



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

INDEPENDENT ENGINEERING LABORATORIES, INC
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Jackson, MI 49202
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MECHANICAL

Valid To: June 30, 2012

Certificate Number: 1492.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests (using technologies such as Durability/Performance of Fuel Delivery Modules, Pumps, Regulators, Filters, Rails, Tanks, Injectors, Senders, PPRV Valves, Check Valves, Carbon Canisters, Hoses, "O" Rings, Pressure Transducers, Solenoids, Dampers, Throttle Bodies, and Intake Manifolds) on automotive fuel systems:

Tests:

Vibration:

(5 to 5000) Hz,
Combined Temperature: (-40 to 350) °F,
(5 to 95) % RH

Random: 30,000 Force lbs

Sine: 30,000 Force lbs

Shock: up to 100 Gs, 100 msec

Sine on Random

Permeation:

LEV Capable /ULEV Capable /
Capable to 0 Emissions

Tensile Testing:

(0 to 5000) lbs

Test Methods:

SAE J2044;
ES-4L8E-9F792-AB;
MIL-STD-810 Method 514 (RH)

PF 9699

RTCA/DO-160E

MIL-STD-810 Method 516

RTCA/DO-160E

GMN-10029SOP;
Ford CETP 0.00-E-400, 10.00-E-401;
GM CG1752

SAE J2044

Tests:

Environmental Simulation:

High / Low Temperature: (-65 to 450) °F

Relative Humidity: (5 to 95) %

Thermal Shock: (-40 to 350) °F, air-to-air / liquid-to-liquid

Burst High Pressure: (0 to 25,000) psi,
Combined Temperature: (-40 to 350) °F,
Relative Humidity: 5% to 95%

Leak Testing: Pressure Decay (40 to 350) °F

Helium Leak: 6×10^{10} ATM cc/sec

High Pressure Testing: Nitrogen or Natural Gas up to 10,000 psi

Fuel Tank Capacity: Filling Performance
(Pressure, Temperature, Flow Rate, Weight)

Test Methods:

PF 9699;
ES-F8DE-9C968-AA

ES-4L8E-9F792-AB

PF 9699

SAE J2044

SAE J2044;
ES-4L8E-9F792-AB

CETP 10.00-E-400

EEP 46699-1

CETP 10.01-R-600, CETP 10.01-L-600;
GM 14508

Using the following types of specifications and standards: ASTM, Ford, Mazda, Chrysler, Honda, Delphi, GM, SAE, Toyota, and directly related to the above tests furnished by the customer on the test methods for the parameters listed above and the equipment capabilities.





The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

INDEPENDENT ENGINEERING LABORATORIES, INC.

Jackson, MI

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 1st day of October 2010.



A handwritten signature in black ink, reading "Peter M. Boyer".

President & CEO
For the Accreditation Council
Certificate Number 1492.01
Valid to June 30, 2012

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.