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40 CFR Ch. I (7-1-07 Edition)

(iii) State: "THIS VEHICLE WAS ADAPTED FOR RECREATIONAL USE WITHOUT AFFECTING ITS EMISSION CONTROLS."

(iv) State the date you finished modifying the vehicle (month and year), if applicable.

(6) The original and supplemental labels must be readily visible in the fully assembled vehicle.

(7) Send the Designated Compliance Officer a signed letter by the end of each calendar year (or less often if we tell you) with all the following information:

(i) Identify your full corporate name, address, and telephone number.

(ii) List the vehicle models you expect to produce under this exemption in the coming year.

(iii) State: "We produced each listed engine or vehicle model for recreational application without making any changes that could increase its certified emission levels, as described in 40 CFR 1051.610."

(e) *Failure to comply.* If your engines or vehicles do not meet the criteria listed in paragraph (d) of this section, the engines will be subject to the standards, requirements, and prohibitions of this part 1051, and the certificate issued under 40 CFR part 86 will not be deemed to also be a certificate issued under this part 1051. Introducing these engines into commerce without a valid exemption or certificate of conformity under this part violates the prohibitions in 40 CFR 1068.101(a)(1).

(f) *Data submission.* We may require you to send us emission test data on any applicable nonroad duty cycles.

(g) *Participation in averaging, banking and trading.* Vehicles adapted for recreational use under this section may not generate or use emission credits under this part 1051. These engines may generate credits under the ABT provisions in 40 CFR part 86. These engines must use emission credits under 40 CFR part 86 if they are certified to an FEL that exceeds an applicable standard.

[70 FR 40502, July 13, 2005]

§ 1051.615 What are the special provisions for certifying small recreational engines?

(a) You may certify ATVs with engines that have total displacement of less than 100 cc to the following exhaust emission standards instead of certifying them to the exhaust emission standards of subpart B of this part:

(1) 25.0 g/kW-hr HC+NO_x, with an FEL cap of 40.0 g/kW-hr HC+NO_x.

(2) 500 g/kW-hr CO.

(b) You may certify off-highway motorcycles with engines that have total displacement of 70 cc or less to the following exhaust emission standards instead of certifying them to the exhaust emission standards of subpart B of this part:

(1) 16.1 g/kW-hr HC+NO_x, with an FEL cap of 32.2 g/kW-hr HC+NO_x.

(2) 519 g/kW-hr CO.

(c) You may use the averaging, banking, and trading provisions of subpart H of this part to show compliance with this HC+NO_x standards (an engine family meets emission standards even if its family emission limit is higher than the standard, as long as you show that the whole averaging set of applicable engine families meet the applicable emission standards using emission credits, and the vehicles within the family meet the family emission limit). You may not use averaging to meet the CO standards of this section.

(d) Measure steady-state emissions by testing the engine on an engine dynamometer using the equipment and procedures of 40 CFR part 1065 with either discrete-mode or ramped-modal cycles. You must use the type of testing you select in your application for certification for all testing you perform for that engine family. If we test your engines to confirm that they meet emission standards, we will do testing the same way. We may also perform other testing as allowed by the Clean Air Act. Measure steady-state emissions as follows:

(1) For discrete-mode testing, sample emissions separately for each mode, then calculate an average emission level for the whole cycle using the weighting factors specified for each mode. In each mode, operate the engine for at least 5 minutes, then sample

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emissions for at least 1 minute. Calculate cycle statistics for the sequence of modes and compare with the specified values in 40 CFR 1065.514 to confirm that the test is valid.

(2) For ramped-modal testing, start sampling at the beginning of the first mode and continue sampling until the end of the last mode. Calculate emis-

sions and cycle statistics the same as for transient testing.

(3) Measure emissions by testing the engine on a dynamometer with one or more of the following sets of duty cycles to determine whether it meets applicable emission standards:

(i) The following duty cycle applies for discrete-mode testing:

TABLE 1 OF § 1051.615—6-MODE DUTY CYCLE FOR RECREATIONAL ENGINES

Mode No.	Engine speed (percent) ¹	Torque (percent) ²	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	(³)	0	5.0	0.05

¹ Percent speed is percent of maximum test speed.
² Percent torque is percent of maximum test torque at maximum test speed.
³ Idle.

(ii) The following duty cycle applies for ramped-modal testing:

TABLE 2 OF § 1051.615—RAMPED-MODAL CYCLE FOR TESTING RECREATIONAL ENGINES

RMC mode	Time	Speed (percent) ^{1,2}	Torque (percent) ^{2,3}
1a Steady-state	41	Warm Idle	0
1b Transition	20	Linear Transition	Linear Transition.
2a Steady-state	135	85	100
2b Transition	20	85	Linear Transition.
3a Steady-state	112	85	10
3b Transition	20	85	Linear Transition.
4a Steady-state	337	85	75
4b Transition	20	85	Linear Transition.
5a Steady-state	518	85	25
5b Transition	20	85	Linear Transition.
6a Steady-state	494	85	50
6b Transition	20	Linear Transition	Linear Transition.
7 Steady-state	43	Warm Idle	0

¹ Percent speed is percent of maximum test speed.
² Advance from one mode to the next within a 20-second transition phase. During the transition phase, command a linear progression from the torque setting of the current mode to the torque setting of the next mode.
³ Percent torque is percent of maximum test torque at the commanded test speed.

(4) 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.

(5) For the full-load operating mode, operate the engine at wide-open throttle.

(6) See 40 CFR part 1065 for detailed specifications of tolerances and calculations.

(e) All other requirements and prohibitions of this part apply to these engines and vehicles.

[67 FR 68347, Nov. 8, 2002, as amended at 70 FR 40503, July 13, 2005]

§ 1051.620 When may a manufacturer obtain an exemption for competition recreational vehicles?

(a) We may grant you an exemption from the standards and requirements of this part for a new recreational vehicle on the grounds that it is to be used