50} : \$2,960 per gram per brake horsepower-hour.

(D) F: 1.2.

(ii) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with §86.1113-87(h): 0.01.

(d) Effective in the 1993 model year, NCPs will be available for the following additional emission standard:

(1) Petroleum-fueled diesel bus engine (as defined in §86.093-2) particulate emission standard of 0.10 grams per brake horsepower-hour.

(i) The following values shall be used to calculate an NCP for the standard set forth in \$86.093-11(a)(1)(iv)(A) in accordance with \$86.1113-87(a):

(A) COC₅₀: \$4,020.

(B) COC₉₀: \$4,535.

(C) MC_{50} : \$22,971 per gram per brake horsepower-hour.

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(D) F: 1.2.

(E) UL: 0.25 grams per brake horse-power-hour.

(ii) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in \$86.093-11(a)(1)(iv)(A) in accordance with \$86.1113-87(h): 0.02.

(2) [Reserved]

(e) The values of COC_{50} , COC_{90} , and MC_{50} in paragraphs (a) and (b) of this section are expressed in December 1984 dollars. The values of COC₅₀, COC₉₀, and MC_{50} in paragraphs (c) and (d) of this section are expressed in December 1989 dollars. The values of COC₅₀, COC₉₀, and MC_{50} in paragraph (f) of this section are expressed in December 1991 dollars. The values of COC₅₀, COC₉₀, and MC₅₀ in paragraphs (g) and (h) of this section are expressed in December 1994 dollars. The values of COC_{50} , COC_{90} , and MC_{50} in paragraph (i) of this section are expressed in December 2001 dollars. The values of COC50, COC90, and MC50 in paragraph (j) of this section are expressed in December 2011 dollars. These values shall be adjusted for inflation to dollars as of January of the calendar year preceding the model year in which the NCP is first available by using the change in the overall Consumer Price Index, and rounded to the nearest whole dollar.

(f) Effective in the 1994 model year, NCPs will be available for the following emission standards:

(1) Petroleum-fueled urban bus engine (as defined in §86.091-2) particulate emission standard of 0.07 grams per brake horsepower-hour.

(i) The following values shall be used to calculate an NCP for the standard set forth in \$86.094-11(a)(1)(iv)(A) in accordance with \$86.1113-87(a):

(A) COC₅₀: \$3292.

(B) COC₉₀: \$10,014.

(C) MC₅₀: \$109,733.

(D) F: 1.2.

(ii) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in \$86.094-11(a)(1)(iv)(A) in accordance with \$86.1113-87(h): 0.38.

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(2) Petroleum-fueled diesel heavyduty engine particulate matter emission standard of 0.10 grams per brake horsepower-hour.

(i) For petroleum-fueled light heavyduty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$772.

(2) COC₉₀: \$1,325.

(3) MC_{50} : \$8,178 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with §86.1113-87(h): 0.081.

(ii) For petroleum-fueled medium heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$1,276.

(2) COC₉₀: \$3,298.

(3) MC_{50} : \$15,370 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with §86.1113–87(h): 0.098.

(iii) For petroleum-fueled heavy heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$2,105.

(2) COC₉₀: \$6,978.

(3) MC_{50} : \$30,070 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP in accordance with §86.1113-87(h): 0.083.

(g) Effective in the 1996 model year, NCPs will be available for the following emission standard:

(1) Light-duty truck 3 diesel-fueled vehicle at full useful life (as defined in §86.094-2) particulate matter emission standard of 0.10 g/mi.

(i) The following values shall be used to calculate an NCP for the standard set forth in \$86.094-9(a)(1)(ii) in accordance with \$86.1113-87(a):

(A) COC₅₀: \$441.

(B) COC₉₀: \$1,471.

(C) MC₅₀: \$14,700 per gram per mile.(D) F: 1.2.

(ii) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in §86.094–9(a)(1)(ii) in accordance with §86.1113–87(h): 0.093.

