Kettering University

2007 Clean Snowmobile Competition


Kettering
University
Motorsports
POLARIS

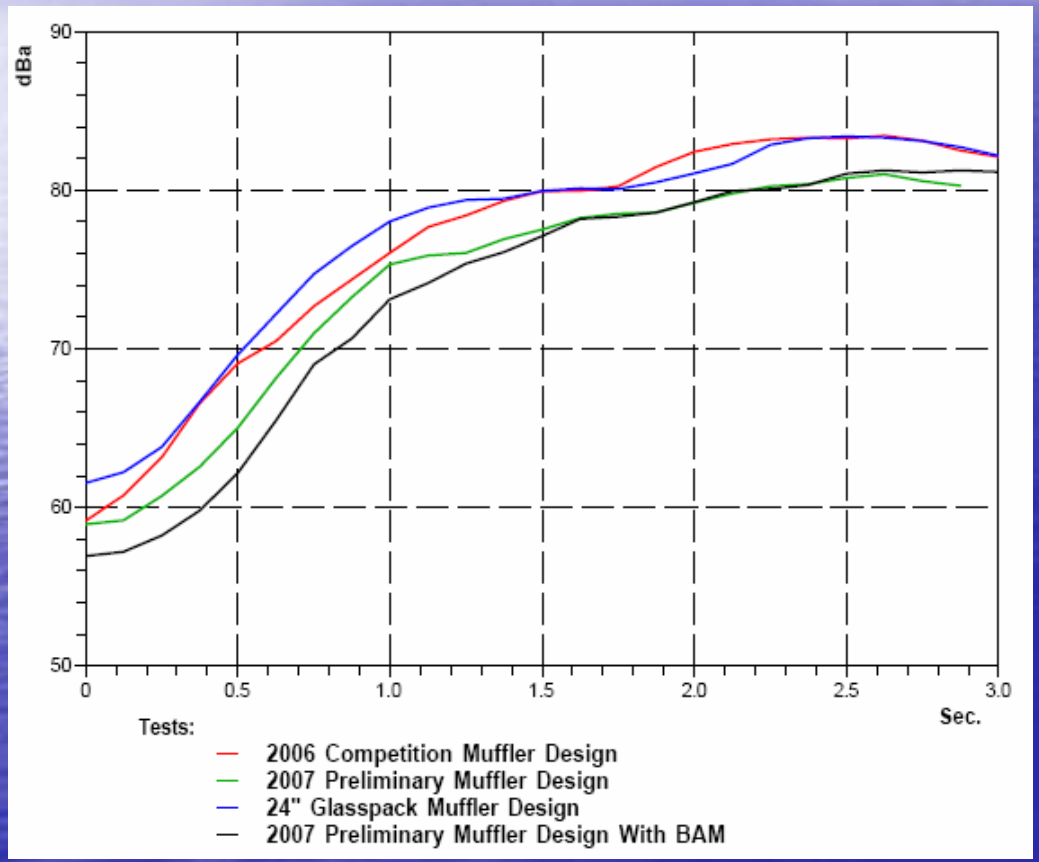
Design Methodology

1. Practicality – track kilt
2. Reliability - thermal management
3. Cleanliness
4. Noise
5. Cost - increase in MSRP of $1,300

Engine Compartment

- 750-cc
- 4-Stroke
- 2-Cylinder
- Turbocharged and Intercooled
- 9:1 Compression Ratio
- Powered with Ethanol

