

Environmental Protection Agency

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$$\text{NER} = 8.782 \times \log(\text{HC} + \text{NO}_x) - 7.277$$

Where:

HC+NO_x is the FEL (or the sum of the cycle-weighted emission rates) for hydrocarbons and oxides of nitrogen in g/kW-hr.

[70 FR 40491, July 13, 2005]

§ 1051.145 What provisions apply only for a limited time?

Apply the following provisions instead of others in this part for the periods and circumstances specified in this section.

(a) *Provisions for small-volume manufacturers.* Special provisions apply to you if you are a small-volume manufacturer subject to the requirements of this part. Contact us before 2006 if you intend to use these provisions.

(1) You may delay complying with otherwise applicable emission standards (and other requirements) for two model years.

(2) If you are a small-volume manufacturer of snowmobiles, only 50 percent of the models you produce (instead of all of the models you produce) must meet emission standards in the first two years they apply to you as a small-volume manufacturer, as described in paragraph (a)(1) of this section. For example, this alternate phase-in allowance would allow small-volume snowmobile manufacturers to comply with the Phase 1 exhaust standards by certifying 50 percent of their snowmobiles in 2008, 50 percent of their snowmobiles in 2009, and 100 percent in 2010.

(3) Your vehicles for model years before 2011 may be exempt from the exhaust standards of this part if you meet the following criteria:

(i) Produce your vehicles by installing engines covered by a valid certificate of conformity under 40 CFR part 90 that shows the engines meet standards for Class II engines for each engine's model year.

(ii) Do not change the engine in a way that we could reasonably expect to increase its exhaust emissions.

(iii) The engine meets all applicable requirements from 40 CFR part 90. This applies to engine manufacturers, vehicle manufacturers who use these engines, and all other persons as if these engines were not used in recreational vehicles.

(iv) Show that fewer than 50 percent of the engine family's total sales in the United States are used in recreational vehicles regulated under this part. This includes engines used in any application, without regard to which company manufactures the vehicle or equipment.

(v) If your engines do not meet the criteria listed in paragraph (a) of this section, they will be subject to the provisions of this part. Introducing these engines into commerce without a valid exemption or certificate of conformity violates the prohibitions in 40 CFR 1068.101.

(vi) Engines exempted under this paragraph (a)(3) are subject to all the requirements affecting engines under 40 CFR part 90. The requirements and restrictions of 40 CFR part 90 apply to anyone manufacturing these engines, anyone manufacturing equipment that uses these engines, and all other persons in the same manner as other engines subject to 40 CFR part 90.

(4) All vehicles produced under this paragraph (a) must be labeled according to our specifications. The label must include the following:

(i) The heading "EMISSION CONTROL INFORMATION".

(ii) Your full corporate name and trademark.

(iii) A description of the provisions under which this section applies to your vehicle.

(iv) Other information that we specify to you in writing.

(b) *Optional emission standards for ATVs.* To meet ATV standards for model years before 2014, you may apply the exhaust emission standards by model year in paragraph (b)(1) of this section while measuring emissions using the engine-based test procedures in 40 CFR part 1065 instead of the chassis-based test procedures in 40 CFR part 86. In model year 2014 you may apply this provision for exhaust emission engine families representing up to 50 percent of your U.S.-directed production. This provision is not available in the 2015 or later-model years. If you certify only one ATV exhaust emission engine family in the 2014 model year this provision is available for that family in the 2014 model year.

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(1) Follow Table 1 of this section for exhaust emission standards, while meeting all the other requirements of § 1051.107. You may use emission credits to show compliance with these standards (see subpart H of this part). You may not exchange emission credits with engine families meeting the standards in § 1051.107(a). You may also not exchange credits between engine families certified to the standards for

engines above 225 cc and engine families certified to the standards for engines below 225 cc. The phase-in percentages in the table specify the percentage of your total U.S.-directed production that must comply with the emission standards for those model years (i.e., the percentage requirement does not apply separately for engine families above and below 225 cc). Table 1 follows:

TABLE 1 OF § 1051.145—OPTIONAL EXHAUST EMISSION STANDARDS FOR ATVS (G/KW-HR)

Engine displacement	Model year	Phase-in (percent)	Emission standards		Maximum allowable family emission limits
			HC+NO _x	CO	
					HC+NO _x
<225 cc	2006	50	16.1	400	32.2
	2007 and 2008	100	16.1	400	32.2
≥225 cc	2006	50	13.4	400	26.8
	2007 and 2008	100	13.4	400	26.8

(2) Measure emissions by testing the engine on a dynamometer with the steady-state duty cycle described in Table 2 of this section.

