



Français	Contact us	Help	Search	Canada Site
Home	About us	History	FAQ	Site Map

Canada Gazette

Welcome to the official newspaper of the Government of Canada published since 1841



[Notice](#)

Quick Search

[News and announcements](#)

[Mandate](#)

[Consultation](#)

[Recent Canada Gazette publications](#)

[Part I: Notices and proposed regulations](#)

[Part II: Official regulations](#)

[Part III: Acts of Parliament](#)

[Learn more about the Canada Gazette](#)

[Publishing information](#)

[Publishing requirements](#)

[Deadline schedule](#)

[Insertion rates](#)

[Request for insertion form](#)

[Subscription information](#)

[Useful links](#)

[Archives \(1998-2004\)](#)

Vol. 139, No. 45 — November 5, 2005

Regulations Amending the On-Road Vehicle and Engine Emission Regulations

Statutory authority

Canadian Environmental Protection Act, 1999

Sponsoring department

Department of the Environment

REGULATORY IMPACT ANALYSIS STATEMENT

(This statement is not part of the Regulations.)

Description

The proposed *Regulations Amending the On-Road Vehicle and Engine Emission Regulations* (hereinafter referred to as the "proposed amendments") have the primary purpose of introducing new requirements for 2006 and later model year on-road motorcycles to maintain alignment with new rules of the United States Environmental Protection Agency (EPA). The proposed amendments also propose minor editorial changes to the current Regulations.

The *On-Road Vehicle and Engine Emission Regulations* ([see footnote 1](#)) (hereinafter referred to as "the current Regulations") under the *Canadian Environmental Protection Act, 1999* (CEPA 1999) came into effect on January 1, 2004. The current Regulations contain standards for smog-forming emissions for various classes of on-road vehicles and engines, including requirements for motorcycles of the 2004 and later model years. The current Regulations were designed to align Canadian requirements with corresponding federal emission standards of the EPA. The proposed amendments continue the

approach of aligning with the federal emission standards of the EPA.

The combustion of fuels to power vehicles and engines contributes significantly to air pollution, which has major adverse impacts on the environment and on the health of Canadians. The proposed amendments will ensure that Canadian emission standards for on-road motorcycles remain aligned with more stringent standards adopted by the EPA. Accordingly, the proposed amendments would contribute to further reducing emissions of hydrocarbons (HCs), oxides of nitrogen (NO_x) and certain air pollutants that have been listed as "toxic substances" in Schedule 1 to CEPA 1999 (e.g. benzene, 1,3-butadiene, formaldehyde, acetaldehyde and acrolein), and will thereby contribute to the protection of the environment and health of Canadians.

The proposed amendments contain additional changes that are intended to ensure consistency between the English and French versions of the current Regulations, to correct minor errors that have been identified and to provide greater clarity to certain existing provisions. These amendments are of an editorial nature and do not result in any changes in the application of the Regulations.

The proposed amendments will come into force in two phases. First, the new provisions addressing compliance flexibilities such as emissions averaging and limited provisions for small-volume manufacturers and importers for motorcycles that are already subject to emission requirements will come into force on the date on which they are registered. Second, the new requirements for motorcycles having an engine displacement of less than 50 cubic centimetres (cc) will come into force on July 1, 2006, and will apply to such motorcycles that are manufactured on or after July 1, 2006.

Background

On January 15, 2004, the EPA published a new final rule ([see footnote 2](#)) to introduce more stringent emission standards for on-road motorcycles beginning in the 2006 model year. The current Regulations incorporate the U.S. technical emission standards by reference to the U.S. Code of Federal Regulations for a given model year of vehicle. This approach seeks, to the extent possible, to ensure that the specified emission standards remain identical in both countries. Accordingly, the EPA's new emission standards for 2006 and later model year on-road motorcycles are automatically incorporated by reference under the current Regulations.

Notwithstanding the above, the EPA rule also introduces some new elements in both the application and structure of future U.S. motorcycle emission standards that must be addressed in order to maintain Canada/U.S. alignment. First, the scope of motorcycles subject to on-road emission standards is broadened to include those with an engine displacement of less than 50 cc. Second, the U.S. rules introduce new compliance-related flexibilities that are not addressed under the current Regulations.

A snapshot of the Canadian market for motorcycles

In 2003, there were approximately 405 000 motorcycles and 28 000 mopeds registered for use on Canadian roads. Annual sales of new on-road motorcycles have increased steadily from approximately 36 000 in 2000 to 54 000 in 2004. ([see footnote 3](#)) The motorcycle industry had revenues of approximately \$940 million at the retail level in 2004

and sales of new motorcycles represented approximately 86 percent of this amount. Nonetheless, the market for on-road motorcycles remains small in comparison to the more than 17 million cars and light-duty trucks operating in Canada.

The vast majority of new motorcycles sold in Canada are imported and distributed by a relatively small number of companies that are members of the Motorcycle & Moped Industry Council (MMIC). In 2003, MMIC member companies accounted for over 99 percent of new motorcycle sales in Canada.

The main sources of new motorcycles imported into Canada are Japan, the United States, Taiwan, and countries of the European Union. China and India both produce more motorcycles than any other country and are likely to export to North America in the future. A very limited number of custom motorcycles are manufactured in Canada for sale in both Canada and the United States. Most models of new motorcycles sold in Canada are already covered by an EPA emission certification, as they are also marketed in the United States.

Contribution of on-road vehicles to air pollution in Canada

The use of on-road vehicles is a large contributor of various air pollutants, including volatile organic compounds (VOCs), oxides of nitrogen (NO_x), particulate matter (PM), carbon monoxide (CO) and sulphur oxides (SO_x), which are collectively referred to as Criteria Air Contaminants (CACs). Both NO_x and VOCs are involved in a series of complex reactions that result in the formation of ground-level ozone, which is a respiratory irritant and one of the major components of smog. Smog is a noxious mixture of air pollutants, consisting primarily of ground-level ozone and PM, that can often be seen as a haze over urban centres.

The estimated contribution of motorcycles to the total emissions from on-road vehicles is summarized in Table 1.

Table 1: Estimated emissions from on-road vehicles (2000) ([see footnote 4](#))

Pollutant	On-Road Vehicle Class	Total Emissions (kilotonnes)
VOCs	Heavy-Duty	31.9
	Light-Duty	371.9
	Motorcycles	1.3
CO	Heavy-Duty	259.7
	Light-Duty	5461.1
	Motorcycles	8.6
NO _x	Heavy-Duty	529.9
	Light-Duty	319.3
	Motorcycles	0.8

Emission standards for on-road motorcycles have not changed in many years. Without changes to emission standards, total emissions from motorcycles are projected to increase between 2004 and 2020, resulting from increased motorcycle population and increased kilometres traveled by motorcycles. When combined with projected decreases

in emissions from light- and heavy-duty vehicles and trucks resulting from cleaner vehicles being introduced to meet the more stringent regulations, the percentage contribution of motorcycles to emissions from on-road vehicles will increase between 2000 and 2020 from 0.3 to 1.8 for VOCs, 0.1 to 0.5 for CO and 0.1 to 0.8 for NO_x.

While total emissions from motorcycles are expected to remain considerably lower than the contribution of light- and heavy-duty vehicles, motorcycle emissions can be an important source of air pollution given that these vehicles are often used in urban areas during periods of warm weather associated with the formation of ground-level ozone and smog.

