

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

NOVARES GROUP 837 Walworth St. Walworth, WI 53184 Dennis Yakes Phone: 262 275 5791

MECHANICAL

Valid To: April 30, 2021

Certificate Number: 0821.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on <u>automotive components</u>:

Test Type/Technology:

Axial Force Testing Insertion / Removal Force (0 to 2000) lb force

Electrical Testing Electrical Characteristics

> (0 to 100) VDC; 1 20 VAC, 100Ω to 10MΩ

Environmental Simulation

Thermal (-55 to 315) °C

Humidity (5 to 95) % R.H.

Vibration (5 to 2000) Hz (-55 to 160) °C

Gas Leak Testing – Air Pressure Decay (0.01 to 10) cc/m

Gas Flow Testing

Mass Flow Measurement 0.5 SCCM to 1000 SLPM .001 to 1000 LPM

Gravitational Effect Testing Mass Measurement (0 to 2) kg

Test Method¹:

F000907 Rubber Connector Pull Off Method

F040913 Pull Testing using the Voltage Recorder

F970521 Chrysler Oil Fill Cap Validation Method

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F980112 Air Leakage Measurement

F970106 Generic Flow Rate Measurement

F160707 Carbon Canister Butane Working Capacity

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(A2LA Cert. No. 0821.01) Revised 02/26/2020

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Test Type/Technology:

Hardness Testing Durometer Shore A

Pressure Testing Air Pressure Measurement

(0 to 250) psi

Liquid Pressure Measurement (0 to 10000) psi

Torsional Testing Torque (0.10 to 135) Nm

Dimensional Testing²:

Test Method¹:

F030416 Rubber Durometer Hardness Testing

F970107 Generic Pressure Measurement Method

F970107 Generic Pressure Measurement Method

F970521 Chrysler Oil Fill Cap Validation Method

Parameter	Range	$CMC^{3}(\pm)$	Technique / Method
Length ⁴ - 1D - 2D	Up to 6 in Up to 1 in	0.001 in 0.001 in	Direct comparison / Caliper Optical measurement / Nikon microscope
Angle ⁴	0° to 360°	1.0°	Direct comparison / Goniometer

¹ Using customer supplied test methods approved by the client directly related to the design and manufacture of molded thermoplastic components and assemblies within the parameters listed below.

² This laboratory does not offer commercial dimensional testing services.

³ Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine measurements of nearly ideal measurement standards or nearly ideal measuring equipment. CMC's represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k = 2. The actual measurement uncertainty of a specific measurement performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific measurement.

⁴ This test is not equivalent to that of a calibration.

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Accredited Laboratory

A2LA has accredited

NOVARES GROUP Walworth, WI

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 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 April 2017).



Presented this 5th day of July 2019.

Vice President, Accreditation Services For the Accreditation Council Certificate Number 0821.01 Valid to April 30, 2021 Revised 02/26/2020

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