(i) During idle mode, hold the speed within your specifications, keep the throttle fully closed, and keep engine torque under 5 percent of the peak torque value at maximum test speed.

(ii) For the full-load operating mode, operate the engine at its maximum fueling rate.

(iii) See part 1065 of this chapter for detailed specifications of tolerances and calculations.

(iv) Table 2 follows:

TABLE 2 OF § 1051.145—6-MODE DUTY CYCLE FOR RECREATIONAL ENGINES

Mode No.	Engine speed (percent of maximum test speed)	Torque (percent of maximum test torque at test speed)	Minimum time in mode (minutes)	Weighting factors
1	85	100	5.0	0.09
2	85	75	5.0	0.20
3	85	50	5.0	0.29
4	85	25	5.0	0.30
5	85	10	5.0	0.07
6	Idle	0	5.0	0.05

(3) For ATVs certified to the standards in this paragraph (b), use the following equations to determine the normalized emission rate required by § 1051.137:

(i) For engines at or above 225 cc, use the following equation:

$$NER = 9.898 \times \log (HC + NO_x) - 4.898$$

Where:

HC +NO_x is the sum of the cycle-weighted emission rates for hydrocarbons and oxides of nitrogen in g/kW-hr.

(ii) For engines below 225 cc, use the following equation:

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$$\text{NER} = 9.898 \times \log [(\text{HC} + \text{NO}_x) 0.83] - 4.898$$

Where:

HC + NO_x is the sum of the cycle-weighted emission rates for hydrocarbons and oxides of nitrogen in g/kW-hr.

(c) [Reserved]

(d) *Phase-in flexibility.* For model years before 2014, if you make a good faith effort to comply, but fail to meet the sales requirements of this part during a phase-in period for new standards, or fail to meet the average emission standards, we may approve an alternative remedy to offset the emission reduction deficit using future emission credits under this part. To apply for this, you must:

(1) Submit a plan during the certification process for the first model year of the phase-in showing how you project to meet the sales requirement of the phase-in.

(2) Notify us less than 30 days after you determine that you are likely to fail to comply with the sales requirement of the phase-in.

(3) Propose a remedy that will achieve equivalent or greater emission reductions compared to the specified phase-in requirements, and that will offset the deficit within one model year.

(e) *Raw sampling procedures.* Using good engineering judgment, you may use the alternate raw-sampling procedures instead of the procedures described in 40 CFR part 1065 for emission testing certain vehicles, as follows:

(1) *Snowmobile.* You may use the raw sampling procedures described in 40 CFR part 90 or 91 for snowmobiles before the 2010 model year.

(2) *ATV.* You may use the raw sampling procedures described in 40 CFR part 90 or 91 for ATVs certified using engine-based test procedures as specified in §1051.615 before the 2015 model year. You may use these raw sampling procedures for any ATVs certified using engine-based test procedures as specified in paragraph (b) of this section.

(f) *Early credits.* Snowmobile manufacturers may generate early emission credits in one of the following ways, by certifying some or all of their snowmobiles prior to 2006. Credit generating snowmobiles must meet all other appli-

cable requirements of this part. No early credits may be generated by off-highway motorcycles or ATVs.

(1) You may certify one or more snowmobile engine families to FELs (HC and CO) below the numerical level of the Phase 2 standards prior to the date when compliance with the Phase 1 standard is otherwise required. Credits are calculated relative to the Phase 2 standards. Credits generated under this paragraph (f)(1) may be used at any time before 2012.

(2) You may certify a snowmobile engine family to FELs (HC and CO) below the numerical level of the Phase 1 standards prior to the date when compliance with the Phase 1 standard is otherwise required. Credits are calculated relative to the Phase 1 standards. Credits generated under this paragraph (f)(2) may only be used for compliance with the Phase 1 standards. You may generate credits under this paragraph (f)(2) without regard to whether the FELs are above or below the numerical level of the Phase 2 standards.