Policy framework: alignment with U.S. standards

Air pollution is a serious problem in Canada and the combustion of fuels to power on-road vehicles is a major contributor to this problem, particularly in urban areas. Air pollution has major impacts on the environment and the health of Canadians. Health studies indicate that air pollution contributes to numerous adverse health impacts, including premature mortality. While emissions of some pollutants have declined over the past two decades, air pollution continues to be one of Canada's highest environmental priorities and challenges.

In 2000, Environment Canada initiated a process of consulting with a broad range of stakeholders to develop a plan for the further reduction of emissions resulting from the use of vehicles and engines. Following a thorough review and full consideration of stakeholder submissions and viewpoints, the federal Minister of the Environment published the Federal Agenda on Cleaner Vehicles, Engines and Fuels. ([see footnote 5](#)) The Agenda set out a series of regulatory and non-regulatory measures to be developed and implemented over a ten-year period to reduce emissions from a broad range of on-road and off-road vehicles and engines. The Agenda was developed in recognition that effective policies to reduce emissions must consider vehicle/engines and fuels as an integrated system.

Pursuant to the Federal Agenda on Cleaner Vehicles, Engines and Fuels, Environment Canada is implementing a series of regulations for on-road and off-road vehicles and engines that are used in a broad range of applications and based on a policy of alignment with corresponding U.S. regulated requirements. This approach is founded on strong environmental and economic rationales and has been widely supported by stakeholders.

The proposed amendments continue the established policy of aligning Canada's emission requirements with those of the United States.

Changes to technical emission standards for motorcycles

The following sections summarize the main elements of the new U.S. rule and, where applicable, describe

- the consequential automatic changes to the current Regulations resulting from existing incorporations by reference of U.S. standards; and
- the proposed amendments to the current Regulations that are necessary to maintain alignment with U.S. standards for 2006 and later model year

motorcycles.

Any reference to "standards" in the context of the Regulations refers to regulatory standards and, for all purposes of interpretation or application of the U.S. rule referenced in the proposed amendments, readers should consult the official publication in the U.S. Federal Register. ([see footnote 6](#))

1) New standards for exhaust, evaporative and crankcase emissions

The current *On-Road Vehicle and Engine Emission Regulations* incorporate the U.S. technical emission standards by reference to the U.S. Code of Federal Regulations for a given model year of vehicle. Accordingly, the EPA's new exhaust, evaporative and crankcase emission standards for 2006 and later model year on-road motorcycles for the existing scope of Class I to III motorcycles are automatically incorporated under the current Regulations.

Motorcycles are currently required to comply with these emission standards for a defined "full useful life" period. The useful life is specified in years and as accumulated mileage, whichever comes first, and varies depending on the class of motorcycle. Under the current Regulations, the useful life for motorcycles is based on engine displacement and is divided into three classes, with each class having a different "useful life" as outlined in Table 2.

Table 2: Current on-road motorcycle displacement classes and useful life

Motorcycle Class	Engine Displacement (cc)	Useful Life
I	50–169	5 years or 12 000 km
II	170–279	5 years or 18 000 km
III	280 +	5 years or 30 000 km

Under the U.S. rule, current Class I motorcycles (i.e. 50–169 cc) will be renamed "Class IB" and will retain the same useful life of 5 years or 12 000 km. This name change is automatically incorporated into the current Regulations. The useful life for Classes II and III will remain unchanged.

Under the current Regulations, the exhaust emission limits for total HC and CO from motorcycles are 5.0 grams/kilometre (g/km) and 12 g/km, respectively, which are aligned with current U.S. federal rules for pre-2006 motorcycles. Table 3 summarizes the new U.S. on-road motorcycle exhaust emission standards and implementation schedules. These more stringent emission standards will automatically apply to all current classes of on-road motorcycles (i.e. Class IB to III).

Table 3: New on-road motorcycle exhaust emission standards

Implementation Model Year	Motorcycle Class	Engine Displacement (cc)	HC (g/km)	HC + No _x (g/km)	CO (g/km)
---------------------------	------------------	--------------------------	-----------	-----------------------------	-----------

2006 and later	IB	< 170	1.0	1.4*	12.0
2006 and later	II	170–279	1.0	1.4*	12.0
2006–2009 (Tier 1)	III	280 +	--	1.4	12.0
2010 and later (Tier 2)			--	0.8	12.0

* Companies have the option of meeting a combined HC+NO_x standard for Class I and II motorcycles instead of the HC standard. Companies may use optional emission averaging to demonstrate compliance with HC+NO_x standards.

The current Regulations do not establish limits to control evaporative emissions ([see footnote 7](#)) from on-road motorcycles. Beginning in the 2008 model year, the new U.S. rule requires that fuel tanks and fuel hoses on on-road motorcycles meet permeation emission ([see footnote 8](#)) standards. These standards limit fuel tank permeation to 1.5 grams per square metre per day (g/m²/day) based on the inside area of the tank and limit fuel hose permeation to 15 g/m²/day based on the inside area of the hose. These new permeation emission standards for 2008 and later model year motorcycles are automatically incorporated by reference into the current Regulations.

New test procedures to measure evaporative emissions resulting from permeation losses and changes to test fuel specifications (i.e. lower sulphur content) are automatically incorporated through existing references to U.S. test procedures.

2) Proposed regulation of small displacement motorcycles (less than 50 cc)

For the first time, the EPA's new emission rules will establish emission standards for on-road motorcycles having an engine displacement of less than 50 cc beginning with the 2006 model year. In addition to the above, motorcycles that "cannot start from a dead stop using only the engine" will no longer be excluded from having to comply with emission standards for on-road motorcycles.

Environment Canada proposes to amend the definition of "motorcycle" under the current Regulations to remove the existing exclusions for vehicles that have an engine displacement of less than 50 cc and vehicles that cannot start from a dead stop using only the engine. This will ensure that the scope of on-road motorcycles subject to emission standards continues to be aligned with the United States. Any motorcycle that cannot exceed a maximum speed of 40 km/hr (25 mph) over a paved level surface will continue to be considered not to be an "on-road vehicle" under the Regulations and will continue to not be subject to the emission standards for on-road motorcycles, which is consistent with U.S. requirements. Generally, any "motorcycle-type" vehicle that is considered not to be an on-road vehicle would be deemed to be an "off-road recreational vehicle" and would be subject to its own set of emission standards. The Department is currently developing emission regulations for off-road recreational vehicles.

Consistent with the new U.S. rule, vehicles with a displacement of less than 50 cc will be considered to be "Class IA" motorcycles with a useful life of 5 years or 6 000 km, whichever comes first.

Environment Canada is proposing new exhaust, evaporative and crankcase emission standards for Class IA motorcycles, consistent with the new U.S. federal rules for 2006 and later model year motorcycles. The proposed new exhaust emission limits for total HC and CO are 1.0 g/km and 12 g/km, respectively. Also consistent with the U.S. rule, it is proposed that companies have the option to demonstrate compliance with an HC+NO_x exhaust emission limit of 1.4 g/km in lieu of the HC limit. The proposed evaporative standard is the same as that being applied to Classes IB to III motorcycles beginning in the 2008 model year (i.e. permeation emission limits of 1.5 g/m²/day for fuel tanks and 15 g/m²/day for fuel system hoses). As well, it is proposed that the existing prohibition on the release of crankcase emissions be extended to apply to Class IA motorcycles.