Noise Reduction

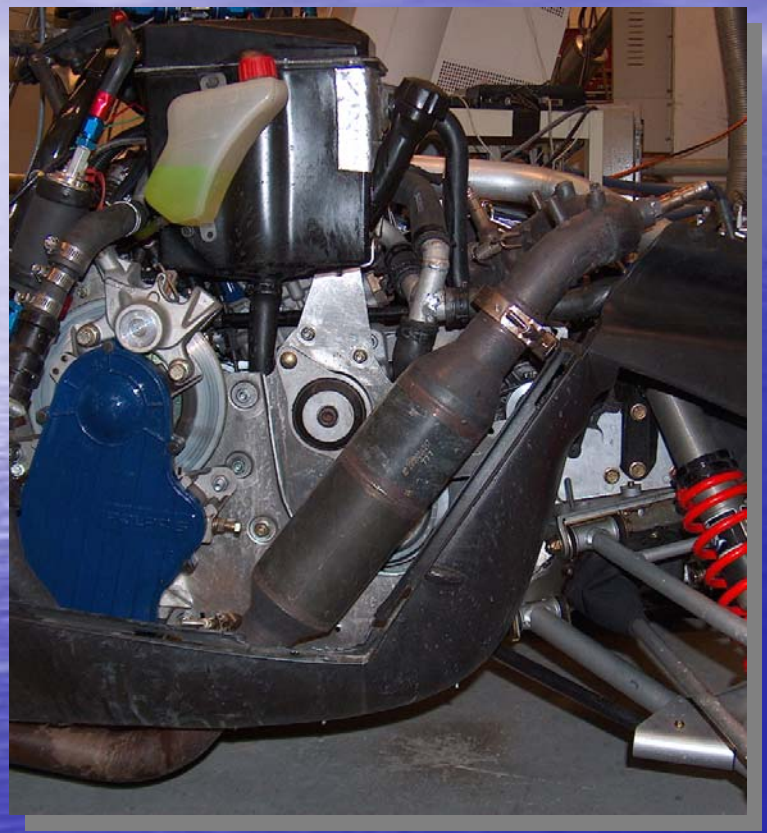


- Preliminary Level of 77.8 dB(A) rms
- Noise Reduction Measures
  - Top Cover for Engine
  - Track Kilt

Ethanol Conversion

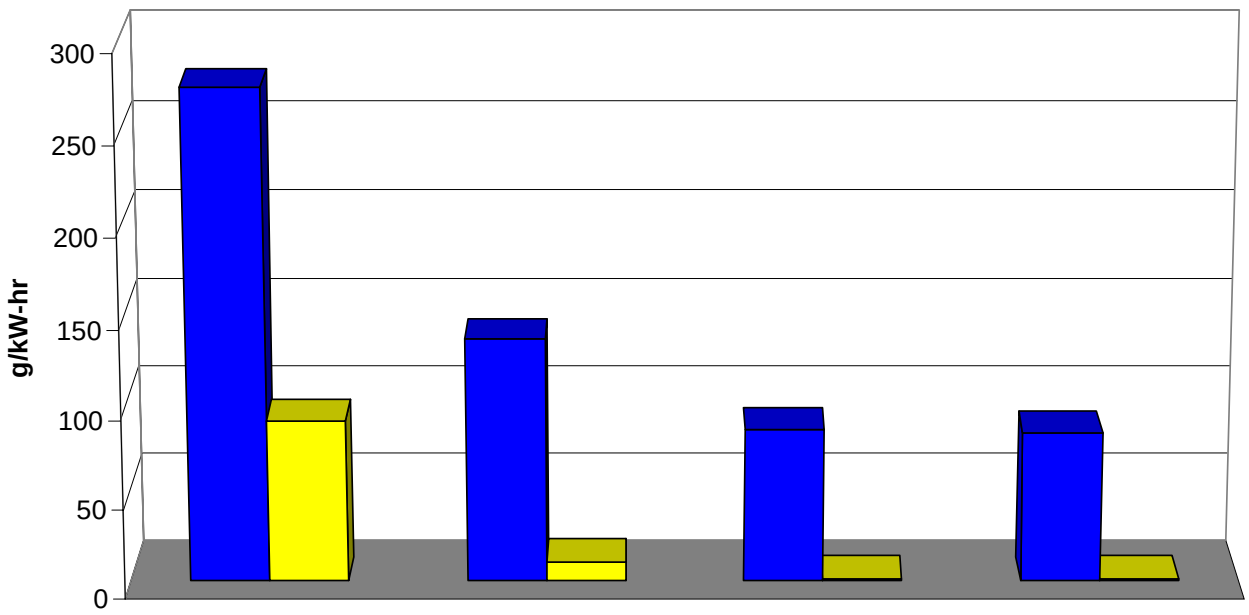
- Cleaner Emissions
- Improved Power Capability
- Reduced Environmental Impact
- Renewable Fuel

Emissions



- Two 3-Way Catalytic Converters
- Wide Band Oxygen Sensor for Precise Air/Fuel Mixture Control

Emissions Data



	2012 Emission Standard	W/O Catalyst	2007 Preliminary w/Catalyst	2 deg. Timing Advance
CO	275	136.2	85.1	83.38
HC + NOx	90	10.6	0.92	0.97

- Preliminary Test Data vs. 2012 Emissions Standards

Series Mufflers

Muffler Testing

Suspension

Fuel Economy

- Mass Reduction of 15kg
- Shorter track
- Unstudded track
- Clutch modification

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Questions?