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# Snowmobile Best Available Technology (BAT) List

**Snowmobiles Meeting Yellowstone and Grand Teton National Parks' Best Available Technology (BAT) Requirements Model Year 2013  
October 19, 2012**

Snowmobile	Air Emissions (g/kW-hr)		Sound Emissions (dBA)
	Hydrocarbons	Carbon Monoxide	
Average 2-Stroke (Non-BAT)	150	400	78
EPA Snowmobile Air Emission Requirements <sup>1</sup>	75	275	
NPS BAT Requirements	15 <sup>2</sup>	120 <sup>3</sup>	73 <sup>4</sup>
2008 Arctic Cat 660 Touring, Bearcat 660 W/T and Panther 660 Touring <sup>5</sup>	FEL: 8	FEL: 105	72.2-73.7
2008 Bombardier Ski-Doo Legend Trail, Legend Touring, Expedition Sport V800, Tundra, Expedition TUV, Skandic SWT <sup>5</sup>	FEL: 8	FEL: 120	70.1-71.9
2008 Yamaha RS Venture and RS Vector, equipped with Yellowstone BAT kit <sup>5</sup>	FEL: 10	FEL: 120	71.9
2008 Polaris FS IQ Touring <sup>5</sup>	FEL: 15	FEL: 120	75
2009 Arctic Cat TZ1, equipped with Yellowstone throttle stop	FEL: 9	FEL: 120	74
2009 Bombardier Skandic Tundra LT V800, Legend Touring V800, GTX LE 1200 and GTX SE 1200	FEL: 8-10	FEL: 119-120	70.1-72
2009 Polaris FS IQ Touring	FEL: 15	FEL: 120	75
2009 Yamaha RS10VT (Venture series) and RS10R (Vector series) snowmobiles, equipped with Yellowstone BAT kit	FEL: 11	FEL: 120	70
2010 Yamaha RS10VT (RS Venture), equipped with Yellowstone BAT kit	FEL: 11	FEL: 120	71.8 - 72.1
2010 Bombardier Ski-Doo GSX SE 1200, GTX LE 1200, and GTX SE 1200	FEL: 10	FEL: 119	72.6 - 75.1
2010 Arctic Cat Z1/Z1 LXR and TZ1/TZ1 LXR throttle-limited snowmobiles	FEL: 9	FEL: 120	71.6 - 74.4

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2011 Yamaha RS Venture, equipped with Yellowstone BAT kit	FEL: 11	FEL:120	72.1
2011 Arctic Cat Z1 LXR and TZ1 / TZ1 LXR, throttle-limited snowmobiles	FEL: 9	FEL: 99	71.6 - 74.4
2011 Bearcat Z1 XT, throttle-limited snowmobile	FEL: 9	FEL: 99	74.9
2011 Bombardier GSX SE 1200 and Grand Touring SE 1200 and Grand Touring LE 1200	FEL: 10	FEL: 119	72.6-75.1
2011 Bombardier MX-Z Sport 600 ACE, MX-Z TNT 600 ACE, Grand Touring Sport 600 ACE, Expedition Sport 600 ACE, Skandic WT 600 ACE, Renegade Sport 600 ACE, and Tundra LT 600 ACE	FEL: 8	FEL: 90	71.3 - 75.1
2012 Yamaha RS Venture, equipped with Yellowstone BAT kit	FEL: 9	FEL:116	72.1
2012 Bombardier and Grand Touring SE 1200 and Grand Touring LE 1200	FEL: 10	FEL: 119	72.9-75.1
2012 Bombardier MX-Z Sport 600 ACE, MX-Z TNT 600 ACE, Grand Touring Sport 600 ACE, Expedition Sport 600 ACE, Skandic WT 600 ACE, Renegade Sport 600 ACE, Tundra LT 600 ACE, and Tundra Sport 600ACE	FEL: 8	FEL: 90	71.3 - 75.1
2012 Arctic Cat TZ1 / TZ1 LXR, M 1100, and XF 1100 / F 1100, Bearcat Z1 XT throttle-limited snowmobiles	FEL: 9	FEL : 99	71.8 - 74.9
2013 Bombardier GSX SE 1200 and Grand Touring SE 1200 and Grand Touring LE 1200	FEL: 10	FEL : 110	72.8 - 73.5
2013 Bombardier MX-Z Sport 600 ACE, MX-Z TNT 600 ACE, Grand Touring Sport 600 ACE, Expedition Sport 600 ACE, Skandic WT 600 ACE, Skandic SWT 600 ACE Renegade Sport 600 ACE, Tundra LT 600 ACE, and Tundra Sport 600ACE	FEL: 8	FEL : 90	71.1 - 75.6
2013 Yamaha RS Venture, equipped with Yellowstone BAT kit	FEL: 9	FEL:116	69.6 - 70.2
2013 Arctic Cat TZ1 / TZ1 LXR, M 1100, and XF 1100 / F 1100, Bearcat Z1 XT throttle-limited snowmobiles	FEL: 9	FEL : 99	71.6 - 74.9

