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

MAXPRO CORPORATION
427 Sargon Way, Unit D
Horsham, PA 19044
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CALIBRATION

Valid To: January 31, 2018 Certificate Number: 3912.01

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

I. Mechanical

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Pressure[3] – Measuring Equipment			
Pressure Gages	(-25 to -15) psi	0.2 psi	Comparison to standard hydraulic pressure gage
	(>-15 to -5) psi	0.1 psi	
	(>-5 to 50) psi	0.5 psi	
	(>50 to 75) psi	0.5 psi	
	(>75 to 90) psi	0.2 psi	
	(>90 to 375) psi	0.6 psi	
	(>375 to 900) psi	0.3 psi + 0.6*R*	Deadweight tester
	(>900 to 9000) psi	1.5 psi + 0.6*R*	
	(>9000 to 10 000) psi	1.7 psi + 0.6*R*	
Torque[3] – Static			
Manual Torque Wrenches	(5 to 30) in·ozf	0.62 in·ozf + 0.6*R*	Torque transducers
	(>30 to 40) in·ozf	0.74 in·ozf + 0.6*R*	
	(>40 to 50) in·ozf	1.4 in·ozf + 0.6*R*	
	(>50 to 200) in·ozf	2.4 in·ozf + 0.6*R*	
	(4 to 100) in·lbf	0.33 in·lbf + 0.6*R*	
	(>100 to 240) in·lbf	0.80 in·lbf + 0.6*R*	
	(>240 to 400) in·lbf	1.4 in·lbf + 0.6*R*	
	(>400 to 1000) in·lbf	3.4 in·lbf + 0.6*R*	

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Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Torque[3] – Static (cont)			
Manual Torque Wrenches	(Up to 100) ft·lbf (>100 to 200) ft·lbf (>200 to 400) ft·lbf (>400 to 600) ft·lbf (>600 to 1000) ft·lbf	0.6 ft·lbf + 0.6*R* 1.0 ft·lbf + 0.6*R* 1.4 ft·lbf + 0.6*R* 4.7 ft·lbf + 0.6*R* 7.4 ft·lbf + 0.6*R*	Torque transducers
Torque[3] – Dynamic			
Pneumatic Torque Wrench	(Up to 100) ft·lbf (>100 to 500) ft·lbf (>500 to 1000) ft·lbf (>1000 to 2000) ft·lbf (>2000 to 3000) ft·lbf (>3000 to 4000) ft·lbf (>4000 to 6000) ft·lbf (>6000 to 7000) ft·lbf (>7000 to 8500) ft·lbf	5 ft·lbf 10 ft·lbf 12 ft·lbf 24 ft·lbf 38 ft·lbf 54 ft·lbf 61 ft·lbf 100 ft·lbf 110 ft·lbf	Torque transducers
Electronic Torque Wrench	(Up to 750) ft·lbf (>750 to 1000) ft·lbf (>1000 to 1500) ft·lbf (>1500 to 2000) ft·lbf (>2000 to 4000) ft·lbf (>4000 to 6000) ft·lbf	6.8 ft·lbf 12 ft·lbf 20 ft·lbf 40 ft·lbf 62 ft·lbf 78 ft·lbf	
Battery Torque Wrench	(Up to 500) ft·lbf (>500 to1000) ft-lbf (>1000 to 1500) ft-lbf	8 ft·lbf + 0.6*R* 12 ft·lbf + 0.6*R* 26 ft·lbf + 0.6*R*	
Electric Torque Wrench	(Up to 300) ft·lbf (>300 to 1000) ft·lbf (>1000 to 1800) ft·lbf (>1800 to 2300) ft·lbf	8 ft·lbf 16 ft·lbf 27 ft·lbf 40 ft·lbf	
Hydraulic Torque Wrench	Up to 500 ft·lbf (>500 to 1000) ft·lbf (>1000 to 2000) ft·lbf (>2000 to 2500) ft·lbf (2500 to 25 000) ft·lbf	14 ft·lbf 18 ft·lbf 21 ft·lbf 23 ft·lbf 18 + 0.009*R* ft·lbf	
Torque Transducers	(100 to 1000) ft·lbf (>1000 to 6000) ft·lbf (>6000 to 20 000) ft·lbf	0.0005*T* + 0.3 ft·lbf + 0.6*R* 0.0002*T* + 2.4 ft·lbf + 0.6*R* 0.001*T* - 2.5 ft·lbf + 0.6*R*	Moment arms and weights

Parameter/Equipment	Range	CMC[2] (±)	Comments
Torque Multipliers	(100 to 20 000) ft·lbf	3.3 % output	Torque transducer torque wrench

[1] This laboratory offers commercial and field 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] Field calibration service is available for this calibration and this laboratory meets A2LA *R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

[4] In the statement of CMC, R represents the resolution of the device. T represents the numerical value of the torque reading of the device.

Accredited Laboratory

A2LA has accredited

MAXPRO CORPORATION

Horsham, PA

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/NCSLI 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 5th day of October 2015.

Senior Director, Quality and Communications
For the Accreditation Council
Certificate Number 3912.01
Valid to January 31, 2018
Revised Apri 25, 2016

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