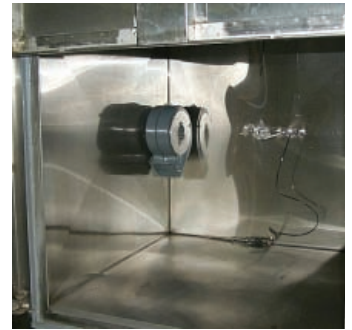


Intertek Automotive Research is one of the largest independent automotive testing companies in the world and is considered a leader in fuel system testing. Since 1978, Intertek Automotive Research has worked extensively with the industry in developing fuel system testing protocols. Our laboratory was a pioneer in the Evaporative Emissions (Mini-SHED & Micro-SHED) Testing Field. Today, the testing protocols are used to evaluate a wide variety of fuel components including valves, hoses, tubing, connectors, fittings, sending units, caps, plugs, tanks, and filler necks.

Intertek Automotive Research has an extensive array of fuel system capabilities. They are as follows:

- Evaporative Emissions Testing (Permeation Testing by Mini-SHED and Micro-SHED)
- OEM Fuel Tank & Fill Pipe DVP&R Program Testing
- Extreme Temperature Environmental Chambers
- Pressure and Vacuum (P/V) Testing
- Fuel Recirculation Conditioning
- Fuel Fill Testing
- SAE J1737 Permeation Testing
- Various Permeation Weight Loss Procedures for Small Tank & Fuel Containers
- Salt Spray Testing
- Fuel Compatibility Studies for Fuel System Materials
- Mechanical Property Testing (Tensile Properties, Impact Strength, Flexural Properties, Dimensional Change)
- Helium Tracer Gas Leak Detection Testing
- On-Board Refueling Vapor Recovery (ORVR) Testing
- Over-the-Road Fuel System Durability
- Fuel Tank Deflection Testing
- Extensive Elevated Temperature Soak Room Facilities
- Hydrocarbon Speciation Including Gas and Liquid Chromatography Testing
- European Witness Tests



15 ft³ (0.4m³) VV/VT S.H.E.D.



*Vapor Recovery (ORVR) SHED
Capable of Ambient Temperatures
+55°F to 140°F (13°C to 60°C)*

Facilities

The Fuel Systems Laboratory consists of over 20,000 sq. ft. of laboratory space which house all of the equipment used for testing.

Technical Expertise

Intertek Automotive Research's Fuel Systems Department has a service oriented staff of senior engineers, mechanics, and technicians that have extensive testing experience. The staff can offer the benefit of years of experience in identifying potential problem areas, developing and evaluating alternatives, and verifying functional reliability. We have the experience, knowledge, and capability to design and fabricate test specific systems to meet your needs. Our staff performs quality testing services for the automotive industry and brings added value to all testing projects.

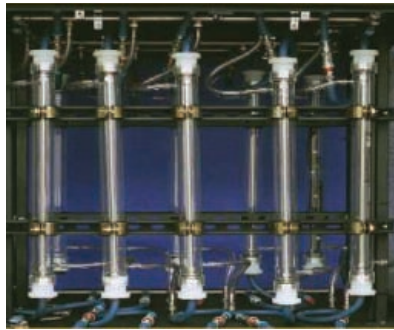


*Fuel Tank Durability Events
Lateral, Longitudinal, Rotational
Tilt/Slosh and Fuel Carryover*

Quality system

An extensive quality system is in place to ensure high reliability of test data that is in strict compliance with test methods. Intertek Automotive Research is ISO 9001-2000 certified, ISO Guide 17025 accredited, and has received Ford Q1 status.

We are continually "raising the bar" regarding quality to exceed the quality needs of our customers.



*Fuel Hose Permeation by Recirculation
(SAE J1737)*

Test Reporting

Intertek Automotive Research has standardized reporting formats that can be utilized, or specific reporting formats can be developed to fit the needs of the customer.

Advantages

There are several advantages in performing testing at Automotive Research, which include:

- Proven fuel system testing operations and procedures
- Recognized as a leader in fuel system testing
- Consistent and repeatable test results
- Leadership and involvement in industry testing activities
- Competitive pricing
- Individual service
- Full Test Program Management

Experience in Vehicle and Vehicle Fuel System Testing

Intertek-AR laboratories in San Antonio, Texas have been performing vehicle based testing since the 1950's. It has been among the pioneers in vehicle fuel and emission testing research since the inception of the Clean Air Act of 1963. Over the years, Intertek-AR has built a wide and satisfied customer base including the EPA, Honda, Nissan, GM, Ford, Visteon, Chrysler and Isuzu.

Vehicle testing activities include:

- Powertrain and Component Development & Durability
- Competitive Benchmarking Evaluations
- Fuel and Lubricant Evaluations
- Fleet Management Services

Intertek-AR is recognized by the EPA and CARB as a qualified testing facility. Personnel are familiar with EPA and CARB test protocols from running current test programs and from managing past surveillance programs performed for the EPA and OEM customers.



*10-BAY & 5-BAY
Fuel Recirculation Stands
Multi-Temperature / Multi-Fuel
Capability Temperature Range
50°F to 180°F (10°C to 82°C)*

Other Testing Services

- Diesel & gasoline engine dyno
- Automatic transmission
- Vehicle
- Evaporative emissions
- Fleet management
- Materials
- Fuel and lubricant qualifications
- Analytical (chemistry lab)
- Vehicle Fuel Deposit Control Additive Testing (IVD, CCD, ORI, etc.)

Testing is performed in San Antonio, TX.

For more information, please feel free to visit our website at www.ar.intertek-cb.com, contact us via email at testingervices@intertek.com.