The U.S. final rule sets out provisions that, under certain limited conditions, on-road Class IA motorcycles can be equipped with less than 50 cc displacement engines certified for off-road use. These engines would be certified for use in off-road motorcycles, snowmobiles, and all-terrain vehicles, or certified as off-road small spark-ignition engines at or below 19 kilowatts for use in lawnmowers, snow blowers, chainsaws, etc. The proposed amendments make allowances for a similar approach in Canada.

Also consistent with U.S. rules, the proposed amendments introduce new exhaust emission test procedures for Class IA motorcycles (incorporated by reference). The new test procedure specifies that a modified version of the existing Class I driving cycle be applied to Class IA motorcycles having a top speed of less than 58.7 km/hr (36.5 mph). The new test procedure is modified by adjusting each speed point of the driving cycle by the ratio of the top speed of the motorcycle to 58.7 km/hr (36.5 mph), which is the top speed of the existing Class I drive cycle. The "vehicle top speed" is the highest sustainable speed on a flat paved surface with a rider weighing 80 kg (176 lbs). The modified cycle is intended to ensure that these motorcycles are tested within their operational limits. Any Class IA motorcycle with a top speed at or greater than 58.7 km/hr (36.5 mph) is required to be tested using the existing and unmodified Class I driving cycle.

The vast majority of motorcycles imported into Canada are sold concurrently in the United States and are certified as compliant with EPA emission standards. Nonetheless, Environment Canada recognizes that the timing to adjust to the new requirements can be a challenge, particularly for small importers of low-displacement motorcycles. Accordingly, in order to provide companies with sufficient lead time, the Department is proposing that motorcycles with an engine displacement of less than 50 cc that are manufactured on or after July 1, 2006, be required to comply with the new emission standards.

3) Proposed optional corporate emissions averaging

The new U.S. rule introduces the option for companies to meet certain emission standards (i.e. exhaust HC+NO_x and fuel tank permeation) on a corporate fleet average basis. Companies can opt to certify some motorcycles at specified emission levels (known as the Family Emission Limits or "FELs") above the prescribed emission standard and certify other motorcycles to FELs below the standard, provided that the calculated sales-weighted average emissions level of such motorcycles in a company's new motorcycle fleet of a given model year does not exceed the applicable emission standard. The formula used for calculating a company's average HC+NO_x exhaust emission level

for a given model year is

Average Emission Level =

$$\left[\sum_i (FEL)_i \times (UL)_i \times (\text{Production})_i \right] \left/ \left[\sum_i (\text{Production})_i \times (UL)_i \right] \right.$$

where,

FEL_i = the family emission limit applicable to the engine family;

UL_i = the useful life of the engine family; and

Production_i = the number of vehicles in the engine family.

A company may use emissions averaging as the basis for demonstrating compliance with the Tier 1 and Tier 2 "HC+NO_x" exhaust emission standards for Class III motorcycles, with a maximum allowable FEL of 5.0 g/km for the 2006–2009 model years and 2.5 g/km for 2010 and beyond. Companies that certify Class I and Class II motorcycles to the optional HC+NO_x emission standard can establish a separate averaging program for those classes with a maximum allowable FEL of 5.0 g/km for the 2006 model year and beyond.

Emission credits ([see footnote 9](#)) generated by a company's Class III fleet of a model year may be used to offset a deficit in its Class I and II fleet in the same model year (credits are adjusted to account for different useful life).

Similarly, a company may use emissions averaging as the basis for demonstrating compliance with the permeation emission standards for non-metal fuel tanks for the 2008 and later model year motorcycles. The formula used for calculating a company's average fuel tank permeation emission level for a given model year is similar to the one for the HC+NO_x exhaust emission level, where

FEL_i = the family emission limit applicable to the engine family;

UL_i = the useful life of the engine family in years; and

Production_i = the number of vehicles in the engine family multiplied by the average internal surface area of the vehicles' fuel tanks.

The U.S. rule does not specify a maximum allowable FEL and does not allow for the generating or banking of credits or deficits in its permeation emissions averaging provisions.

Environment Canada is proposing to adopt provisions to allow companies to meet the applicable 2006 and later model year emission standards in Canada on the basis of

Canadian corporate fleet average emissions. While the averaging provisions are based on those of the United States, there are differences aimed at specifically recognizing U.S. certified vehicles that are sold concurrently in both countries. Under the proposed amendments, a company's fleet of new motorcycles manufactured or imported for sale in Canada may include motorcycles that are certified to an FEL that is above the applicable emission standard as long as (1) the motorcycles comply with the FEL referred to in the EPA certificate of conformity and belong to an engine family of which the total number of units sold in Canada does not exceed the total number of units sold in the United States; or (2) if a company's fleet includes motorcycles not meeting these criteria, the company conforms with the applicable emission standards on the basis of the average emissions of all its motorcycles that are certified to an FEL, or only of those motorcycles that do not meet the specified criteria.

The proposed Regulations require that companies manufacturing or importing motorcycles for sale in Canada submit an end-of-model-year report to Environment Canada. In any model year where a company's fleet of new motorcycles includes motorcycles certified to an FEL that exceeds the applicable emission standard, the proposed amendments require that the company's report contain specific information related to their fleet average emission values for the model year. The reporting requirements will allow the Department to monitor the fleet average emission performance of companies.

4) Proposed flexibility for small-volume manufacturers

The U.S. rules provide new compliance flexibilities for "small-volume manufacturers," ([see footnote 10](#)) which are manufacturers and importers with fewer than 500 employees worldwide and fewer than 3 000 U.S. motorcycle sales per year. Small-volume manufacturers are required to comply with the Tier 1 standards for Class III motorcycles beginning in the 2008 model year, two years later than for larger companies. In addition, small-volume manufacturers are not required to comply with the Tier 2 standards for Class III motorcycles. ([see footnote 11](#)) The types of classic and custom motorcycles typically built by small-volume manufacturers tend to make the addition of new technologies a uniquely resource-intensive prospect. The Tier 2 standards are not being applied by the United States to small-volume manufacturers at this time, as they represent a significant technological challenge and are potentially infeasible for these small manufacturers. The general intent of the U.S. special provisions for small-volume manufacturers was stated by the EPA as "to reduce the burden while ensuring the vast majority of the program is implemented to ensure timely emission reductions."

Under Canada's current Regulations, motorcycles sold in the United States under small-volume manufacturer provisions would be eligible for sale in Canada through the acceptance of the EPA certificate of conformity as evidence of conformity with Canada's corresponding emission standards. Given the established policy of alignment, Environment Canada also intends that Class III motorcycles manufactured in, or imported into, Canada by a company dealing in small volumes of motorcycles that are not covered by U.S. certification be subject to emission standards equivalent to those of the United States. Accordingly, similar provisions have been included in the proposed Regulations, but with the associated limit on annual sales volume reduced to a maximum of 200 motorcycles to reflect the proportional size of the Canadian market (i.e. about 8 percent).

Alternatives

Status quo

At the time the *On-Road Vehicle and Engine Emission Regulations* were finalized and published (January 2003), Environment Canada was aware that the EPA had initiated a rulemaking process to develop new, more stringent emission standards for on-road motorcycles starting in the 2006 model year. This was acknowledged in the Regulatory Impact Analysis Statement (RIAS) that accompanied the publication of the Regulations. The RIAS further stated that once the new U.S. motorcycle emission standards were finalized, the Department "plans to review the final U.S. rule and take any necessary steps to ensure appropriate alignment with U.S. standards. This could include proposing amendments to the Regulations."

