

## Environmental Protection Agency

## § 86.000-15

(A) A minimum of the percentage shown in table A00-5 of a manufacturer's sales of the applicable model year's heavy light-duty trucks shall not exceed the applicable SFTP standards in table A00-6 when tested under the procedures in subpart B of this part indicated for 2002 and later model year heavy light-duty trucks.

(B) Sales percentages for the purposes of determining compliance with paragraph (e)(1)(ii)(A) of this section shall be based on total actual U.S. sales of heavy light-duty trucks of the applicable model year by a manufacturer to a dealer, distributor, fleet operator, broker, or any other entity which comprises the point of first sale.

(C) The manufacturer may petition the Administrator to allow actual volume produced for U.S. sale to be used in lieu of actual U.S. sales for purposes of determining compliance with the implementation schedule sales percentages of table A00-5. Such petition shall be submitted within 30 days of the end of the model year to the Vehicle Programs and Compliance Division. For the petition to be granted, the manufacturer must establish to the satisfaction of the Administrator that actual production volume is functionally equivalent to actual sales volume.

(ii) These SFTP standards do not apply to heavy light-duty trucks certified on alternative fuels, but the standards do apply to the gasoline fuel operation of flexible fuel vehicles and dual fuel vehicles.

(iii) These SFTP standards do not apply to heavy light-duty trucks tested at high altitude.

(iv) The air to fuel ratio shall not be richer at any time than the leanest air to fuel mixture required to obtain maximum torque (lean best torque), plus a tolerance of six (6) percent. The Administrator may approve a manufacturer's request for additional enrichment if it can be shown that additional enrichment is needed to protect the engine of emissions control hardware.

(v) The requirement to use a single roll dynamometer (or a dynamometer which produces equivalent results), discussed in §§86.108-00, 86.118-00, and 86.129-00, applies to all SFTP and FTP test elements for families which are designated as SFTP compliant under

the implementation schedule in table A00-5.

(vi) Small volume manufacturers, as defined in §86.094-14(b) (1) and (2), are exempt from the requirements of paragraph (e) of this section until model year 2004, when 100 percent compliance with the standards of this paragraph (e) is required. This exemption does not apply to small volume engine families as defined in §86.094-14(b)(5).

(vii) The manufacturer must state at the time of Application for Certification, based on projected U.S. sales or projected production for U.S. sale, which families will be used to attain the required implementation schedule sales percentages for certification purposes.

(viii) A manufacturer cannot use one set of engine families to meet its intermediate useful life standards and another to meet its full useful life standards. The same families which are used to meet the intermediate useful life standards will be required without deviation to meet the corresponding full useful life standard.

(ix) The NO<sub>x</sub> averaging program is not applicable for determining compliance with the standards of table A00-6.

(x) Compliance with composite standards shall be demonstrated using the calculations set forth in §86.164-00.

(f) [Reserved]

(g) through (k) [Reserved]. For guidance see §86.097-9.

[61 FR 54879, Oct. 22, 1996]

### **§ 86.000-15 NO<sub>x</sub> and particulate averaging, trading, and banking for heavy-duty engines.**

Section 86.000-15 includes text that specifies requirements that differ from §86.094-15 or §86.098-15. Where a paragraph in §86.094-15 or §86.098-15 is identical and applicable to §86.000-15, this may be indicated by specifying the corresponding paragraph and the statement "[Reserved]. For guidance see §86.094-15." or "[Reserved]. For guidance see §86.098-15."

(a)(1) Heavy-duty engines eligible for NO<sub>x</sub> and particulate averaging, trading and banking programs are described in the applicable emission standards sections in this subpart. All heavy-duty

engine families which include any engines labeled for use in clean-fuel vehicles as specified in 40 CFR part 88 are not eligible for these programs. For manufacturers selecting Option 1 Otto-cycle engine standards contained in § 86.005–10(f)(1), the ABT program requirements in § 86.004–15 apply for 2003 model year Otto-cycle engines, rather than the provisions contained in this § 86.000–15. Participation in these programs is voluntary.

(a)(2) through (b) [Reserved]. For guidance see § 86.094–15.

(c) [Reserved]. For guidance see § 86.098–15.

(d) through (i) [Reserved]. For guidance see § 86.094–15.

(j) *Optional program for early banking for diesel engines.* Provisions set forth in §§ 86.094–15 (a), (b), (d) through (i), and 86.098–15 (c) apply except as specifically stated otherwise in § 86.098–15 (j)(1) through (j)(3)(iii).

(j)(1) through (j)(3)(iii) [Reserved]. For guidance see § 86.098–15.

(k) *Optional program for early banking for Otto-cycle engines.* Provisions set forth in §§ 86.094–15(a), (b), (d) through (i), and 86.098–15(c) apply except as specifically stated otherwise in this paragraph (k).

(1) To be eligible for the optional program described in this paragraph (k), the following must apply:

(i) Credits are generated from Otto-cycle heavy-duty engines which have been certified using certification durability demonstration procedures which meet the criteria contained in § 86.004–26 and with deterioration factors calculated in accordance with § 86.004–28.

(ii) During certification, the manufacturer shall declare its intent to include specific engine families in the program described in this paragraph. Separate declarations are required for each program and no engine families may be included in both programs in the same model year.

(2) *Credit generation and use.* (i) Credits shall only be generated by 2000 and later model year engine families.

(ii) Except as provided in paragraph (k)(2)(iii) of this section, credits generated under this paragraph (k) may only be used for 2003 and later model year heavy-duty Otto-cycle engines subject to NO<sub>x</sub> or NO<sub>x</sub> plus NMHC

standards more stringent than 4.0 g/bhp-hr. When used with 2003 and later model year engines, NO<sub>x</sub> credits may be used to meet an applicable NO<sub>x</sub> plus NMHC standard, except as otherwise provided in § 86.004–10(a)(1)(i)(C).

