

## Highway Motorcycles: Exhaust Emission Standards

	Year	Class	Engine Size (cc)	HC (g/km)	HC + NOx (g/km)	CO (g/km)	Useful Life <sup>a</sup>	Warranty <sup>a</sup>
Federal	1978-2005	I	50-169	5.0	-	12.0	5 / 12,000	5 / 12,000
		II	170-279		-		5 / 18,000	5 / 18,000
		III	280+		-		5 / 30,000	5 / 30,000
	2006+	I-A <sup>b</sup>	< 50	1.0	1.4 <sup>c</sup>	12.0	5 / 6,000	5 / 6,000
		I-B <sup>b</sup>	50-169	1.0	1.4 <sup>c</sup>	12.0	5 / 12,000	5 / 12,000
		II	170-279	1.0	1.4 <sup>c</sup>	12.0	5 / 18,000	5 / 18,000
	2006-2009	III (Tier 1)	280+	-	1.4	12.0	5 / 30,000	5 / 30,000
	2010+	III (Tier 2)	280+	-	0.8	12.0	5 / 30,000	5 / 30,000

### Notes:

General applicability: These standards apply to 1978 and later model year, new gasoline-fueled motorcycles built after December 31, 1977, and to 1990 and later model year, new, methanol-fueled motorcycles built after December 31, 1989, and to 1997 and later model year, new, natural gas-fueled and liquefied petroleum gas-fueled motorcycles built after December 31, 1996, and to 2006 and later model year new motorcycles regardless of fuel.

- a** Useful life and warranty period are expressed in years and kilometers, whichever comes first.
- b** Starting with the 2006 model year EPA re-defined Class I to include motorcycles with engines smaller than 50 cubic centimeters. These new previously unregulated vehicles are Class I-A, and the pre-existing Class I became Class I-B.

- c** This is an optional standard that allows manufacturers to average their emissions or transfer emission credits across classes.

### Code of Federal Regulations (CFR) citations:

- 40 CFR 86 Subpart F = Motorcycle emission test procedures
- 40 CFR 86.410-90 = Emission standards for MY 1990-2005
- 40 CFR 86.410-2006 = Emission standards for MY 2006+. [epa.gov/otaq/standards/light-duty/motorcycle](http://epa.gov/otaq/standards/light-duty/motorcycle)