GS ENGINEERING OFFERS EXTENSIVE VEHICLE TESTING AND VALIDATION SERVICES.

We support development and performance testing of vehicles and vehicle sub-systems at a variety of facilities including private and on-site government test facilities. Our test support can include turnkey tests from the initial planning stage, through logistical planning to full vehicle instrumentation, test execution and reporting.

VEHICLE TYPES TESTED
• Military Wheeled Vehicles
• Military Tracked Vehicles
• Light, Medium, & Heavy Duty Trucks
• All-terrain Vehicles
• Trailers
• Multi-purpose Vehicles
• Off-Highway Equipment
• Specialty Vehicles

TEST TYPES OFFERED
• Development Testing
• Performance Testing
• Endurance/Durability Testing
• Suspension Testing & Tuning
• Noise, Vibration, & Ride Quality
• Vehicle Stability
• Tire & Runflat Evaluation
• Powertrain Development
• Brake System Testing
• Strain & Torque Measurement
• Thermal Signature & Imaging

TEST SERVICES
• Test Planning
• Test Execution per ISO, SAE, NATO or TOPs
• Real-time Data Acquisition & Analysis
• Test Correlation to FEA & Dynamic Simulation
• Mobile Test Trailer with Wireless Vehicle Connectivity
• Vehicle Ballasting & Weight Distribution
• Vehicle Maintenance & Repair
• Full Test Reporting
• Test Incident Reports (TIRs)
• Test Facility Rental Options
• Course Terrain Profiling
DATA ACQUISITION & ANALYSIS SERVICES

DATA ACQUISITION SYSTEMS
8, 16, 32, 48 and 64 channel systems and ruggedized laptops configured for real-time wireless data acquisition and analysis are available.

TECHNOLOGY
- Accelerometers
- Strain Gages
- Attitude Heading Reference System
- Speed & Distance
- Environmental
- Load Cells
- Lasers
- Displacement Sensors
- Pressure Transducers
- Voltage
- Thermocouples & RTDs
- Differential GPS
- CAN Bus

GS ENGINEERING TEST FACILITIES

OFF-ROAD COURSE & OBSTACLES
Private off-road vehicle test course features a low visibility location, ideal for private vehicle development and performance testing.
- Paved 1" & 2" RMS Courses: 500' length
- Paved Half Rounds: 4", 6", 8", 10", & 12"
- Paved Side Slopes: 20%, 30%, & 40%
- Gravel & Paved Slopes: 15% - 40%, 60%
- Vertical Steps: 18", 24", & 36"
- Stability Tilt Table: 45,000 lbs & 50% slope
- Multiple Secondary Road Endurance Areas
- Multiple Off-Road Endurance Areas
- Gravel Frame Twist & Urban Rubble Course
- Many Other Customizable Terrain Options

PAVED VEHICLE DYNAMICS AREA
GS Engineering provides paved vehicle dynamics testing. We have expertise with the following vehicle dynamics tests:
- NATO Lane Change
- Sinusoidal Steer
- Constant Radius Circular Steer
- Ramp Steer & J-Turn
- Braking
- Maximum Speed
- Acceleration & Dash Speed
- Vibration Testing
- Fuel Economy
- Turning Diameter
- Suspension Tuning
- Correlation to Dynamic Simulation

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