



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

LEADER CORPORATION  
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 Shelby Township, MI 48315  
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CALIBRATION

Valid To: June 30, 2017

Certificate Number: 3692.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1</sup>:

I. Dimensional

Parameter/Equipment	Range	CMC <sup>2,3</sup> (±)	Comments <sup>4</sup>
External Straight Thread – Simple Pitch Diameter	(0.05 to 2) in	$(63 + 4.2D) \mu\text{in}$	P&W Supermicrometer, gage blocks, thread wire
	(2 to 16) in	$(60 + 14D) \mu\text{in}$	Gage blocks, thread wire, Mikrokat
Major	Up to 2 in	$(28 + 4D) \mu\text{in}$	P&W Supermicrometer, gage blocks, thread wire
	(2 to 16) in	$(48 + 7.8D) \mu\text{in}$	Gage blocks, thread wire, Mikrokat
Flank Angle	(0 to 90)°	2.7°	Optical comparator
Thread Lead	Up to 1 in	$(140 + 1.7L) \mu\text{in}$	Optical comparator, gage blocks
External Taper Thread – Simple Pitch Diameter	(0.062 to 8) in	$(77 + 17D) \mu\text{in}$	Mikrokat, gage blocks, thread wire, sine block
	Major Diameter	Up to 6 in	$(67 + 8.2D) \mu\text{in}$

*Peter Rhyne*

Parameter/Equipment	Range	CMC <sup>2,3</sup> (±)	Comments
Internal Straight Thread – Pitch Diameter (0.5 to 80 TPI) Minor Diameter	Up to 8 in  (0.1 to 1) in (1 to 8) in	(130 + 47D) μin  (160 + 15D) μin (85 + 15D) μin	Master plug  Gage pins, gage blocks
Internal Taper Thread – Pitch Diameter Minor Diameter	Up to 8 in  (0.05 to 8) in	(120 + 18D) μin  (190 + 8.2D) μin	Taper master plug set
Cylindrical External	(0.01 to 8) in	(18 + 8.8D) μin	Mikrokator, gage blocks
Cylindrical Ring Gages	(0.1 to 8) in	(27 + 2.4D) μin	Master rings, comparison equipment, UMM
Spline Gage Plug – MOW	(0.05 to 9) in	(78 + 13D) μin	Mikrokator, gage blocks, gear measuring wires
Spline Gage Ring – MBW	(0.2 to 9) in	(160 + 8.2D) μin	Gage blocks, gage measuring wires
Dimension Over Roll	Up to 8 in	(92 + 0.8L) μin	Roll gage, gage blocks, pins

## II. Dimensional Testing/Calibration<sup>5</sup>

Parameter/Equipment	Range	CMC <sup>2,3</sup> (±)	Comments
Length <sup>5</sup> – 1D – Measure 3D – Measure	Up to 14 in	(49 + 3.6L) μin	Micro-Hite
Linear	Up to 14 x 16 x 12 in	(280 + 29L) μin	CMM
Volumetric	Up to 14 x 16 x 12 in	450 μin	

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<sup>1</sup> This laboratory offers commercial calibration service and field calibration service.

<sup>2</sup> 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.

<sup>3</sup> In the statement of CMC,  $D$  is the diameter in inches and  $L$  is the length in inches.

<sup>4</sup> "Supermicrometer" is a registered trademark with a last listed owner of Pratt & Whitney Measurement Systems, Inc., Connecticut U.S.A.

<sup>5</sup> This laboratory meets *R205 – Specific Requirements: Calibration Laboratory Accreditation Program* for the types of dimensional tests listed above and is considered equivalent to that of a calibration.



## *Accredited Laboratory*

A2LA has accredited

### **LEADER CORPORATION**

*Shelby Township, MI*

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 the requirements of ANSI/NCSL Z540-1-1994 and any additional program requirements in the field of calibration. 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 17<sup>th</sup> day of September 2015.

A handwritten signature in black ink, reading "Peter Abney".

President & CEO  
For the Accreditation Council  
Certificate Number 3692.01  
Valid to June 30, 2017

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