

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

MAXPRO CORPORATION

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CALIBRATION

Valid To: January 31, 2024 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, 5}:

I. Mechanical

| Parameter/Equipment | Range | CMC ^{2, 4} (±) | Comments |
|---|--|--|---|
| Pressure ³ – Measuring Equipment, Pressure Gauges | (>400 to 600) psi (>600 to 1000) psi | 0.23 psi 0.56 psi 0.85 psi 1.4 psi | Comparison to standard hydraulic pressure gauge |
| | (>200 to 900) psi (>900 to 10 000) psi | 1.0 psi 2.0 psi | Deadweight tester |
| Torque ³ – Static, Manual Torque Wrenches | 4 lbf·in (>4 to 10) lbf·in (>10 to 50) lbf·in (>50 to 200) lbf·in (>200 to 600) lbf·in (>400 to 1000) lbf·in (83 to 120) lbf·ft (>120 to 600) lbf·ft (>600 to 1000) lbf·ft | 0.074 lbf·in 0.18 lbf·in 0.53 lbf·in 0.87 lbf·in 2.3 lbf·in 16 lbf·in 1.5 lbf·ft 3.9 lbf·ft 8.4 lbf·ft | Torque transducers |
| Torque ³ – Dynamic | | | Torque transducers |
| Pneumatic Torque Wrench | Up to 200 lbf·ft (>200 to 400) lbf·ft (>400 to 1000) lbf·ft | 5 lbf·ft 12 lbf·ft 17 lbf·ft | |

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| Parameter/Equipment | Range | CMC ² (±) | Comments |
|--------------------------------------|--|--|-------------------------|
| Torque ³ – Dynamic (cont) | | | |
| Pneumatic Torque Wrench | (>1000 to 4800) lbf·ft (>4800 to 6000) lbf·ft (>6000 to 8000) lbf·ft (>8000 to 11 000) lbf·ft | 31 lbf·ft 37 lbf·ft 55 lbf·ft 79 lbf·ft | Torque transducers |
| Electronic Torque Wrench | Up to 100 lbf·ft (>100 to 400) lbf·ft (>400 to 1000) lbf·ft (>1000 to 2400) lbf·ft (>2400 to 3600) lbf·ft (>3600 to 4800) lbf·ft (>4800 to 6000) lbf·ft (>6000 to 11 500) lbf·ft | 2.0 lbf·ft 4.1 lbf·ft 11 lbf·ft 22 lbf·ft 28 lbf·ft 35 lbf·ft 41 lbf·ft 120 lbf·ft | |
| Battery Torque Wrench | (25 to 1000) lbf·ft (>1000 to 3600) lbf·ft (>3600 to 5000) lbf·ft | 15 lbf·ft 70 lbf·ft 93 lbf·ft | |
| Electric Torque Wrench | Up to 1800 lbf·ft (>1800 to 3000) lbf·ft | 23 lbf·ft 43 lbf·ft | |
| Hydraulic Torque Wrench | 50 to 500 lbf·ft (>500 to 2000) lbf·ft (>2000 to 4000) lbf·ft (>4000 to 8000) lbf·ft (>8000 to 12 000) lbf·ft (>12 000 to 25 000) lbf·ft | 9 lbf·ft 20 lbf·ft 94 lbf·ft 160 lbf·ft 200 lbf·ft 230 lbf·ft | |
| Torque Transducers | (5 to 200) ozf·in (>12 to 75) lbf·in (>75 to 150) lbf·in (>150 to 300) lbf·in (>300 to 500) lbf·in (>500 to 1000) lbf·in (>83 to 150) lbf·ft (>150 to 260) lbf·ft (>260 to 500) lbf·ft (>500 to 1000) lbf·ft (>1000 to 2000) lbf·ft (>1000 to 2000) lbf·ft (>2000 to 7500) lbf·ft (>12 000 to 2000) lbf·ft (>12 000 to 20 000) lbf·ft | 0.15 ozf·in 0.05 lbf·in 0.08 lbf·in 0.17 lbf·in 0.31 lbf·in 0.40 lbf·in 0.10 lbf·ft 0.20 lbf·ft 0.31 lbf·ft 0.64 lbf·ft 0.81 lbf·ft 1.5 lbf·ft 9.8 lbf·ft 17 lbf·ft | Moment arms and weights |



| Parameter/Equipment | Range | CMC ² (±) | Comments |
|---------------------------------|----------------------|----------------------|---------------------------------|
| Torque Multipliers ³ | (100 to 5500) lbf·ft | 3.4 % Output | Torque transducer torque wrench |

¹ This laboratory offers commercial and field calibration service.

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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. 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 The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.

⁵ This scope meets A2LA's *P112 Flexible Scope Policy*.



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 17025:2017 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 4th day of February 2022.

Vice President, Accreditation Services For the Accreditation Council Certificate Number 3912.01 Valid to January 31, 2024

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