



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

TEAM TORQUE, INC.
1231 Park Avenue
Bismarck, ND 58504
Cary Hoffman Phone: 701 223 4552

CALIBRATION

Valid To: September 30, 2018

Certificate Number: 2472.01

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

I. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ² (±)	Comments
DC Voltage – Measure ³	(1.0 to 100) mV 101 mV to 1 V (1.001 to 10) V (10.001 to 30) V	0.036 mV 0.064 mV 0.46 mV 5.9 mV	6.5 digit digital multimeter

II. Mechanical

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Pressure Gauges	(0 to 10 000) PSI	0.25 %	Pressure comparator
Torque Transducers ³	0.5 in·oz to 500 in·lbf (25 to 250) ft·lbf (251 to 600) ft·lbf (601 to 2000) ft·lbf (2000 to 10 000) ft·lbf	0.12 % 0.12 % 0.12 % 0.12 % 0.12 %	Dead weights Transducer comparison

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments	
Torque ³ –				
Wrenches	3.5 in·oz to 50 in·lbf (51 to 150) in·lbf (151 to 400) in·lbf (401 to 1000) in·lbf (25 to 250) ft·lbf (251 to 600) ft·lbf (601 to 1000) ft·lbf (1001 to 2000) ft·lbf (2001 to 20 000) ft·lbf	1.2 % 1.1 % 0.66 % 0.41 % 0.76 % 0.73 % 0.70 % 0.89 % 1.3 %	Torque tester	
Hydraulic	(25 to 250) ft·lbf (251 to 600) ft·lbf (601 to 1000) ft·lbf (1001 to 2000) ft·lbf (2001 to 20 000) ft·lbf	1.3 % 1.3 % 1.3 % 1.3 % 1.3 %		
Pneumatic	3.5 in·oz to 25 ft·lbf (25 to 250) ft·lbf (251 to 600) ft·lbf (601 to 1000) ft·lbf (1001 to 2000) ft·lbf (2001 to 20 000) ft·lbf	1.6 % 1.0 % 0.73 % 0.73 % 0.73 % 0.73 %		
Multipliers	(25 to 250) ft·lbf (251 to 600) ft·lbf (601 to 1000) ft·lbf (1001 to 2000) ft·lbf (2001 to 20 000) ft·lbf	1.6 % 1.6 % 1.6 % 1.6 % 1.6 %		
Watches	0.5 in·oz to 20 in·lbf	0.32 %		
Screwdrivers	2.0 in·oz to 50 in·lbf (51 to 400) in·lbf	0.74 % 0.30 %		
Torque Angle –				
Wrenches	0° to 360°, Up to 250 ft·lbf	0.58°		Motorized rotary table
Transducers	0° to 360°, Up to 250 ft·lbf	0.58°		

¹ This laboratory offers commercial calibration service 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, all percentages represent percent of range.



Accredited Laboratory

A2LA has accredited

TEAM TORQUE, INC.

Bismarck, ND

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 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 20th day of January 2017.

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

President and CEO
For the Accreditation Council
Certificate Number 2472.01
Valid to September 30, 2018

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