(g) *Pull-ahead option for permeation emissions.* Manufacturers choosing to comply with an early tank permeation standard of 3.0 g/m²/day prior to model year 2008 may be allowed to delay compliance with the 1.5 g/m²/day standard by earning credits, as follows:

(1) Calculate earned credits using the following equation:

$$\text{Credit} = (\text{Baseline emissions} - \text{Pull-ahead level}) \times \left[\sum_i (\text{Production})_i \times (\text{UL})_i \right]$$

Where:

Baseline emissions = the baseline emission rate, as determined in paragraph (g)(2) of this section.

Pull-ahead level = the permeation level to which you certify the tank, which must be at or below 3.0 g/m²/day.

(Production)_i = the annual production volume of vehicles in the engine family for model year "i" times the average internal surface area of the vehicles' fuel tanks.

(UL)_i = The useful life of the engine family in model year "i".

(2) Determine the baseline emission level for calculating credits using any of the following values:

(i) 7.6 g/m²/day.

(ii) The emission rate measured from your lowest-emitting, uncontrolled fuel tank from the current or previous

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model year using the procedures in § 1051.515. For example, this would generally involve the fuel tank with the greatest wall thickness for a given material.

(iii) The emission rate measured from an uncontrolled fuel tank that is the same as or most similar to the model you have used during the current or previous model year. However, you may use this approach only if you use it to establish a baseline emission level for each unique tank model you produce using the procedures in § 1051.515.

(3) Pull-ahead tanks under this option must be certified and must meet all applicable requirements other than those limited to compliance with the exhaust standards.

(4) You may use credits generated under this paragraph (g) as specified in subpart H of this part.

(h) *Deficit credits for permeation standards.* For 2008 through 2010 model years, you may have a negative balance of emission credits relative to the permeation emission standards at the end of each model year, subject to the following provisions:

(1) You must eliminate any credit deficit we allow under this paragraph (h) by the end of the 2011 model year. If you are unable to eliminate your credit deficit by the end of the 2011 model year, we may void the certificates for all families certified to FELs above the allowable average, for all affected model years.

(2) State in your application for certification a statement whether you will have a negative balance of permeation emission credits for that model year. If you project that you will have a negative balance, estimate the credit deficit for each affected model year and present a detailed plan to show where and when you will get credits to offset the deficit by the end of the 2011 model year.

(3) In your end-of-year report under § 1051.730, state whether your credit deficit is larger or smaller than you projected in your application for certification. If the deficit is larger than projected, include in your end-of-year report an update to your detailed plan to show how you will eliminate the credit

deficit by the end of the 2011 model year.

[67 FR 68347, Nov. 8, 2002, as amended at 70 FR 40491, July 13, 2005; 72 FR 20735, Apr. 26, 2007]

Subpart C—Certifying Engine Families

§ 1051.201 What are the general requirements for obtaining a certificate of conformity?

(a) You must send us a separate application for a certificate of conformity for each engine family. A certificate of conformity is valid from the indicated effective date until December 31 of the model year for which it is issued.

(b) The application must contain all the information required by this part and must not include false or incomplete statements or information (see § 1051.255).

(c) We may ask you to include less information than we specify in this subpart, as long as you maintain all the information required by § 1051.250.

(d) You must use good engineering judgment for all decisions related to your application (see 40 CFR 1068.5).

(e) An authorized representative of your company must approve and sign the application.

(f) See § 1051.255 for provisions describing how we will process your application.

(g) We may require you to deliver your test vehicles or engines to a facility we designate for our testing (see § 1051.235(c)).

[70 FR 40492, July 13, 2005]

§ 1051.205 What must I include in my application?

This section specifies the information that must be in your application, unless we ask you to include less information under § 1051.201(c). We may require you to provide additional information to evaluate your application.

(a) Describe the engine family's specifications and other basic parameters of the vehicle's design and emission controls. List the fuel type on which your engines are designed to operate (for example, gasoline, liquefied petroleum gas, methanol, or natural gas).