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

AUTO TECHNOLOGY COMPANY
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Strongsville, OH 44149
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CALIBRATION

Valid To: December 31, 2015 Certificate Number: 2563.01

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

I. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC[2] (±)	Comments
DC Voltage[3, 4] – Measure	(0 to 110) mV (0 to 1.1) V (0 to 11) V (0 to 110) V (0 to 300) V	0.029 % + 19 µV 0.029 % + 0.065 mV 0.029 % + 0.66 mV 0.058 % + 6.4 mV 0.057 % + 19 mV	Fluke 743B
DC Voltage[3, 4] – Generate	(0 to 110) mV (0 to 1.1) V (0 to 11) V	0.011 % + 6.8 µV 0.011 % + 0.065 mV 0.012 % + 0.87 mV	Fluke 743B
DC Current[3, 4] – Generate	(2 to 22) mA	0.013 % + 3.6 µA	Fluke 743B
Resistance[3, 4] – Measure	(0 to 110) Ω (0 to 1.1) kΩ (0 to 11) kΩ	0.058 % + 0.06 Ω 0.058 % + 0.58 Ω 0.12 % + 12 Ω	Fluke 743B

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Parameter/Equipment	Range	CMC[2] (±)	Comments
Resistance[3, 4] – Generate	(0 to 11) Ω (0 to 110) Ω (0 to 1.1) kΩ (0 to 11) kΩ	0.011 % + 0.023 Ω 0.011 % + 0.047 Ω 0.023 % + 0.58 Ω 0.03 % + 6 Ω	Fluke 743B
Thermocouple Simulation[3] –			
Type J	-210 ºC to -100 ºC -100 ºC to 800 ºC 800 ºC to 1200 ºC	0.44 ºC 0.34 ºC 0.33 ºC	Fluke 743B
Type K	-200 ºC to -100 ºC -100 ºC to 400 ºC 400 ºC to 1200 ºC 1200 ºC to 1372 ºC	0.55 ºC 0.45 ºC 0.44 ºC 0.44 ºC	
Type T	-250 ºC to -200 ºC -200 ºC to 0 ºC 0 ºC to 400 ºC	1.2 ºC 0.54 ºC 0.43 ºC	
RTD – Simulation[3]			
100 Ω, Pt 3926	-200 ºC to 0 ºC 0 ºC to 630 ºC	0.24 ºC 0.31 ºC	Fluke 743B
100 Ω, Pt 385	-200 ºC to 0 ºC 0 ºC to 400 ºC 400 ºC to 800 ºC	0.24 ºC 0.31 ºC 0.51 ºC	
100 Ω, Pt 3916	-200 ºC to -190 ºC -190 ºC to 0 ºC 0 ºC to 360 ºC	0.40 ºC 0.24 ºC 0.31 ºC	

II. Mechanical

Parameter/Equipment	Range	CMC[2] (±)	Comments
Pressure[3] –			
Gages and Transducers	(0 to 200) psig	0.17 psig	Fluke 743B and Fluke 700PD7

III. Thermodynamics

Parameter/Equipment	Range	CMC[2] (±)	Comments
Relative Humidity – Measure[3]	(10 to 90) % RH	1.9 % RH	Vasiala temperature and humidity indicator
	(90.1 to 95) % RH	2.6 % RH	
Temperature – Measure[3]	-70 ºC to 200 ºC	1.2 ºC	Fluke 743B w/ type T SLE TC
	-40 ºC to 125 ºC	0.65 ºC	Fluke 743B w/ PRT

[1] This laboratory offers commercial calibration service and field calibration service.

[2] Calibration and Measurement Capability (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. Calibration and Measurement Capabilities 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] The measurands stated are generated with the Fluke 743B and Fluke 700PD7 series of instruments. This capability is suitable for the calibration of the devices intended to measure the stated measurand in the ranges indicated. CMC's are expressed as either a specific value that covers the full range or as a fraction of the reading plus a fixed floor specification.

American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

AUTO TECHNOLOGY COMPANY

Strongsville, OH

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 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 6th day of February 2014.

President & CEO
For the Accreditation Council
Certificate Number 2563.01
Valid to December 31, 2015

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