(iii) If a manufacturer chooses to use credits generated under this paragraph (k) for engine families subject to the NO<sub>x</sub> standard contained in § 86.098–10 (4.0 g/bhp-hr) the averaging, trading, and banking of such credits shall be governed by the program provided in §§ 86.094–15(a), (b), (d) through (i) and 86.098–15(c) and shall be subject to all discounting, credit life limits and all other provisions contained in §§ 86.094–15(a), (b), (d) through (i) and 86.098–15(c). In the case where the manufacturer can demonstrate that the credits were discounted under the program provided in this paragraph (k), that discount may be accounted for in the calculation of credits described in § 86.098–15(c).

(iv) For NO<sub>x</sub> credits generated under this paragraph (k), a Std value of 2.0 grams per brake horsepower-hour shall be used in place of the current and applicable NO<sub>x</sub> standard in the credit availability equation in § 86.098–15(c)(1).

(3) *Program flexibilities.* (i) NO<sub>x</sub> credits that are banked under this paragraph (k) and not used as provided by paragraph (k)(2)(iii) of this section may be used without being forfeited due to credit age. The requirement in this paragraph (k)(3) applies instead of the requirements in § 86.094–15(f)(2)(i).

(ii) There are no regional category restraints for averaging, trading, and banking of credits generated under the program described in this paragraph (k) except if they are used under paragraph (k)(2)(iii) of this section. This applies instead of the regional category provisions described in the introductory text of § 86.094–15(d) and (e).

(iii) *Credit discounting.* (A) For NO<sub>x</sub> credits generated under this paragraph (k) from engine families with NO<sub>x</sub> FELs greater than 1.0 grams per brake horsepower-hour for oxides of nitrogen, a Discount value of 0.9 shall be used instead of 0.8 in the credit availability equation in § 86.098–15(c)(1).

(B) For NO<sub>x</sub> credits generated under this paragraph (k) from engine families with NO<sub>x</sub> FELs less than or equal to 1.0

## Environmental Protection Agency

## § 86.000-21

grams per brake horsepower-hour for oxides of nitrogen, a Discount value of 1.0 shall be used in place of 0.8 in the credit availability equation in § 86.098-15 (c)(1).

(4) *2003 model year.* Manufacturers selecting Option 1, described in § 86.005-10(f)(1), may not generate or bank early credits under this paragraph (k) for the 2003 model year. Credit generation and banking provisions contained in § 86.004-15 apply for the 2003 model year.

(l) *Credit apportionment.* At the manufacturer's option, credits generated under the provisions described in paragraph (j) or (k) of this section may be sold to or otherwise provided to another party for use in programs other than the averaging, trading and banking program described in this section.

(1) The manufacturer shall pre-identify two emission levels per engine family for the purposes of credit apportionment. One emission level shall be the FEL and the other shall be the level of the standard that the engine family is required to certify to under § 86.098-10 or § 86.098-11, as applicable. For each engine family, the manufacturer may report engine sales in two categories, "ABT-only credits" and "non-manufacturer-owned credits."

(i) For engine sales reported as "ABT-only credits", the credits generated must be used solely in the ABT program described in this section.

(ii) The engine manufacturer may declare a portion of engine sales "non-manufacturer-owned credits" and this portion of the credits generated between the standard and the FEL, based on the calculation in § 86.098-15(c)(1), would belong to another party. For ABT, the manufacturer may not generate any credits for the engine sales reported as "non-manufacturer-owned credits." Engines reported as "non-manufacturer-owned credits" shall comply with the FEL and the requirements of the ABT program in all other respects.

(2) Only manufacturer-owned credits reported as "ABT-only credits" shall be used in the averaging, trading, and banking provisions described in this section.

(3) Credits shall not be double-counted. Credits used in the ABT program

may not be provided to an engine purchaser for use in another program.

(4) Manufacturers shall determine and state the number of engines sold as "ABT-only credits" and "non-manufacturer-owned credits" in the end-of-model year reports required under § 86.098-23.

[65 FR 59944, Oct. 6, 2000]

### § 86.000-16 Prohibition of defeat devices.

Section 86.000-16 includes text that specifies requirements that differ from § 86.094-16. Where a paragraph in § 86.094-16 is identical and applicable to § 86.000-16, this may be indicated by specifying the corresponding paragraph and the statement "[Reserved]. For guidance see § 86.094-16."

(a) No new light-duty vehicle, light-duty truck, heavy-duty vehicle, or heavy-duty engine shall be equipped with a defeat device.

(b) The Administrator may test or require testing on any vehicle or engine at a designated location, using driving cycles and conditions which may reasonably be expected to be encountered in normal operation and use, for the purpose of investigating a potential defeat device.

(c) [Reserved]. For guidance see § 86.094-16.

(d) For vehicle and engine designs designated by the Administrator to be investigated for possible defeat devices:

(1) The manufacturer must show to the satisfaction of the Administrator that the vehicle or engine design does not incorporate strategies that unnecessarily reduce emission control effectiveness exhibited during the Federal emissions test procedure when the vehicle or engine is operated under conditions which may reasonably be expected to be encountered in normal operation and use.

(d)(2) through (d)(2)(ii) [Reserved]. For guidance see § 86.094-16.

[61 FR 54881, Oct. 22, 1996, as amended at 65 FR 59945, Oct. 6, 2000]

### § 86.000-21 Application for certification.

Section 86.000-21 includes text that specifies requirements that differ from § 86.094-21, § 86.096-21 or § 86.098-21.