(2) Light-duty truck 3 diesel-fueled vehicle at full useful life (as defined in §86.094-2) oxides of nitrogen emission standard of 0.98 g/mi.

(i) The following values shall be used to calculate an NCP for the standard set forth in \$86.094-9(a)(1)(ii) in accordance with \$86.1113-87(a):

(A) COC₅₀: \$654.

(B) COC₉₀: \$779.

(C) MC₅₀: \$908 per gram per mile.

(D) F: 1.2.

(ii) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in §86.094–9(a)(1)(ii) in accordance with §86.1113–87(h): 0.082.

(3) 1996 Urban Bus (as defined in §86.094-2) particulate matter emission standard of 0.05 g/BHp-hr.

(i) The following values shall be used to calculate an NCP for the standard set forth in \$86.094-9(a)(1)(ii) in accordance with \$86.1113-87(a):

(A) COC₅₀: \$576.

(B) COC₉₀: \$6,569.

(C) MC_{50} : \$28,800 per gram per brake horsepower-hour.

(D) F: 1.2.

(ii) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in §86.094-9(a)(1)(ii) in accordance with §86.1113-87(h): 0.500.

(h) Effective in the 1998 model year, NCPs will be available for the following emission standard:

(1) Petroleum-fueled diesel heavyduty engine oxides of nitrogen standard of 4.0 grams per brake horsepowerhour.

(i) For petroleum-fueled light heavyduty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$833.

(2) COC₉₀: \$1,513.

(3) MC_{50} : \$833 per gram per brake horsepower-hour.

(4) F: 1.2.

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(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in \$86.094-9(a)(1)(ii)in accordance with \$86.1113-87(h): 0.039.

(ii) For petroleum-fueled medium heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$444.

(2) COC₉₀: \$1,368.

(3) MC_{50} : \$444 per gram per brake horsepower-hour.

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in §86.094–9(a)(1)(ii) in accordance with §86.1113–87(h): 0.043.

(iii) For petroleum-fueled heavy heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$1,086.

(2) COC₉₀: \$2,540.

(3) MC_{50} : \$1,086 per gram per brake horsepower-hour

(4) F: 1.2.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in §86.094–9(a)(1)(ii) in accordance with §86.1113–87(h): 0.039.

(2) [Reserved]

(i) Effective in the 2004 model year, NCPs will be available for the following emission standard:

(1) Diesel heavy-duty engine nonmethane hydrocarbon plus oxides of nitrogen standard of 2.4 grams per brake horsepower-hour (or alternatively, 2.5 grams per brake horsepower-hour with a limit on non-methane hydrocarbon emissions of 0.5 grams per brake horsepower-hour), in §86.004-11(a)(1)(i).

(i) For light heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$1,240.

(2) COC₉₀: \$2,710.

(3) MC_{50} : \$2,000 per gram per brake horsepower-hour.

(4) F: 1.3.

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(5) UL: 4.5 grams per brake horsepower-hour; notwithstanding §86.1104-91.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in \$86.004-11(a)(1)(i) in accordance with \$86.1113-87(h): 0.403.

(ii) For medium heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$2,740.

(2) COC₉₀: \$4,930.

(3) MC_{50} : \$1,400 per gram per brake horsepower-hour.

(4) F: 1.3.

(5) UL: 4.5 grams per brake horsepower-hour; notwithstanding §86.1104-91.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in \$86.004-11(a)(1)(i) in accordance with \$86.1113-87(h): 0.197.

(iii) For heavy heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$6,810.

(2) COC₉₀: \$12,210.

(3) MC_{50} : \$5,600 per gram per brake horsepower-hour.

(4) F: 1.3.

(5) UL: 6.0 grams per brake horsepower-hour; notwithstanding §86.1104-91.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in \$86.004-11(a)(1)(i) in accordance with \$86.1113-87(h): 0.090.

(iv) For diesel urban bus engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC 50: \$3,930.

(2) COC₉₀: \$6,660.

(3) MC_{50} : \$3,800 per gram per brake horsepower-hour.