The current Regulations enable a company to base its evidence of conformity with the Regulations on the certificate of conformity issued by the EPA. Given that the majority of motorcycles marketed in Canada fall into this category, the structure of the current Regulations is not expected to have a major effect on the marketability of motorcycles in Canada. However, the current Regulations would

— allow motorcycles having an engine displacement of less than 50 cc to continue to be unregulated in Canada, while they would be subject to regulations in the United States beginning with the 2006 model year; and

— not include certain flexibilities which could, in some cases, result in more restrictive requirements for models of motorcycles that may be sold in Canada but not in the United States.

The option of retaining the current standards does not take advantage of the opportunity for continued reductions in motorcycle emissions and would not be fully consistent with the policy of aligning Canada's emission standards with those of the U.S. programs.

Voluntary vs. regulatory approach

On-road vehicles and engines continue to be major contributors to air pollution despite the reductions in vehicle emissions achieved over the last three decades. Many Canadians live in areas where air pollution from vehicle use has adverse impacts on their health. Given the importance of environmental protection and improving air quality, the federal government determined that a regulatory framework is appropriate for controlling emissions from on-road vehicles and engines with the publication of the *On-Road Vehicle and Engine Emission Regulations* in January 2003.

The proposed amendments continue to provide the flexibility necessary for manufacturers to operate in a competitive North American market, together with an enforceability that offers a high level of environmental protection for Canadians. The proposed amendments ensure that no single company is allowed to deviate from established standards and put other companies under competitive pressure to do likewise.

Regulations with unique Canadian standards

There are strong environmental and economic rationales for Canada to continue to align its emission standards with those of the United States. The basis for this policy is

described in the RIAS supporting the publication of the current Regulations. Accordingly, the option of adopting standards that are different from U.S. federal emission standards was rejected.

Regulations aligned with U.S. rules

Given the progressive nature of U.S. federal emission standards and the highly integrated nature of the North American vehicle manufacturing industry, there has been broad stakeholder support for the policy of Canada/U.S. alignment of emission standards. This support was evidenced throughout the consultation process associated with the development of the Federal Agenda on Cleaner Vehicles, Engines and Fuels and the subsequent regulatory development processes for on-road and off-road vehicle and engine emissions. Aligning with U.S. rules allows for comparable emission performance between the two countries and is cost-effective for companies and consumers. The proposed amendments for motorcycles, therefore, continue to align with the EPA emission standards, which are generally harmonized with those of the California Air Resources Board. ([see footnote 12](#))

The vast majority of motorcycles sold in Canada are vehicles designed for and marketed in the United States, and Canada represents approximately 8 percent of the Canada/U.S. market. The Department believes that motorcycles designed to meet the U.S. fleet average standard will, when sold concurrently in Canada, yield a similar but not identical result in Canada. Accordingly, a company's fleet average value in Canada, in respect of the motorcycles that it sells concurrently in both countries, will be "anchored" to the U.S. fleet average value and there should be no need for an independent Canadian restriction. The proposed amendments specifically recognize U.S.-certified motorcycles that are sold concurrently in both countries and allow companies to exclude these motorcycles effectively from the optional fleet average standard. The Department believes that the fleet averaging provisions are structured in a manner that will deliver fleet average emissions comparable to the United States while minimizing the regulatory burden on companies and allowing companies to market vehicles in Canada independently from the United States. The approach proposed for the motorcycle fleet averaging standards is consistent with the approach for light-duty vehicles under the current Regulations.

Environment Canada believes that an appropriate regulatory framework is necessary to remove the opportunity for individual companies to sell systematically a significant number of higher-emitting motorcycles in Canada than would be allowed in the United States. This is important to provide assurance that the long-term environmental performance of the Canadian fleet will be comparable with that of the United States.

The proposed amendments contain provisions that act as safeguards towards ensuring a Canadian fleet emission performance comparable to the United States. For example, any motorcycle that is sold in Canada and the United States must meet the same emission standards (i.e. be certified to the same FEL) in Canada as in the United States. A company cannot exclude motorcycles certified to an FEL above the applicable emission standard from compliance with a fleet average standard if the total number of equivalent vehicles sold in Canada exceeds the total number of such vehicles sold in the United States. This ensures that a company cannot exclude motorcycles that are certified to higher emission limits from being subject to a fleet average standard in Canada by selling an insignificant number of such vehicles in the United States. A company must also include all eligible motorcycles in the group that is excluded from the fleet average value. Thus, a company could not choose to exclude only a portion of its eligible motorcycles

while allowing others to remain in the portion of their fleet subject to the averaging requirements.

There are reasons for a company to market motorcycles uniquely in Canada and, from time to time, there are motorcycle models sold in Canada but not in the United States. The proposed amendments contain provisions to ensure that unique-Canadian motorcycles do not adversely affect the environmental performance of a company's fleet relative to the applicable emission standards.

Environment Canada is not proposing provisions for the early banking of emission credits for Class III motorcycles, as permitted by the EPA. It is believed that the added complexity of such provisions is not warranted. Given the flexibility of the proposed overall approach to the Canada fleet averaging provisions, companies are not expected to be disadvantaged by not being able to generate early emission credits.

Environment Canada is not proposing any new requirements based on the U.S. provisions regarding temporary exemptions for reasons of financial hardship or hardship due to unusual circumstances, or for volume-limited compliance exemptions including those for motorcycle kits (maximum one per individual per lifetime of the provisions) and custom motorcycles used solely for display purposes (maximum 24 per company per year). The framework for granting exemptions and the importation of "non-complying" vehicles for the purposes of exhibition, demonstration, evaluation and testing is contained directly in the *Canadian Environmental Protection Act, 1999* and these issues are generally addressed on a case-by-case basis.

Regulations aligned with the Worldwide Motorcycle Emission Test Cycle and Standards

Canada is a signatory to the Agreement Concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts which can be fitted and/or used on Wheeled Vehicles under the auspices of the United Nations. A primary objective of this agreement is to establish a global process by which Contracting Parties from all regions of the world can jointly develop global technical regulations regarding the safety, environmental protection, energy efficiency, and anti-theft performance of motor vehicles.

In June 2005, the United Nations' World Forum for Harmonization of Vehicle Regulations approved a new global test cycle for the measurement of motorcycle emissions that better reflects in-use operating conditions. The focus is now shifting to the development of appropriate motorcycle emission limits under the new test cycle, known as the "Worldwide Motorcycle Test Cycle" or "WMTC." Ultimately, the objective is to integrate this new test cycle into the emission regulations of nations around the world, including Canada. In the longer term, this approach will result in both improved emission testing and efficiencies for motorcycle manufacturers, through the harmonization of emission certification test procedures worldwide. Consistent with the commitments under the Agreement and with the expected action of the United States, Environment Canada intends to propose the acceptance of motorcycles certified to appropriate emission limits on the basis of the WMTC through a future regulatory process. However, at this time, Environment Canada is proposing to maintain alignment with EPA test procedures used in the emission certification of on-road motorcycles.

Benefits and costs

Benefits

Emission reductions

Continuing to align with U.S. emission standards will introduce more stringent emission standards for on-road motorcycles. For example, on a per-vehicle basis, the proposed allowable levels of smog-forming emissions such as HCs from new Class I and II motorcycles will be reduced by 80 percent, relative to current regulated limits.

As the new, cleaner motorcycles enter the Canadian market and account for an increasing portion of the in-use fleet, the more stringent emission standards will result in considerable reductions of air pollutants emitted from the in-use fleet of on-road motorcycles. The reductions in emissions of CACs were estimated by Environment Canada.

