



TESTING CAPABILITIES

Durability Stands:

- Carbon Canisters
- Contamination
- CNG / LP
- Direct Injection
- Fuel Injectors
- Fuel Pumps
- Fuel Regulators
- Fuel Senders
- Impulse
- Liquid Pulsation
- Missile (under-wing armament)
- Recirculation (hoses)
- Throttle Bodies

Performance Stands:

- Carbon Canisters
- Fuel Pumps
- Fuel Regulators
- Fuel senders
- Injectors (post and direct)
- Leak (helium, pneumatic, hydraulic)
- Throttle Bodies

Chambers:

- 3-Zone Thermal Shock (air)
- High Rate of Change
- Humidity
- Liquid to Liquid Thermal Shock
- Ozone
- Static Soak
- Sun Load
- Thermal Cycle

Vibration:

- Electrodynamic
- 5-5000Hz to 6000 force pounds
- Servo-Hydraulic
- 0-1000Hz to 30,000 force pounds up to 150in/sec 0-12 inch stroke
- Shock - up to 100g's, 100ms
- Sine, Random, Sine on Random
- Import Actual Vehicle Road Data
- Resonance (up to 6-channels)
- Windmilling and More.....

Permeation:

- 3-(0.36256cuM) 96gallon MicroSHED's
- 1-(6.7cuM) MiniSHED
- 1-(9.4cuM) MiniSHED
- PZEV and ZERO Emissions Capable
- Capable of fuel / vapor flow during testing
- Multi-point FID Measurements
- Conditioning (soak)

Fuel Handling:

- Certification
- Development / Problem Solving
- Fill Capacity
- Fill Quality
- Flame Arrestor
- Height vs. Resistance
- Plant Fills
- Pressure Fatigue / Burst and more.....


Miscellaneous:

- Applied Pressure
- Applied Vacuum
- Automation
- Burst (0-10,000psi)
- Compressed CNG
- Compressed LP
- Data Acquisition (to 50kHz)
- Fixture Design
- Flow (Liquid or Air)
- Helium Leak Check
- Hydraulic Leak Check
- Impulse
- Instron (0-5000lbs)
- Machine Shop
- Pneumatic Leak Check
- Test Stand Build
- Welding
- Vehicle Hoist
- and more.....



Independent Engineering Laboratories, Inc.
Innovation Beyond Limitation

ROUTINELY TESTING COMPONENTS



A/C Lines	Fuel Hoses	Intake Manifolds
Battery Packs	Fuel Injectors (port)	Level Senders
Carbon Canisters	Fuel Injectors (direct)	Low Pressure Lines
Connectors	Fuel Lines	MRA
Dampers	Fuel Pumps	Plastic Materials
Direct Injection Systems	Fuel Rail Assemblies	Rollover Valves
FDM	Fuel Rails	Sensors
Filler Caps	Fuel Regulators	Tensile Bars
Filler Pipes	Fuel Tanks	Throttle Bodies
Filters	Grade Vent Valves	Transmission Modules
Flame Arrestors	High Pressure Hoses	Tubing
Fittings	Hydraulic Lines	Valves

SPECIFICATIONS

ASTM	GM	Nissan
CEPT	Honda	SAE
Chrysler	Mazda	Toyota
Delphi	MIL-STD	Volvo
Ford	And many more.....	

CLIENTS

ACH-LLC	Eaton Corporation	Senior Automotive
Airbus	Eaton Aeroquip	Solvay Advanced Polymers
AMI-Lewiston	Ford Motor Company	Spectra Premium Industries
Buckley Manufacturing	Freudenberg	Strategic Alliance for Steel Fuel Tanks
Chrysler LLC	General Motors Corporation	SRS Inc.
Continental Corporation	Hitachi Automotive Products	Swoboda Inc.
Continental Corporation Italy	Martinrea Industries	Teleflex Fluid Systems
Cooper-Standard Automotive	Millineum	Titeflex
Cooper-Standard Mexico	NTS-Corporation	Terumo Heart Inc.
Delphi Corporation US	Parker Hannifin Corporation	TG Fluids Systems
Delphi Corporation Mexico	RayConnect Inc.	TI Automotive
Denso International America	Roush Industries	Usui International Corporation
Detroit Flexible Metal	Robert Bosch LLC	Visteon US, Italy, Hungary, Phillipenes
Diversified Machine Inc.	Siemens	Yazaki North America