(4) F: 1.3.

(5) UL: 4.5 grams per brake horsepower-hour; notwithstanding §86.1104-91.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the

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standard set forth in §86.004–11(a)(1)(i) in accordance with §86.1113–87(h): 0.155. (2) [Reserved]

(j) Effective in the 2012 and later model years, NCPs will be available for the following emission standard:

(1) Diesel heavy-duty engine oxides of nitrogen standard of 0.20 grams per brake horsepower-hour in 886.007-11(a)(1)(i).

(i) [Reserved]

(ii) For heavy heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with §86.1113-87(a):

(1) COC₅₀: \$3,219.

(2) COC₉₀: \$3,775.

(3) MC_{50} : \$10,729 per gram per brake horsepower-hour NO_X .

(4) F: 1.173.

(5) UL: 0.50 grams per brake horse-power-hour NO_X .

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in \$86.007-11(a)(1)(i)in accordance with \$86.1113-87(h): 0.005.

(2) Manufacturers may not generate emission credits for any pollutant from engines for which the manufacturer pays an NCP for the NO_X standard identified in paragraph (j)(1) of this section.

(3) The penalty shall be adjusted annually as specified in §86.1113–87 with 2012 as the first year. Note that this means AAF_{2012} is equal to 1.

[50 FR 53466, Dec. 31, 1985, as amended at 52
FR 47870, Dec. 16, 1987; 53 FR 43878, Oct. 31, 1988; 56 FR 64712, Dec. 12, 1991; 58 FR 15802, Mar. 24, 1993; 58 FR 68540, Dec. 28, 1993; 60 FR 33925, June 29, 1995; 61 FR 6949, 6953, Feb. 23, 1996; 67 FR 51477, Aug. 8, 2002; 69 FR 18803, Apr. 9, 2004; 77 FR 4687, Jan. 31, 2012; 77 FR 54402, Sept. 5, 2012; 79 FR 23703, Apr. 28, 2014]

§86.1106–87 Production compliance auditing.

For a model year in which upper limits for heavy-duty engine or heavyduty vehicle emission standards for one or more exhaust pollutants are specified in §86.1105–87, a manufacturer may elect to conduct a Production Compliance Audit (PCA) for each engine or vehicle configuration satisfying the following conditions:

(a) Certification test results, pursuant to \$86.082-23, exceed the emission

standard for a particular pollutant but do not exceed the upper limit established for that pollutant. In that event, the manufacturer will be offered a qualified certificate of conformity allowing for the introduction into commerce of the specified engine family, *Provided*, That:

(1) The manufacturer must agree to conduct a PCA of those engines or vehicles;

(2) PCA testing must be conducted on the same configurations that exceeded the standard in certification. In lieu of that requirement, the Administrator may approve testing of a greater or lesser number of configurations provided the manufacturer agrees to pay the NCP determined from the CL of each tested configuration for that configuration and for other non-tested configurations that have similar emission characteristics. If an acceptable showing of similar emission characteristics is not made, the highest CL of the configurations tested will apply to all non-tested configurations exceeding the standard.

(3) The selection of engines or vehicles for PCA testing must be initiated no later than five (5) days after the start of assembly-line production of the specified engine or vehicle configuration, unless that period is extended by the Administrator;

(4) The manufacturer must agree:

(i) To pay the NCP amount calculated as a result of PCA testing on each engine or vehicle, unless the manufacturer successfully challenges the Administrator's determination of the compliance level or penalty calculation or both under §86.1115–87(c);

(ii) To recall any engines or vehicles introduced into commerce, without invoking the procedural requirements of section 207(c) of the Clean Air Act, if the compliance level for the engine or vehicle configuration of (a)(2) exceeds the upper limit as determined by the PCA;

(5) If the compliance level determined in the PCA is below the emission standard, no NCP will be offered, and all appropriate qualifications will be removed from the qualified certificate of conformity.

(b) An engine or vehicle configuration fails a Selective Enforcement