The emission estimates indicate that the proposed amendments will result in progressively greater annual emission reductions during the 2006 to 2020 period. For the year 2020, the associated emission reductions in NO_x and VOCs (includes HC exhaust and permeation emissions) relative to the base case are summarized in Table 4.

Table 4: Emission reductions of NO_x and VOCs in 2020

Pollutant	Base Case Emissions in 2020 (kilotonnes)	Emissions in 2020 with new standards (kilotonnes)	Percentage Reduction in 2020 (with new standards vs. Base Case)
NO _x	2.1	0.9	59
VOCs	3.6	2.0	45

On-road motorcycles are contributors to mobile-source air pollution and can produce more smog-forming emissions per mile than a car or a light truck. It is estimated that motorcycles currently account for 0.3 percent of on-road source VOC emissions and 0.1 percent of on-road source NO_x emissions. Given the more stringent emission standards that have been put in place for other classes of on-road vehicles, without tighter regulations for motorcycles, the contribution of on-road motorcycles would increase to 1.8 percent of on-road source VOCs and 0.8 percent of on-road source NO_x by 2020.

It is recognized that the current Regulations automatically incorporate the new standards for Class IB to III motorcycles and that most motorcycles having an engine displacement of less than 50 cc would be designed to meet the new requirements as a result of the similar Canada and U.S. markets for motorcycles. Accordingly, the magnitude of the emission reduction benefits directly attributable to the proposed amendments are expected to be smaller than those presented above. Nonetheless, the proposed amendments provide a framework to ensure that Canada will achieve significant emission reductions from motorcycles and associated reductions in health and environmental impacts.

Health and environmental benefits

The emission reductions described in the previous sections will generate multiple health and environmental benefits. Health benefits can be described in terms of damages or health effects avoided. Table 5 summarizes a selection of health effects and their associated pollutants. ([see footnote 13](#))

Table 5: Selected health effects and their associated air pollutants

Health Effects	Pollutant
Premature mortality	PM
Hospital admissions	PM, VOCs+NO _x
Emergency room visits	PM, VOCs+NO _x
New cases of chronic bronchitis	PM
Respiratory illness in children	PM
Asthma symptom days	PM
Restricted activity days	PM, VOCs+NO _x
Acute respiratory symptoms	PM, VOCs+NO _x

The above list is not exhaustive. The combination of PM, VOCs, NO_x and CO also results in adverse health effects, but the valuation of the benefits from reducing these pollutants in combination is very difficult. There are also direct health benefits from reductions in toxic substances (e.g. benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein).

The emission reductions associated with the adoption of the tighter standards help reduce the public's exposure to these emissions and to smog, especially since motorcycles are typically used during the summer months, when smog-related health problems are more prevalent. The new standards are also expected to help reduce exposure to airborne toxic substances for persons who operate or work with, or who are otherwise active in close proximity to, motorcycles. Finally, the proposed amendments will help address other environmental problems associated with these sources, such as reduced visibility.

Other benefits

In its rulemaking documents, the EPA found that the technological improvements associated with meeting the more stringent standards are expected to provide the additional benefits of improving the performance and reliability of motorcycles and reducing fuel consumption and associated carbon dioxide emissions linked to climate change.

The proposed minor editorial changes will contribute to improved clarity and consistency between the French and the English versions of the current Regulations and will not have any negative impact on the regulated community.

Costs

The EPA estimates that compliance with the new emission standards for 2006 and later model year motorcycles is technologically feasible, although it is recognized that there will be technical challenges in meeting the Tier 2 standards (2010 and later) for Class III motorcycles. The additional costs to manufacturers to meet the more stringent emission standards has been estimated by the EPA in their regulatory impact analysis for their final rule to control emissions from highway motorcycles. The cost of compliance will vary between individual models of motorcycles and will depend on the type of control technologies used, the manufacturing processes, the size of the manufacturer, and other factors. On average, the cost for Class III motorcycles was estimated to be approximately US\$30 per motorcycle for the 2006–2009 model year standards, with an additional incremental cost of US\$45 for the 2010 model year standards.

As the current Regulations automatically incorporate tighter standards for Class IB to III, the incremental cost for industry to meet the proposed standards are expected to be very low.

The EPA projects that the average cost associated with the proposed new standards for motorcycles with an engine displacement of less than 50 cc would be US\$44 per motorcycle. In Canada, the actual costs are expected to be low, as this sector accounts for a very small percentage of the motorcycle market and the standards are aligned with those of the United States. In addition, the proposed standards for this class of motorcycles are of similar stringency as other parts of the world where they are much more popular (e.g. Europe, Asia and India). Therefore, compliant products are expected to be available for importation into Canada.

There will also be some incremental administrative cost to the industry associated with the preparation of reports related to the fleet average emission standards.

Incremental costs to the Government are expected to be of an administrative nature and are mainly associated with the review of fleet average reports by manufacturers. Incremental enforcement costs are not expected to be significant, as compliance will be monitored and enforced consistently with the current Regulations.

Benefit/cost

Given the similar nature of the U.S. and Canadian markets for motorcycles and the fact that the incremental costs associated with the proposed amendments are low, the benefits of the Canadian proposed amendments are expected to outweigh the associated costs.

Competitiveness implications

The Canadian motorcycle industry is dominated by imported products (i.e. 99 percent of new motorcycles sold in Canada are imported), and the vast majority of models are sold concurrently in the United States. There are a few small companies that assemble a very limited volume of custom motorcycles in Canada with a target market of both Canada and the United States. Accordingly, their motorcycles are generally certified to meet U.S. emission standards

Since the proposed amendments further align Canadian emission requirements for motorcycles with those of the United States, a level playing field for companies in Canada and the United States will be maintained, and no long-term competitive changes to the Canadian motorcycle sector as a whole are expected to arise as a direct result of the proposed amendments.

Consultation

The proposed amendments have been developed in a process that builds on a long history of consultation on motor vehicle emissions, as outlined in the RIAS for the *On-Road Vehicle and Engine Emission Regulations*. Previous examples are the 1995 Canadian Council of Ministers of the Environment Task Force on Cleaner Vehicles and Fuels, the 1998 promulgation of new regulations under the *Motor Vehicle Safety Act*, the passage of CEPA 1999 with its Part 7, Division 5, addressing vehicle and engine emissions, the development of the Federal Agenda on Cleaner Vehicles, Engines and Fuels, and the promulgation of the *On-Road Vehicle and Engine Emission Regulations*.

Consultations during each of these processes reveal a broad consensus that Canada's emission standards for smog-forming pollutants from on-road vehicles and engines should be based on alignment with corresponding U.S. federal programs. Commenters recognize that the highly integrated North American automotive manufacturing industry together with the alignment with aggressive EPA programs to reduce vehicle emissions allows Canada to achieve significant reduction in smog-forming emissions in a cost-effective manner.

In September 2004, Environment Canada distributed a discussion document on the planned amendments to the Regulations to stakeholders and to the provinces and territories through the CEPA National Advisory Committee. The discussion document was also posted on Environment Canada's CEPA Registry Web site to ensure its wide availability. Comments were received from the governments of Nova Scotia and Ontario and from the MMIC. All commenters supported the proposed approach of maintaining alignment of Canadian emission standards with those of the EPA. As part of the consultation process, a meeting was held in November 2004 with the MMIC and representatives from member companies to consider and clarify aspects of the proposed amendments.