1 EPA Family Emissions Limits (FEL) for Snowmobiles are 75 for Hydrocarbons and 275 for Carbon Monoxide (2010 and 2011 model years). (See *Federal Register* Vol. 73, No. 123, Wednesday, June 25, 2008, page 35946)

2 Hydrocarbons: certified by EPA to a Family Emissions Limit (FEL) of 15 g/kW-hr or less.

3 Carbon Monoxide: certified by EPA to a Family Emissions Limit (FEL) of 120 g/kW-hr or less. Air emission figures for carbon monoxide and hydrocarbons presented are either the Official Test Results (OTR) or the certified FEL. The Official Test Results are actual measured emissions. FEL's are not-to-exceed levels as certified by EPA.

4 Society of Automotive Engineers testing procedures allow for a 2 dB tolerance over the sound level limit to provide for variations in test site, temperature gradients, wind velocity gradients, test equipment, and inherent differences in nominally identical vehicles. (It has been observed that under some test site conditions, variability in test results greater than 2 dB can be experienced.) Sound emission figures represent an average of Official Test Results.

5 Yellowstone BAT certification for all 2008 year model snowmobiles will expire at the end of the 2012-2013 winter. Once approved, a snowmobile would generally be certified in Yellowstone as BAT for a period of six years.

**2003-2006 Model Year BAT Snowmobiles Authorized to be used on Jackson Lake in Grand Teton National Park**

In Grand Teton National Park, BAT snowmobiles are allowed to be used on Jackson Lake for the purpose of ice fishing. The certification period is for six years, except that for individual machines, the period may be

extended up to a total of 10 years provided that the mileage does not exceed 6,000 miles. Following are model year 2003-2007 snowmobiles authorized for use on Jackson Lake.

Snowmobile	Air Emissions (g/kW-hr)		Sound Emissions (dBA)
	Hydrocarbons	Carbon Monoxide	
2003 Arctic Cat 4-Stroke Touring and Trail models	7.55	95.40	70.1-72.2
2003 Bombardier Ski-Doo Legend Sport GT V1000, equipped with BAT upgrade <sup>6</sup>	6.12	92.93	72.3
2003 Polaris Frontier Classic and Touring models	5.4	111.6	74.3
2004 Arctic Cat T660 Touring	5.62 FEL: 10	92.30 FEL: 115	71.75
2004 Bombardier Ski-Doo Elite SE, equipped with the Elite BAT upgrade <sup>6</sup>	4.65	103.16	74.8
2004 Bombardier Ski-Doo Legend Sport GT V1000, equipped with BAT upgrade <sup>6</sup>	6.12	92.93	72.3
2004 Polaris Frontier Classic and Touring models	5.4 FEL: 10	111.6 FEL: 140	73.2-73.7
2005 Arctic Cat Bearcat W/T5	5.62 FEL: 8	92.30 FEL: 105	73.7
2005 Arctic Cat T660 Touring <sup>5</sup>	5.62 FEL: 8	92.30 FEL: 105	72.2
2005 Bombardier Ski-Doo Legend Sport GT V1000, equipped with BAT upgrade kit <sup>5,6</sup>	4.65 FEL: 6.5	92.93 FEL: 120	71.8
2005 Polaris Frontier Touring <sup>5</sup>	5.4 FEL: 10	111.6 FEL: 120	73.7
2006 Arctic Cat Bearcat 660 W/T	FEL: 8	FEL: 105	74.5
2006 Arctic Cat Panther 660 Touring and Trail models	FEL: 8	FEL: 105	73.9
2006 Arctic Cat 660 Touring	FEL: 8	FEL: 105	72.2
2006 Polaris FS Classic and FS IQ Touring	9.8 FEL: 15	98.4 FEL: 120	75
2006 Yamaha RS Venture Touring with Yellowstone BAT kit	FEL: 10	FEL: 120	71.9
2007 Arctic Cat Bearcat 660 W/T, Panther 660 Touring, Panther 660 Trail, 660 Touring	FEL: 8	FEL: 105	Same as 2006 models
2007 Bombardier Ski-Doo Legend V800 Trail, Legend V800 Touring, Expedition V800 Sport, Skandic V800 Tundra	FEL: 8	FEL: 120	72-73.9
2007 Polaris FS IQ Touring	FEL: 15	FEL: 120	75
2007 Yamaha RS Venture and RS Vector, equipped with Yellowstone BAT kit	FEL: 10	FEL: 120	71.9

Notes: The 2004 model year snowmobiles would be authorized through March 31, 2014  
The 2005 model year snowmobiles would be authorized through March 31, 2015  
The 2006 model year snowmobiles would be authorized through March 31, 2016  
The 2007 model year snowmobiles would be authorized through March 31, 2017

#### Did You Know?





*At peak summer levels, 3,500 employees work for Yellowstone National Park concessioners and about 800 work for the National Park Service.*

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