SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

MACHINIST TOOL REPAIR INC.
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Valley City, OH 44280
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CALIBRATION

Valid To: December 31, 2024 Certificate Number: 3673.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1, 4]:

I. Dimensional

Parameter/Equipment	Range	CMC[2, 3] (±)	Comments
Gage Blocks	(0.05 to 4) in	(2.4 + 0.32*L*) µin	Pratt & Whitney Labmaster™, gage blocks
	(> 4 to 12) in	(4.4 + 1.2 *L*) µin	Pratt & Whitney Labmaster™ universal, gage blocks
	(12 to 20) in	(14 + 3.4*L*) µin	Pratt & Whitney standard measuring machine, gage blocks
Length Standards	Up to 60 in	(60 + 5.5*L*) µin	Pratt & Whitney measuring machine, gage blocks
Disks, Plugs, & Pins –			
XXX-XX	(0.05 to 4) in (0.4 to 6) in	(2.0 + 1.2*L*) µin (7.6 + 3.6*L*) µin	Pratt & Whitney Labmaster™ universal, gage blocks

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Parameter/Equipment	Range	CMC[2, 3] (±)	Comments
Disks, Plugs, & Pins – (cont)			
X-Y	Up to 12 in	(36 + 4.2*L*) µin	Pratt & Whitney Labmaster™ universal, gage blocks
Z-ZZ	Up to 4 in	(86 + 2.8*L*) µin	Gage blocks, Mikematic bench micrometer
Ring Gages	(0.04 to 6) in	(6.8 + 2.9*L*) µin	Pratt & Whitney Labmaster™ universal, master ring gage
Cal Master	Up to 12 in	(170 + 9.4*L*) µin	Gage blocks, micro-hite
Mic Masters –			
Survey Trees	Up to 12 in	(9.4 + 3.7*L*) µin	Gage blocks, bench micrometer
Depth	Up to 12 in	(370 + 2.4*L*) µin	Micro-hite
Bench Micrometer	Up to 10 in	(36 +4.5*L*) µin	Gage blocks
Thread Wires	Up to 0.15 in	(17 + 32*L*) µin	LaserScan, master wires
Micrometer –			
Outside Diameter	Up to 12 in (13 to 60) in	(75 + 3.5*L*) µin (75 + 5.8*L*) µin	Gage blocks
Inside Diameter	Up to 60 in	(42 + 2.7*L*) µin	Pratt & Whitney measuring machine, gage block
Depth	Up to 12 in	(360 + 2.4*L*) µin	Gage blocks, master step set

Parameter/Equipment	Range	CMC[2, 3] (±)	Comments
Indicators	(0.001 to 2) in (2 to 4) in	(20 + 5 *L*) µin (210 + 1.5 *L*) µin	Bench micrometer
Calipers OD ID Depth	 Up to 60 in Up to 1 in Up to 1 in	 (750 + 2*L*) µin 54 µin 47 µin	 Gage blocks Ring gage Gage blocks
Height Gages	Up to 48 in	(28 + 0.6*L*) µin	Gage blocks
Bore Micrometers	(0.1 to 4) in	(77 + 18*L*) µin	Ring gages
Dial Bore Gages	(0.05 to 24) in	(17 + 3.3*L*) µin	Bench micrometer
Thread Plug Gages – Major Diameter Pitch Diameter	 (0.06 to 0.5) in (0.5 to 4) in (0.05 to 4) in	 (11 + 6.7*L*) µin (14 + 0.8*L*) µin (22 + 3.4*L*) µin	 Thread wires, Pratt & Whitney standard measuring machine, gage blocks
Adjustable Thread Ring Gages – Minor Diameter	 (0.3125 to 4) in	 (33 + 1.2*L*) µin	 Thread set plugs, height gage
Surface Finish – RA	 16.1 µin 119.5 µin	 5.1 µin 5.1 µin	 Specimen and master profilometer SV-501

II. Mechanical

Parameter/Equipment	Range	CMC[2, 3] (±)	Comments
Torque Wrenches	(2 to 10) lbf·in (10 to 100) lbf·in (25 to 300) lbf·in (25 to 250) lbf·ft (100 to 1000) lbf·ft	(0.0013 + 0.0011*T*) lbf·in (0.89 + 0.006*T*) lbf·in (0.071 + 0.005*T*) lbf·in (0.4 + 0.01*T*) lbf·ft (7.2 + 0.01*T*) lbf·ft	Torque & tension tester
Durometer – (Types A & D)			
Indentor Extension & Shape –	Visual Inspection Only		
Spring Calibration – Force:			
Type A	(10 to 90) Duro Units	(0.42 + 0.005*D*) Duro Units	Shore durocalibrator
Type D	(10 to 90) Duro Units	(0.71 + 0.0003*D*) Duro Units	

[1] This laboratory offers commercial calibration service.

[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, D is the durometer unit numerical value, T is the applied torque, L is the numerical value of the nominal length of the device measured in inches.

[4] This scope meets A2LA's *P112 Flexible Scope Policy*.

Accredited Laboratory

A2LA has accredited

MACHINIST TOOL REPAIR INC.

Valley City, OH

for technical competence in the field of

Calibration

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 laboratory also meets the requirements of 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 April 2017*).

Presented this 1st day of August 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3673.01
Valid to December 31, 2024

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