



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

STEWARTS USA
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CALIBRATION

Valid To: June 30, 2019

Certificate Number: 3677.02

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

I. Dimensional

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Dial Indicators	(0.01 to 0.5) in	23 µin + 27.2L µin	Gage blocks Mic Trac ULM/UMM
Micrometers	(0.05 to 1) in (1.0 to 36) in	55 µin + 7.6L µin 57 µin + 8.8L µin	Gage blocks Mic Trac ULM/UMM
Calipers	Up to 6 in (1.0 to 36) in	120 µin + 8.7L µin 120 µin + 0.65L µin	Gage blocks Mic Trac ULM/UMM

II. Mechanical

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Pressure – Generate/Measure	(1 to 30 000) psi	(0.94 + 0.00014P) psi	DHI RPM4-E-DWT

Parameter/Equipment	Range	CMC ^{2,4} (\pm)	Comments
Torque Measure –	(4 to 50) in·lbf	0.23 % + 0.013 in·lbf	Snap-on TTC810 w/ TTC400
	(50 to 400) in·lbf	0.18 % + 0.03 in·lbf	
	(400 to 1000) in·lbf	0.19 % + 0.11 in·lbf	
	(80 to 250) ft·lbf	0.26 % + 0.014 ft·lbf	
	(250 to 600) ft·lbf	0.21 % + 0.033 ft·lbf	Snap-on TTC810 w/ TTC12
	(600 to 2000) ft·lbf	0.24 % + 0.29 ft·lbf	Snap-on TTC810 w/ TTC14

III. Thermodynamic

Parameter/Equipment	Range	CMC ^{2,4}	Comments
Temperature –			
Measure & Measuring Equipment	(-15 to 100) °C	0.24 °C + 0.6R	Fluke temperature stick 1552a, Fluke 9009 dry well / bath
	(100 to 350) °C	0.003 °C + 0.0018° C/°C + 0.6R	

¹This laboratory offers commercial calibration service.

²Calibration 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, percentages are percentage of reading, unless otherwise indicated.

⁴ In the statement of CMC, L is the numerical value of the nominal length of the device measured in inches. R represents the resolution of the unit calibrated. P represents the pressure measured.



Accredited Laboratory

A2LA has accredited

STEWARTS USA

Houston, TX

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 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 16th day of August 2017.

A handwritten signature in black ink, appearing to read 'L. S.', written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 3677.02
Valid to June 30, 2019

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