In addition to the formal consultation process, the Department received subsequent comments from a company that imports motorcycles having an engine displacement of less than 50 cc. The company expressed concern that the coming into force date of January 1, 2006, which was mentioned in the discussion document would not provide sufficient time to make the necessary changes to its product lines. Given that the new standards are aligned with those of the United States and are of a similar stringency as other parts of the world where these low-displacement motorcycles are much more popular, compliant products are expected to be available for importation into Canada. Nonetheless, in recognizing that the timing to adjust to the new requirements can be a particular challenge for small importers of low-displacement motorcycles, the Department is proposing that only those low-displacement motorcycles that are manufactured on or after July 1, 2006, be required to comply with the new emission standards, in order to provide companies with additional lead time.

Compliance and enforcement

Since the proposed amendments are promulgated under CEPA 1999, enforcement officers will, when verifying compliance with the Regulations, apply the Compliance and Enforcement Policy for CEPA 1999. The policy also sets out the range of possible responses to alleged violations: warnings, directions, environmental protection compliance orders, ticketing, ministerial orders, injunctions, prosecution, and environmental protection alternative measures (which are an alternative to a court trial after the laying of charges for a CEPA 1999 violation). In addition, the policy explains when Environment Canada will resort to civil suits by the Crown for cost recovery.

When, following an inspection or an investigation, an enforcement officer discovers an alleged violation, the officer will choose the appropriate enforcement action based on the following factors:

- Nature of the alleged violation: This includes consideration of the damage, the intent of the alleged violator, whether it is a repeat violation, and whether an attempt has been made to conceal information or otherwise subvert the objectives and requirements of the Act.
- Effectiveness in achieving the desired result with the alleged violator: The desired result is compliance within the shortest possible time with no further repetition of the violation. Factors to be considered include the violator's history of compliance with the Act, willingness to co-operate with enforcement officers, and evidence of corrective action already taken.
- Consistency: Enforcement officers will consider how similar situations have been handled in determining the measures to be taken to enforce the Act.

Contacts

Malcolm McHattie, Chief, Regulatory Development Division, Transportation Systems Branch, Air Pollution Prevention Directorate, Environment Canada, Gatineau, Quebec K1A 0H3, (819) 953-7776 (telephone), (819) 953-7815 (fax), malcolm.mchattie@ec.gc.ca (email) or Céline Labossière, Policy Manager, Regulatory and Economic Analysis Branch, Economic and Regulatory Affairs Directorate, Environment Canada, Gatineau, Quebec K1A 0H3, (819) 997-2377 (telephone), (819) 997-2769 (fax), celine.labossiere@ec.gc.ca (email).

PROPOSED REGULATORY TEXT

Notice is hereby given, pursuant to subsection 332(1) ([see footnote a](#)) of the *Canadian Environmental Protection Act, 1999* ([see footnote b](#)), that the Governor in Council proposes, pursuant to section 160 of that Act, to make the annexed *Regulations Amending the On-Road Vehicle and Engine Emission Regulations*.

Any person may, within 60 days after the date of publication of this notice, file with the Minister of the Environment comments with respect to the proposed Regulations or a notice of objection requesting that a board of review be established under section 333 of that Act and stating the reasons for the objection. All comments and notices of objection must cite the *Canada Gazette*, Part I, and the date of publication of this notice, and be sent to the Director, Transportation Systems Branch, Air Pollution Prevention Directorate, Environmental Protection Service, Department of the Environment, Ottawa, Ontario K1A 0H3.

A person who provides information to the Minister may submit with the information a request that it be treated as confidential, in accordance with section 313 of the Act.

Ottawa, October 31, 2005

DIANE LABELLE
Acting Assistant Clerk of the Privy Council

REGULATIONS AMENDING THE ON-ROAD VEHICLE AND ENGINE EMISSION REGULATIONS

AMENDMENTS

1. (1) The definition "motorcycle" in subsection 1(1) of the *On-Road Vehicle and Engine Emission Regulations* ([see footnote 14](#)) is replaced by the following:

"motorcycle" means an on-road vehicle with a headlight, taillight and stoplight that has two or three wheels and a curb weight of 793 kg (1,749 pounds) or less. (*motocyclette*)

(2) Subsection 1(1) of the Regulations is amended by adding the following in alphabetical order:

"Class I motorcycle" means a motorcycle having an engine displacement of less than 170 cubic centimetres. (*motocyclette de classe I*)

"Class II motorcycle" means a motorcycle having an engine displacement of 170 cubic centimetres or more but less than 280 cubic centimetres. (*motocyclette de classe II*)

"Class III motorcycle" means a motorcycle having an engine displacement of 280 cubic centimetres or more. (*motocyclette de classe III*)

"HC+NO_x" means the sum of the hydrocarbon and oxides of nitrogen exhaust emissions. (HC+NO_x)

2. The Regulations are amended by adding the following after section 2:

BACKGROUND

2.1 These Regulations set out

(a) prescribed classes of on-road vehicles and engines for the purposes of section 149 of the Act;

(b) requirements respecting the conformity of on-road vehicles and engines with emission-related standards for the purposes of sections 153 and 154 of the Act; and

(c) other requirements for carrying out the purposes and provisions of Part 7, Division 5 of the Act.

3. The portion of section 9 of the French version of the Regulations before paragraph (a) is replaced by the following:

9. L'entreprise peut apposer la marque nationale sur les véhicules ou moteurs dont l'assemblage principal ou la fabrication, selon le cas, a été terminé avant le 1^{er} janvier 2004 si les conditions suivantes sont réunies :

4. Paragraphs 11(1)(a) and (b) of the Regulations are replaced by the following:

(a) in its operation, release a substance that causes air pollution and that would not have been released if the system were not installed; or

(b) in its operation or malfunction, make the vehicle unsafe or endanger persons or property in or near the vehicle.

5. Section 17 of the Regulations is replaced by the following:

17. Subject to sections 17.1, 19 and 32.2, motorcycles of a specific model year shall

(a) conform to the exhaust and evaporative emission standards applicable to motorcycles of that model year set out in section 410, subpart E, of the CFR; and

(b) not release any crankcase emissions.

17.1 (1) A company manufacturing or importing less than 200 motorcycles for sale in Canada per year and having fewer than 500 employees worldwide is exempt from the requirement to conform to the HC+NO_x emission standard set out in the section of the CFR referred to in paragraph 17(a) in respect of its Class III motorcycles of the 2006 and 2007 model years that conform to the hydrocarbon emission standard referred to in section 410, subpart E, of the CFR applicable to 2005 model year motorcycles.

(2) A company manufacturing or importing less than 200 motorcycles for sale in Canada per year and having fewer than 500 employees worldwide is exempt from the requirement to conform to the HC+NO_x emission standard set out in the section of the CFR referred to in paragraph 17(a) in respect of its Class III motorcycles of the 2010 and later model years that conform to the HC+NO_x emission standard referred to in section 410, subpart E, of the CFR applicable to 2009 model year motorcycles.

6. The heading "FLEET AVERAGING REQUIREMENTS" before section 20 of the Regulations is replaced by the following:

FLEET AVERAGING REQUIREMENTS FOR LIGHT-DUTY VEHICLES, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY PASSENGER VEHICLES

7. Section 28 of the Regulations is replaced by the following:

28. Subject to section 31, if a company's average NO_x value in respect of a fleet of a specific model year is higher than the fleet average NO_x standard for that model year, the company shall calculate the negative number that is the value of a NO_x emission deficit incurred in that model year using the formula set out in subsection 26(2).

