



Accredited Laboratory

A2LA has accredited

ALPHAUSA

Livonia, MI

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 20th day of August 2021.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1215.01
Valid to July 31, 2023

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



SCOPE OF ACCREDITATION TO ISO 17025:2017

ALPHAUSA
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Livonia, MI 48150
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MECHANICAL

Valid To: July 31, 2023

certificate Number: 1215.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following fastener tests:

<u>Test</u>	<u>Test Methods</u>
Mechanical Testing	
Hardness	
Rockwell, Rockwell Superficial – A, B, C, 15N, 30N, 15T, 30T	ASTM E18
Tensile / Yield / %E	ASTM E8/E8M, F606/F606M; ISO 898-1
DTI Compression Testing	ASTM F959, F959M, F606/F606M
Torque Twist-off Testing	SOP 1212, 4070, 4070-01; Ford WE963, ESBM5A-1N265-AA; FCA PF-90346, PS50004
Push Out/Pull Out	SOP 1027, 4070, 4070-01; Ford WE963, ESBM5A-1N265-AA; FCA PF-90346, PS50004
Prevailing Torque	Ford WE955; FCA PF.90284; IFI 545
Chemical Testing	
LECO GDS900A Spectrometer (Al, C, Cr, Cu, Mn, Mo, Ni, P, S, Si)	ASTM E415

I. Dimensional Testing¹:

Parameter	Range	CMC ² (±)	Comments / Method
Angle	Up to 360° Up to 360°	0.1° 0.01°	Optical comparator / MIL-STD-120 (Canceled 1996) ³ CMM machine / MIL-STD-120 (Canceled 1996) ³
Linear			
1D	(0.028 to 1.00) in Up to 1.0000 in Up to 3.0000 in Up to 1.000 in Up to 6.000 in Up to 1.000 in	0.0016 in 0.0003 in 0.0003 in 0.0008 in 0.0007 in 0.0004 in	Pin gages / MIL-STD-120 (Canceled 1996) ³ Ball micrometer / MIL-STD-120 (Canceled 1996) ³ Flat micrometer / MIL-STD-120 (Canceled 1996) ³ Point micrometer / MIL-STD-120 (Canceled 1996) ³ Caliper / MIL-STD-120 (Canceled 1996) ³ Dial indicator / MIL-STD-120 (Canceled 1996) ³
2D	Up to 7.5000 in	0.0005 in	Optical comparator / MIL-STD-120 (Canceled 1996) ³
3D	Up to 16.000 in	0.000 14 in	CMM machine / MIL-STD-120 (Canceled 1996) ³
Radii	(0.02 to 0.7600) in (0.02 to 0.7600) in	0.001 in 0.000 32 in	Optical comparator / MIL-STD-120 (Canceled 1996) ³ CMM machine / MIL-STD-120 (Canceled 1996) ³

¹ This laboratory does not offer commercial dimensional testing/calibration services. These tests are not equivalent to that of a calibration.

² Calibration and Measurement Capability (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. Calibration and Measurement Capabilities 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.

³ This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.