



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1-1994

NATIONAL INSTITUTE FOR AVIATION RESEARCH (NIAR) at WICHITA STATE UNIVERSITY
National Institute for Aviation Research Building
1845 Fairmount Street
Wichita, KS 67260-0093
Keith Fitzgeralds Phone: 316 978 7272

CALIBRATION

Valid to: November 30, 2019

Certificate Number: 3210.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Mechanical

Parameter/Equipment	Range	CMC ^{2,3} (±)	Comments
Force	(1 to 220 000) lbf	0.19 %	ASTM E4, Class A standards

¹ This laboratory does not offer commercial calibration service. Calibration only services the NIAR group.

² 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 calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs 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 calibration 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 calibration.

³ In the statement of CMC, the value is defined as the percentage of reading.



Accredited Laboratory

A2LA has accredited

NATIONAL INSTITUTE FOR AVIATION RESEARCH (NIAR) AT WICHITA STATE UNIVERSITY

Wichita, KS

for technical competence in the field of

Calibration

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 laboratory also meets ANSI/NCSL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. 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 7th day of November 2017.

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 3210.01
Valid to November 30, 2019

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



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

NATIONAL INSTITUTE FOR AVIATION RESEARCH (NIAR) at
WICHITA STATE UNIVERSITY¹
National Institute for Aviation Research Building
1845 Fairmount Street
Wichita, KS 67260-0093
Keith Fitzgeralds Phone: 316 978 7272

MECHANICAL

Valid To: November 30, 2019

Certificate Number: 3210.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location listed above as well as the satellite laboratory location listed below to perform the following tests on composite materials and plastics:

<u>Test Method</u>	<u>Test Description</u>
ASTM D695	Compressive Properties of Rigid Plastics
ASTM D2344/D2344M	Standard Test Method for Short-Beam Strength of Polymer Matrix Composite Materials and Their Laminates
ASTMD3039/D3039M	Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials
ASTM D3518/D3518M	Standard Test Method for In-Plane Shear Response of Polymer Matrix Composite Materials by Tensile Test of a $\pm 45^\circ$ Laminate
ASTM D3846	Test Method for In-Plane Shear Strength of Reinforced Plastics
ASTM D5379/D5379M	Shear Properties of Composite Materials by the V-Notch Beam Method
ASTM D5766/D5766M	Standard Test Method for Open-Hole Tensile Strength of Polymer Matrix Composite Laminates
ASTM D5961/D5961M	Standard Test Method for Bearing Response of Polymer Matrix Composite Laminates
ASTM D6415/D6415M	Standard Test Method for Measuring the Curved Beam Strength of a Fiber-Reinforced Polymer-Matrix Composite

(A2LA Cert. No. 3210.02) 11/7/2017

Page 1 of 3

<u>Test Method</u>	<u>Test Description</u>
ASTM D6484/D6484M	Standard Test Method for Open-Hole Compressive Strength of Polymer Matrix Composite Laminates
ASTM D6641/D6641M	Standard Test Method for Compressive Properties of Polymer Matrix Composite Materials Using a Combined Loading Compression (CLC) Test Fixture
ASTM D6742/D6742M	Standard Practice for Filled-Hole Tension and Compression Testing of Polymer Matrix Composite Laminates
ASTM D7137/D7137M	Standard Test Method for Compressive Residual Strength Properties of Damaged Polymer Matrix Composite Plates
SRM 1R-94	Test Method for Compressive Properties of Oriented Fiber-Resin Composites

¹ This accreditation covers testing performed at the main laboratory listed above, and the satellite location listed below.

NIAR Coliseum
1279 E 85th St N
Park City, KS 67206
Keith Fitzgeralds Phone: 316 978 7272

MECHANICAL

<u>Test Method</u>	<u>Test Description</u>
ASTM D695	Compressive Properties of Rigid Plastics
ASTM D2344/D2344M	Standard Test Method for Short-Beam Strength of Polymer Matrix Composite Materials and Their Laminates
ASTM D3039/D3039M	Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials
ASTM D3518/3518M	Standard Test Method for In-Plane Shear Response of Polymer Matrix Composite Materials by Tensile Test of a $\pm 45^\circ$ Laminate
ASTM D3846	Test Method for In-Plane Shear Strength of Reinforced Plastics
ASTM D5379/D5379M	Shear Properties of Composite Materials by the V-Notch Beam Method



<u>Test Method</u>	<u>Test Description</u>
ASTM D5766/D5766M	Standard Test Method for Open-Hole Tensile Strength of Polymer Matrix Composite Laminates
ASTM D5961/D5961M	Standard Test Method for Bearing Response of Polymer Matrix Composite Laminates
ASTM D6415/D6415M	Standard Test Method for Measuring the Curved Beam Strength of a Fiber-Reinforced Polymer-Matrix Composite
ASTM D6484/D6484M	Standard Test Method for Open-Hole Compressive Strength of Polymer Matrix Composite Laminates
ASTM D6641/D6641M	Standard Test Method for Compressive Properties of Polymer Matrix Composite Materials Using a Combined Loading Compression (CLC) Test Fixture
ASTM D6742/D6742M	Standard Practice for Filled-Hole Tension and Compression Testing of Polymer Matrix Composite Laminates
ASTM D7137/D7137M	Standard Test Method for Compressive Residual Strength Properties of Damaged Polymer Matrix Composite Plates
SRM 1R-94	Test Method for Compressive Properties of Oriented Fiber-Resin Composites



Accredited Laboratory

A2LA has accredited

NATIONAL INSTITUTE FOR AVIATION RESEARCH (NIAR) AT WICHITA STATE UNIVERSITY

Wichita, KS

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 laboratory also meets the requirements of any additional program requirements in the Mechanical field. 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 7th day of November 2017.

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 3210.01
Valid to November 30, 2019

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