

We have one goal — improving the noise and vibration quality of our customers' products. Roush delivers innovative, effective noise and vibration control solutions. By combining advanced analysis capabilities, comprehensive engineering services, and state-of-the-art facilities, Roush has become a proven partner in identifying and resolving challenging noise and vibration issues. Backed by the diverse capabilities of the Roush family of companies, we are uniquely equipped to provide turnkey noise and vibration solutions.

Roush... your silent partner in developing smoother, quieter products.

Vehicle NVH Engineering

Roush is well-equipped to provide complete vehicle NVH engineering and testing. A combination of extensive noise and vibration measurement and management expertise, vehicle experience, and facilities capabilities creates a unique environment for addressing customer vehicle concerns.

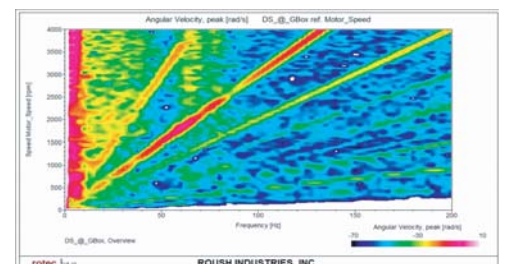
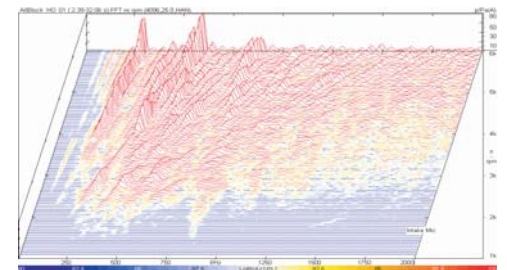
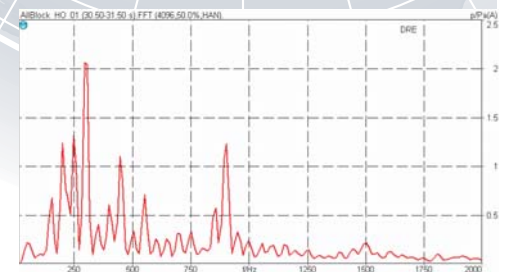
Our vehicle engineering staff has worked with customer concerns on a variety of vehicles including snowmobiles, motorcycles, passenger cars, light, medium, and heavy trucks, motor homes, passenger trains, and even a submarine. These studies were done at our facility or off-site as desired by our customers.

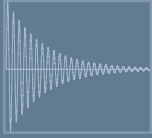
Our On-Road Support Capabilities Include:

- Driveline — balance, angles, couples and torsional issues
- Powertrain — bending and isolation
- Root cause analysis and powertrain transient analysis
- Many unique methodologies developed to facilitate root cause analysis
- Brakes — noise, judder and performance
- Suspension — modes and isolation
- Interior and exterior sound analysis
- Pass-by noise
- System and component response
- Operating deflection shape analysis

Other Laboratory Support Capabilities Include:

- Tuned vibration damper design, development and prototyping
- Sound quality
- Modal analysis
- Radiated sound
- Air induction tuning
- Sound package development





NOISE AND VIBRATION ENGINEERING

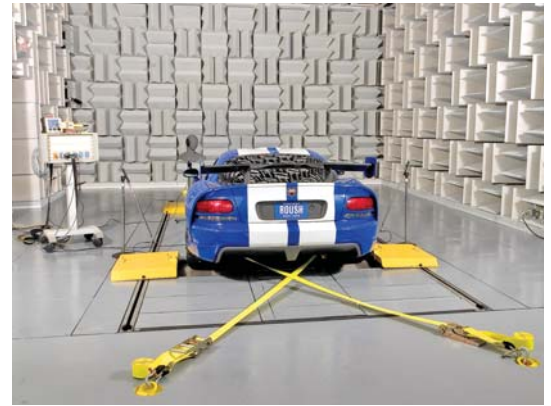
Our Livonia test labs support vehicle NVH testing in many ways.

4WD NVH Chassis Rolls:

- 12,000 lb GVW capability, 6' Diameter Rolls
- 300 HP per axle capability, 120 MPH
- 5255 ft-lb shaft torque, 150% transient capability
- 93" to 175" wheelbase
- 80 Hz cutoff frequency

Roush also offers:

- West Coast brake and vehicle test operation.
- CAE capabilities.
- Vehicle and component design services.
- Component fabrication capabilities.



Vehicle Dynamometer Testing



Second Muffler to Reduce Exhaust Noise for Intake Testing



Hemi-Anechoic Test Chamber



Propshaft Acoustic Mode Measurement

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