8. (1) Subsection 31(1) of the Regulations is replaced by the following:

31. (1) Subject to subsections (2), (3) and (8), a company may elect to exclude the group of vehicles in a fleet that are covered by an EPA certificate and that are sold concurrently in Canada and the United States from the requirement to meet the standards set out in section 21, 22 or 23, as the case may be, and from the NO_x emission deficit calculations in respect of a fleet under section 28.

(2) The portion of subsection 31(7) of the French version of the Regulations before paragraph (a) is replaced by the following:

(7) Si l'entreprise fait le choix prévu au paragraphe (1) et que la valeur moyenne de NO_x pour le groupe en cause, calculée selon l'alinéa (4)a), dépasse la norme moyenne de NO_x qui s'appliquerait au parc selon les articles 21, 22 ou 23 :

(3) Subsection 31(8) of the French version of the Regulations is replaced by the following:

(8) L'entreprise ne peut faire le choix prévu au paragraphe (1) pour une année de modèle au cours de laquelle elle a transféré des points relatifs aux émissions de NO_x à une autre entreprise si la valeur moyenne de NO_x pour le groupe, calculée selon l'alinéa (4)a) dépasse la norme moyenne de NO_x qui s'appliquerait au parc selon les articles 21, 22 ou 23.

9. The Regulations are amended by adding the following after section 32:

SUBFLEET AVERAGING REQUIREMENTS FOR MOTORCYCLES

General

32.1 The following definitions apply in this section and sections 32.2 to 32.7 and 37.1.

"engine family" means a classification unit for a company's motorcycles determined in accordance with section 420, subpart E, of the CFR. (*famille de moteurs*)

"family emission limit" means the maximum emission level established by a company for an engine family for the purpose of emissions averaging. (*limite d'émissions de la famille de moteurs*)

"fuel tank permeation emissions" means evaporative emissions resulting from permeation of fuel through the fuel tank materials. (*émissions par perméation du réservoir de*

carburant)

"subfleet" means motorcycles of a specific model year that have a family emission limit and that a company manufactures in Canada, or imports into Canada, for the purpose of sale to the first retail purchaser. Each of the following groupings of motorcycles constitutes a subfleet for the purpose of emissions averaging:

(a) in respect of the applicable HC+NO_x emission standard referred to in paragraph 17(a), all Class I and Class II motorcycles;

(b) in respect of the applicable HC+NO_x emission standard referred to in paragraph 17(a) or in subsection 17.1(2), all Class III motorcycles;

(c) in respect of the fuel tank permeation emission standard referred to in paragraph 17(a), all motorcycles with a non-metal fuel tank. (*sous-parc*)

32.2 (1) Subject to subsection (2), any motorcycle that does not conform to the applicable HC+NO_x emission standard or fuel tank permeation emission standard referred to in paragraph 17(a) shall conform to, as the case may be:

(a) the applicable family emission limit for HC+NO_x emissions, and

(b) the family emission limit for fuel tank permeation emissions.

(2) In any model year, the HC+NO_x family emission limit applicable to a motorcycle shall not exceed the applicable family emission limit cap set out in section 449, subpart E, of the CFR.

(3) In any model year, a company's subfleet may include motorcycles that conform to a family emission limit that is greater than the applicable HC+NO_x emission standard referred to in paragraph 17(a) or subsection 17.1(2) or the fuel tank permeation emission standard referred to in paragraph 17(a) in the following cases:

(a) where each motorcycle of a subfleet is covered by an EPA certificate, each motorcycle conforms to the family emission limit referred to in the EPA certificate and belongs to an engine family of which the total number of units sold in Canada does not exceed the total number of units sold in the United States; or

(b) where a subfleet contains motorcycles that do not meet all of the criteria set out in paragraph (a), the average HC+NO_x value or the average fuel tank permeation value, as the case may be, does not exceed the applicable HC+NO_x emission standard referred to in paragraph 17(a) or subsection 17.1(2) and the fuel tank permeation emission standard referred to in paragraph 17(a), in respect of

(i) the subfleet, or

(ii) the group of motorcycles within the subfleet that do not meet all of the criteria

set out in paragraph (a).

Calculation of Subfleet Average Emission Values

32.3 (1) Where a company's subfleet includes one or more motorcycles that conform to a family emission limit that is greater than the applicable HC+NO_x emission standard referred to in paragraph 17(a) or subsection 17.1(2), the company shall calculate the average HC+NO_x value for the subfleet in accordance with the following formula:

$$[\Sigma (A \times B \times C)] / [\Sigma (B \times C)]$$

where

A is the family emission limit applicable to the engine family, expressed to the same number of decimal places as the emission standard it replaced;

B is the useful life of the engine family expressed in units of years or kilometres; and

C is the number of motorcycles in the engine family.

(2) Where a company's subfleet includes one or more motorcycles that conform to a family emission limit that is greater than the fuel tank permeation emission standard referred to in paragraph 17(a), the company shall calculate the average fuel tank permeation value for the subfleet in accordance with the following formula:

$$[\Sigma (A \times B \times C \times 365.24)] / [\Sigma (B \times C \times 365.24)]$$

where

A is the family emission limit applicable to the engine family, expressed to the same number of decimal places as the emission standard it replaced;

B is the useful life of the engine family expressed in units of years; and

C is the number of motorcycles in the engine family multiplied by the average internal surface area of the motorcycles' fuel tanks, where the average internal surface area is expressed in square meters to at least three decimal places.

(3) The average HC+NO_x value and average fuel tank permeation value for a subfleet shall be expressed in g/km and g/m² per day, respectively, and be rounded to one decimal place.

(4) When calculating the average HC+NO_x value for a subfleet of the 2006 model year, a company may include all motorcycles of that model year, including those manufactured before the coming into force of this section.

Emission Credits for Class III Motorcycles

32.4 (1) A company may obtain HC+NO_x emission credits in relation to a specific model year if

(a) the average HC+NO_x value in respect of a subfleet of Class III motorcycles of that model year is lower than the applicable HC+NO_x emission standard for that class and model year; and

(b) the company reports the credits in its end of model year report.

(2) The HC+NO_x emission credits, expressed in units of vehicle-grams, shall be calculated using the following formula, rounding the result to the nearest whole number:

$$(A - B) \times C \times D$$

where

A is the applicable HC+NO_x emission standard for the subfleet;

B is the average HC+NO_x value for the subfleet;

C is the total number of motorcycles in the subfleet; and

D is the useful life expressed in units of kilometres.

(3) The HC+NO_x emission credits for a specific model year are credited on the last day of that model year and may only be used by a company to offset an HC+NO_x emission deficit that it incurred in the same model year as calculated in section 32.5.

Emission Deficits for Class I and Class II Motorcycles

32.5 (1) If a company's average HC+NO_x value in respect of a subfleet of Class I and Class II motorcycles of a model year is higher than the applicable HC+NO_x emission standard, the company shall calculate the value of the emission deficit it incurred in that model year.

(2) The HC+NO_x emission deficit is the negative number calculated using the formula set out in subsection 32.4(2), where the values used represent the subfleet of Class I and Class II motorcycles.

32.6 (1) A company shall offset an HC+NO_x emission deficit in the model year in which the deficit was incurred, no later than the day on which the company submits its end of model year report.

(2) A company shall offset an HC+NO_x emission deficit with an equivalent number of

HC+NO_x emission credits obtained in the same model year in accordance with section 32.4.

End of Model Year Reports

32.7 (1) A company shall submit to the Minister an end of model year report, signed by a person who is authorized to act on behalf of the company, no later than May 1 after the end of each model year.

