

the provisions of this subpart. Averaging of credits in this manner is used to determine compliance under §90.207(b).

(b) Cross-class averaging of credits is allowed across all classes of nonroad spark-ignition engines at or below 19 kW.

(c) Credits used in averaging for a given model year may be obtained from credits generated in the same model year by another engine family, credits banked in previous model years, or credits of the same or previous model year obtained through trading subject to the provisions of §90.205(a). The restrictions of this paragraph notwithstanding, credits from a given model year may be used to address credit needs of previous model year engines as allowed under §90.207(c).

(d) The use of credits generated under the early banking provisions of §90.205(b) is subject to regulations under this subpart.

[64 FR 15239, Mar. 30, 1999, as amended at 65 FR 24308, Apr. 25, 2000]

§90.205 Banking.

(a)(1) Beginning August 1, 2007, a manufacturer of a Class I engine family with an FEL below the applicable emission standard for a given model year may bank credits in that model year for use in averaging and trading. For new Class I engine families initially produced during the period starting August 1, 2003 through July 31, 2007, a manufacturer of a Class I engine family with an FEL below the applicable emission standard for a given model year may bank credits in that model year for use in averaging and trading.

(2) Beginning with the 2000 model year, a manufacturer of a Class I-A or Class I-B engine family with an FEL below the applicable emission standard for a given model year may bank credits in that model year for use in averaging and trading.

(3) Beginning with the 2001 model year, a manufacturer of a Class II engine family with an FEL below the applicable emission standard for a given model year may bank credits in that model year for use in averaging and trading.

(4) For the 2002 through 2004 model years, a manufacturer of a Class III or

Class IV engine family may bank credits for use in future model year averaging and trading from only those Class III or Class IV engine families with an FEL at or below 72 g/kW-hr. Beginning with the 2005 model year, a manufacturer of a Class III or Class IV engine family with an FEL below the applicable emission standard may generate credits for use in future model year averaging and trading.

(5) For the 2004 through 2006 model years, a manufacturer of a Class V engine family may bank credits for use in future model year averaging and trading from only those Class V engine families with an FEL at or below 87 g/kW-hr. Beginning with the 2007 model year, a manufacturer of a Class V engine family with an FEL below the applicable emission standard may generate credits for use in future model year averaging and trading.

(6) Negative credits may be banked only according to the requirements under §90.207(c).

(b)(1) For Class I engine families initially produced during the period beginning with the 1999 model year and prior to August 1, 2003, a manufacturer may bank early credits for engines with HC + NO_x FELs below 16.1 g/kW-hr. All early credits for such Class I engines shall be calculated against a HC + NO_x level of 20.5 g/kW-hr and may continue to be calculated against the 20.5 g/kW-hr level until August 1, 2007.

(2) Beginning with the 1999 model year and prior to the applicable date listed in paragraph (a) of this section for Class II engines, a manufacturer may bank early credits for all Class II engines with HC+NO_x FELs below 12.1 g/kW-hr. All early credits for Class II engines shall be calculated against a HC+NO_x level of 18.0 g/kW-hr.

(3) Beginning with the 2000 model year and prior to the applicable date listed in paragraph (a) of this section for Class III engines, a manufacturer may bank early credits for all Class III engines with HC+NO_x FELs below 72 g/kW-hr. All early credits for Class III engines shall be calculated against a HC+NO_x level of 238 g/kW-hr.

(4) Beginning with the 2000 model year and prior to the applicable date listed in paragraph (a) of this section for Class IV engines, a manufacturer

may bank early credits for all Class IV engines with HC+NO_x FELs below 72 g/kW-hr. All early credits for Class IV engines shall be calculated against a HC+NO_x level of 196 g/kW-hr.

(5) Beginning with the 2000 model year and prior to the applicable date listed in paragraph (a) of this section for Class V engines, a manufacturer may bank early credits for all Class V engines with HC+NO_x FELs below 87 g/kW-hr. All early credits for Class V engines shall be calculated against a HC+NO_x level of 143 g/kW-hr.

(6) Engines certified under the early banking provisions of this paragraph are subject to all of the requirements of this part applicable to Phase 2 engines.

(c) A manufacturer may bank actual credits only after the end of the model year and after EPA has reviewed the manufacturer's end-of-year reports. During the model year and before submittal of the end-of-year report, credits originally designated in the certification process for banking will be considered reserved and may be redesignated for trading or averaging in the end-of-year report and final report.

(d) Credits declared for banking from the previous model year that have not been reviewed by EPA may be used in averaging or trading transactions. However, such credits may be revoked at a later time following EPA review of the end-of-year report or any subsequent audit actions.

[64 FR 15239, Mar. 30, 1999, as amended at 65 FR 24308, Apr. 25, 2000]

§ 90.206 Trading.

(a) An engine manufacturer may exchange emission credits with other engine manufacturers in trading.

(b) Credits for trading can be obtained from credits banked in previous model years or credits generated during the model year of the trading transaction.

(c) Traded credits can be used for averaging, banking, or further trading transactions, subject to § 90.205(a).

(d) Traded credits are subject to the limitations on use for past model years, as set forth in § 90.204(c).

(e) In the event of a negative credit balance resulting from a transaction, both the buyer and the seller are liable, except in cases involving fraud. Certificates of all engine families participating in a negative trade may be voided *ab initio* pursuant to § 90.123.

[64 FR 15239, Mar. 30, 1999, as amended at 65 FR 24309, Apr. 25, 2000]

§ 90.207 Credit calculation and manufacturer compliance with emission standards.

(a) For each engine family, HC+NO_x [NMHC+NO_x] certification emission credits (positive or negative) are to be calculated according to the following equation and rounded to the nearest gram. Consistent units are to be used throughout the equation.

$$\text{Credits} = \text{Production} \times (\text{Standard} - \text{FEL}) \times \text{Power} \times \text{Useful life} \times \text{Load Factor}$$

Where:

Production = eligible production as defined in this part. Annual production projections are used to project credit availability for initial certification. Eligible production volume is used in determining actual credits for end-of-year compliance determination.

Standard = the current and applicable Small SI engine HC+NO_x (NMHC+NO_x) emission standard in grams per kilowatt hour as determined in § 90.103 or, for early credits, the applicable emission level as specified in § 90.205(b).

FEL = the family emission limit for the engine family in grams per kilowatt hour.

Power = the maximum modal power of the certification test engine, in kilowatts, as calculated from the applicable federal test procedure as described in this part.

Useful Life = the useful life in hours corresponding to the useful life category for which the engine family was certified.

Load Factor = 47 percent (i.e., 0.47) for Test Cycle A and Test Cycle B, and 85 percent (i.e., 0.85) for Test Cycle C. For approved alternate test procedures, the load factor must be calculated according to the following formula:

$$\sum_{i=1}^n (\% \text{MTT mode}_i) \times (\% \text{MTS mode}_i) \times (\text{WF mode}_i)$$