



Regulatory Announcement

Frequently Asked Questions from Snowmobile Owners

The U.S. Environmental Protection Agency (EPA) has adopted emission standards for recreational vehicles, including snowmobiles, off-highway motorcycles, and ATVs. This information sheet addresses questions we have heard from snowmobile owners.

Why is EPA adopting emission standards for snowmobiles?

Snowmobiles currently emit more than 220,000 tons of hydrocarbons (HC) and 580,000 tons of carbon monoxide (CO) each year across the United States. These emissions contribute to ambient concentrations of CO, air toxics (such as benzene), and fine particulate matter, which is largely responsible for visibility impairment at our national parks. Reducing these emissions would benefit our health and environment. In the Clean Air Act, Congress requires us to set emission standards that address these problems. These environmental impacts are described in more detail in the fact sheet referenced below.

Does my current snowmobile need to meet these regulations?

No. Snowmobile manufacturers must ensure that each **new** snowmobile sold meets the new emission standards. The standards apply only to new snowmobiles produced in 2006 or later. Anything manufactured before that model year would not be affected. We usually allow several years of

lead time between publication of a final rule and the effective date of new standards. New emission standards for snowmobiles therefore won't affect the snowmobile you own now or any snowmobile you buy before 2006.

As a snowmobile owner, how does this affect me?

You may **not** disable any emission controls installed on your snowmobile. Manufacturers explain in their owner's manual what type of emission controls exist for each model and may specify some minor maintenance that must be performed to keep emission controls working properly over the life of the snowmobile. You may also make adjustments specified by manufacturers in the owner's manual, such as carburetor jetting changes, to account for changing operating conditions.

What kind of emission controls is EPA requiring?

We require manufacturers to meet emission standards on an average basis, which will allow them to offer a wide range of technologies to their customers. We don't specify what emission controls the manufacturers must use to comply with the regulations. Some manufacturers are expected to use direct fuel injection with some of their two-stroke engines, much like the latest models of personal watercraft and outboard engines. We also expect manufacturers to increase the number of snowmobiles that use four-stroke engines.

We are also adopting requirements to control permeation emissions from snowmobile fuel systems. We expect these requirements to lead to the use of improved materials that reduce the permeation of fuel through fuel tanks and hoses and into the atmosphere. This should noticeably reduce the smell of gasoline from your snowmobile.

How much will these controls cost?

We estimate that the range of costs for meeting the requirements to be about \$50 for a modified two-stroke engine, \$300 for direct-injection technology, and up to \$900 for a four-stroke engine with fuel injection. However, direct-injection and four-stroke technologies reduce fuel and oil consumption, which somewhat offset these costs. The permeation requirements are expected to cost less than \$10 per vehicle, which is also offset by fuel savings.

How will these controls affect performance and safety?

We don't expect the controls to harm performance or safety. Manufacturers have made many improvements in snowmobile designs over the last few years and will have several years to further improve their products. Engine modifications and fuel system changes should allow performance similar to your current snowmobile—and may allow for better performance. Direct fuel injection also performs better than today's snowmobiles that use a carburetor. Manufacturers are already marketing four-stroke engines that compete directly with snowmobile models with two-stroke engines. None of the emission controls manufacturers are considering affect safety.

How much pollution do snowmobiles emit?

We estimated the amount of pollution coming from snowmobiles based on testing of currently unregulated recreational vehicles. With the new emission standards for snowmobiles, we expect manufacturers will use a variety of engine technologies to meet emission standards. Our estimates of baseline and future emission rates for snowmobiles are shown in the following table.

Engine Category	Snowmobile Emission Rates (grams per horsepower-hour)*			
	HC	CO	NOx	PM
Baseline two-stroke	111	296	1	2.7
Recalibrated two-stroke	54	147	1	2.7
Direct Injection two-stroke	22	90	3	0.6
Four-stroke	8	123	9	0.2

*Manufacturers meet standards based on emission rates in grams per kilowatt-hour; emission estimates are presented here in grams per horsepower-hour for convenience in comparing with other programs.

Will these regulations affect where I can ride my snowmobile?

No. These regulations do not include any specific restrictions about where you can ride snowmobiles.

Will there be noise regulations?

We are not adopting any noise regulations. Snowmobile manufacturers in some cases design snowmobiles that already meet voluntary noise standards for snowmobiles.

Do these regulations apply in California?

Yes. California currently does not have separate emission standards for snowmobiles, so the federal standards apply in California.

Where can I get more information?

You can access documents on recreational vehicles on the Office of Transportation and Air Quality Web site at:

www.epa.gov/otaq/recveh.htm

You can also contact us at:

U.S. Environmental Protection Agency
Office of Transportation and Air Quality
Assessment and Standards Division
2000 Traverwood Drive
Ann Arbor, MI 48105
Voice-mail: (734) 214-4636
E-mail: asdinfo@epa.gov

See additional fact sheets:

- Emission Standards for New Nonroad Engines— Large Industrial Spark-ignition Engines, Recreational Marine Diesel Engines, and Recreational Vehicles (EPA420-F-02-037)
- Environmental Impacts of Newly Regulated Nonroad Engines (EPA420-F-02-033)
- Frequently Asked Questions: Emission Exemption for Racing Motorcycles and Other Competition Vehicles (EPA420-F-02-045)
- How to Maintain or Rebuild Engines Certified to EPA Standards (EPA420-F-02-035)