



Frequently Asked Questions

Proposed Emission Standards for Highway Motorcycles

In July 2002, the U.S. Environmental Protection Agency (EPA) published a Notice of Proposed Rulemaking (NPRM) to seek public comment on the Agency's plan to propose more stringent emission standards for highway motorcycles. This fact sheet addresses questions we have heard from concerned motorcycle owners.

Why is EPA proposing new emission standards for highway motorcycles?

Motorcycles are regulated under section 202(a)(3)(E) of the Clean Air Act. This provision calls for EPA to “consider the need to achieve equivalency of emission reductions between motorcycles and other vehicles to the maximum extent practicable.” EPA has not revised the motorcycle emission standards for over 20 years. While there have been many vehicle emission control technology advances over the past two decades, motorcycles produce more harmful emissions per mile than a car or even a large sport utility vehicle (SUV). The current federal motorcycle standard for hydrocarbon emissions is about 90 times the hydrocarbon standard for today’s passenger cars. And, although many of today’s motorcycles actually meet the current California standards, the California hydrocarbon standard is still about 20 times the current federal passenger car limit.

What kind of emission controls may be used by manufacturers?

We are proposing standards that manufacturers would meet on an average basis, which may encourage manufacturers to use a broader array of technologies across their product line. The standards would generally be effective in two “tiers:” a Tier 1 that would take effect in the 2006 model year and a Tier 2 that would take effect in the 2010 model year. We don’t specify what emission controls manufacturers must use to comply with the regulations, but we anticipate many manufacturers will choose to meet them by increasing their use of secondary air injection, electronic fuel injection, and, in some cases, catalytic converters. These technologies are used to varying degrees on current highway motorcycles.

Will catalytic converters be required on all highway motorcycles?

No. We understand that motorcycles are not cars, and the application of some passenger car technologies may raise unique issues when applied to motorcycles. These issues may be more critical with some makes and models than with others. We will continue to discuss with manufacturers and other stakeholders the potential role catalytic converters could play in strategies to reduce emissions. More than twenty percent of the 2002 engine families certified by manufacturers already incorporate catalytic converters. Our Regulatory Support Document contains a detailed discussion of the technologies expected to be used to meet the proposed standards.

Would new highway motorcycle emission standards affect motorcycles on the road today?

No. New regulations would only affect new motorcycles produced after a specified model year. Anything manufactured prior to that model year would not be affected and would remain legal to own and operate. EPA generally provides several years of lead time between publication of a final rule and the effective date of new standards. Thus, new standards for motorcycles will not have any effect on motorcycles purchased prior to this year, or in fact purchased for the next several years.

Does the term “useful life” mean that my motorcycle must be scrapped or turned over to the government after certain mileage limits are reached?

No. EPA uses the term “useful life” to describe the period (usually years and/or miles) over which the manufacturer must demonstrate the effectiveness of the emission control system. For example, the “useful life” of current passenger cars is 10 years or 100,000 miles, whichever occurs first. It does not mean that a vehicle is no longer useful or that the vehicle must be scrapped once these limits are reached. The term has no effect on the owners’ ability to ride or keep their motorcycles for as long as they want. The current useful life for motorcycles with engines over 279cc is 5 years or 30,000 kilometers (about 18,640 miles), whichever occurs first. In December 2000, we published an Advance Notice of Proposed Rulemaking requesting comment on whether this is a representative number, or whether motorcycles are driven longer and last longer relative to 20 years ago when these numbers were established. We are not proposing to make any changes to the useful life definitions.

Are motorcycles a less-polluting alternative to cars and SUVs?

No. In fact, motorcycles produce more harmful emissions per mile than a car, or even a large SUV. The current federal motorcycle standard for hydrocarbon emissions is about 90 times the hydrocarbon standard for today’s passenger cars. Although many of today’s motorcycles will actually meet the current California standards, the California hydrocarbon standard is still 18 to 24 times the current federal passenger car limit, depending on the displacement of the motorcycle engine.

Beginning in 2004, all passenger cars, light trucks, and SUVs will be required to meet even more stringent standards. When these standards become effective, new SUVs will be meeting hydrocarbon standards about 95 percent cleaner than today’s typical motorcycle.

Would new emission standards make it illegal to customize my motorcycle?

No. Many motorcycle owners personalize their motorcycles. Indeed, this is one of the joys of owning a motorcycle, and owners take their freedom to customize motorcycles very seriously. We are not proposing to change

existing provisions of section 203(a) of the Clean Air Act, as established in 1977, in which the U. S. Congress stated that it is illegal:

for any person to remove or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this title ... after such sale and delivery to the ultimate purchaser...

In other words, owners of motor vehicles cannot legally make modifications that cause the emissions to exceed the applicable emissions standards, and they cannot remove or disable emission control devices installed by the manufacturer.

We use the term “tampering” to refer specifically to actions that are illegal under section 203 of the Clean Air Act; the term, and the prohibition, do not apply generally to the wide range of things that a motorcycle enthusiast can do to legally personalize their vehicle, only to actions that cause the emissions to exceed the standards. New emissions standards, if adopted by EPA, would not change this “tampering” prohibition. In fact, it is not within EPA’s ability or discretion to change this statutory prohibition, which Congress put in place more than 20 years ago. Owners would still be free generally to customize their motorcycles in any way, as long as they do not disable emission controls or cause the motorcycle to exceed the emission standards.

How much will these controls cost?

The cost for emission controls depends on the control technologies used, manufacturing processes, the size of the manufacturer, and other issues. We estimate increased costs to manufacturers on average of about \$26 per motorcycle for the 2006-2009 model year standards, then an incremental \$35 for the 2010 model year standards.

How will these controls affect performance and safety?

We don’t expect the controls to harm performance or safety. Advancements in engine technologies in recent years should allow the use of new emission control technologies with little to no impact on performance. Motorcycles meeting the new standards should perform as well or better than current motorcycles. The use of some of these technologies, such as fuel injection, may even improve reliability, fuel consumption, and performance.

Some people have expressed concern about the high temperatures from catalytic converters posing a safety hazard. Protecting the rider from the excessive heat is a concern for both riders and manufacturers. The current use of catalytic converters on a number of motorcycles (accounting for tens of thousands of motorcycles in the current U.S. fleet and over 15 million worldwide) shows that there are engineering solutions to these concerns on a variety of motorcycle styles and engine sizes. Countries that have successfully implemented catalyst-based emission control programs for motorcycles (some of which have many years of experience) do not report any safety issues associated with the use of catalytic converters on motorcycles under real-world conditions. According to sales projections from manufacturers, almost 90,000 2002 motorcycles with catalytic converters will be sold in the U.S., about one fifth of total projected sales.

How can I comment on the proposed rule?

We welcome your comments on the proposed rule. You may submit comments by sending an E-mail to mcnprm@epa.gov, or, for more detailed instructions on submitting written comments, please see the Federal Register notice. It is available from the EPA Air Docket by calling (202) 566-1742; please refer to Docket No. A-2000-02. In addition, you can access the Federal Register notice and related documents electronically on our Web page for highway motorcycles at: www.epa.gov/otaq/roadbike.htm.

Where can I get more information?

Keep an eye on the EPA highway motorcycle web page for more information and any developments. For further information, please contact the Assessment and Standards Division at:

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