(2) A company shall include in the end of model year report a statement that

(a) each of Classes I, II and III motorcycles, as the case may be, conforms to the applicable exhaust and evaporative emission standards set out in paragraph 17(a) or section 17.1; and

(b) for each subfleet, as the case may be,

(i) each motorcycle in the subfleet conforms to the criteria set out in paragraph 32.2(3)(a), or

(ii) the subfleet contains motorcycles that do not meet all of the criteria set out in paragraph 32.2(3)(a), but the subfleet conforms to the emissions averaging requirements set out in paragraph 32.2(3)(b), or the group of motorcycles referred to in subparagraph 32.2(3)(b)(ii) conforms to the emissions averaging requirements set out in paragraph 32.2(3)(b).

(3) In a model year where any of the company's subfleets includes one or more motorcycles that conform to a family emission limit that is greater than the applicable HC+NO_x emission standard referred to in paragraph 17(a) or subsection 17.1(2) or the fuel tank permeation emission standard referred to in paragraph 17(a), the end of model year report shall contain the following information for each subfleet:

(a) the applicable HC+NO_x emission standard and the fuel tank permeation emission standard;

(b) the average HC+NO_x value and average fuel tank permeation value;

(c) for each model of motorcycle, the values used in calculating the average HC+NO_x value and average fuel tank permeation value;

(d) the total number of motorcycles in the subfleet;

(e) the HC+NO_x emission credits, if any, in that model year; and

(f) the HC+NO_x emission deficits, if any, in that model year.

(4) Where the end of model year report contains a statement referred to in subparagraph

(2)(b)(ii) in respect of a group of motorcycles, the company shall include in the end of model year report the information set out in paragraphs (3)(a) to (d), with the necessary modifications, with respect to the group of motorcycles described in subparagraph 32.2(3)(b)(ii).

(5) The company availing itself of the exemption referred to in subsection 17.1(1) or (2) shall include in the end of model year report:

(a) the number of Class III motorcycles of the model year that were manufactured or imported by the company under this exemption;

(b) the total number of motorcycles that were manufactured or imported by the company for sale in Canada during the model year; and

(c) the number of employees of the company worldwide.

10. (1) The portion of subsection 33(1) of the French version of the Regulations before paragraph (a) is replaced by the following:

33. (1) L'entreprise veille à ce que soient fournies au premier usager de chaque véhicule des instructions écrites concernant l'entretien relatif aux émissions qui sont conformes aux instructions d'entretien données pour l'année de modèle en question :

(2) Subsection 33(2) of the French version of the Regulations is replaced by the following:

(2) Les instructions sont fournies en français, en anglais ou dans les deux langues officielles, suivant la demande de l'utilisateur.

11. Section 36 of the Regulations is replaced by the following:

36. (1) In the case of a vehicle or engine other than those referred to in section 35, evidence of conformity required under paragraph 153(1)(b) of the Act shall be obtained and produced by a company in a form and manner satisfactory to the Minister instead of that specified in section 35.

(2) The company shall submit the evidence of conformity referred to in subsection (1) to the Minister before affixing a national emissions mark to the vehicle or engine or importing the vehicle or engine.

12. The heading before section 37 of the Regulations is replaced by the following:

Fleet Average NO_x Records for Light-Duty Vehicles, Light-Duty Trucks and Medium-Duty Passenger Vehicles

13. The Regulations are amended by adding the following after section 37:

Records Concerning Subfleet Average Emission Values for Motorcycles

37.1 A company shall maintain records containing the following information for each of its subfleets of motorcycles:

(a) the model year;

(b) all values used in calculating the average HC+NO_x values and average fuel tank permeation values reported in its end of model year report; and

(c) for each motorcycle in the subfleet

(i) the model,

(ii) the name and street address of the plant where the motorcycle was assembled,

(iii) the vehicle identification number, and

(iv) the name and street or mailing address of the first purchaser in Canada.

14. Subsection 38(1) of the Regulations is amended by striking out the word "and" at the end of paragraph (a) and by replacing paragraph (b) with the following:

(b) for light-duty vehicles, light-duty trucks and medium-duty passenger vehicles, in respect of each model year, the records referred to in section 37 and a copy of the end of model year report referred to in section 32, for a period of eight years after the end of the model year; and

(c) for motorcycles, in respect of each model year, the records referred to in section 37.1 and a copy of the end of model year report referred to in section 32.7, for a period of three years from the due date for the end of model year report.

COMING INTO FORCE

15. (1) Subject to subsection (2), these Regulations come into force on the day on which they are registered.

(2) Subsection 1(1) comes into force on July 1, 2006.

[45-1-o]

[Footnote 1](#)

On-Road Vehicle and Engine Emission Regulations, Canada Gazette, Part II, January 1, 2003, SOR/2003-2

[Footnote 2](#)

Control of Emissions from Highway Motorcycles; Final Rule, U.S. Environmental Protection Agency, Federal Register, January 15, 2004 (www.epa.gov/fedrgstr/EPA-AIR/2004/January/Day-15/a006.htm).

[Footnote 3](#)

Motorcycle and All-Terrain Vehicle Annual Industry Statistics, Motorcycle & Moped Industry Council, 2004 (www.mmic.ca/stats2004.asp#).

[Footnote 4](#)

Environment Canada's "2000 Criteria Air Contaminants (CAC) Emission Summary" available at www.ec.gc.ca/pdb/cac/cac_home_e.cfm.

[Footnote 5](#)

Federal Agenda on Cleaner Vehicles, Engines and Fuels, Minister of the Environment, Canada Gazette, Part I, February 17, 2001.

[Footnote 6](#)

Control of Emissions from Highway Motorcycles, Final Rule, U.S. Environmental Protection Agency, Federal Register, January 15, 2004 (www.epa.gov/fedrgstr/EPA-AIR/2004/January/Day-15/a006.htm).

[Footnote 7](#)

"Evaporative emissions" refer to HC emissions that result from the evaporation of fuel.

[Footnote 8](#)

"Permeation emissions" refer to evaporative emissions that result from the permeation of fuel through the fuel system materials.

[Footnote 9](#)

Emission credits are generated when a company's fleet average emissions value in a model year is lower than the prescribed standard for the class; an emission deficit is incurred when a company's fleet average emissions value in a model year exceeds the prescribed standard for the class.

[Footnote 10](#)

This would also include importers of motorcycles.

[Footnote 11](#)

The EPA indicated its intent to participate in a review planned by California in 2006 to evaluate progress in meeting the Tier 2 standards, which may include a re-evaluation of whether the Tier 2 standards should be applied to small-volume manufacturers in the future.

[Footnote 12](#)

With the exception of the new EPA emission standards for motorcycles with an engine displacement of less than 50 cc.

[Footnote 13](#)

The selection of health effects is similar to the categories of health effects used by the 1998 Government Working Group on Setting a Sulphur Level for Sulphur in Gasoline and Diesel. The combination of VOCs and NOx in the table is a proxy for ozone.

[Footnote a](#)

S.C. 2004, c. 15, s. 31

[Footnote b](#)

S.C. 1999, c. 33

[Footnote 14](#)

SOR/2003-2

NOTICE:

The format of the electronic version of this issue of the *Canada Gazette* was modified in order to be compatible with hypertext language (HTML). Its content is very similar except for the footnotes, the symbols and the tables.


[Top of page](#)

Maintained by the [Canada Gazette Directorate](#)

Updated: 2005-11-04

[Important notices](#)