



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

Davis Calibration

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CALIBRATION

Valid to: May 24, 2010

Certificate Number: AC-1104

I. Electromagnetic - DC/Low Frequency

PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
DC Volts - Source	(0 to 220) mV 220 mV to 2.2 V (2.2 to 11) V (11 to 22) V (22 to 220) V (220 to 1100) V	8 μ V/V + 0.6 μ V 7 μ V/V + 1 μ V 7 μ V/V + 3.5 μ V 7 μ V/V + 6.5 μ V 8 μ V/V + 0.08 mV 9 μ V/V + 0.5 mV	Fluke 5700A	OEM and GIDEP Sourced Calibration Procedures
DC Voltage - Measure	(10 to 100) mV 100 mV to 1 V (1 to 10) V (10 to 100) V (100 to 1000) V	7 μ V/V + 0.3 μ V 6 μ V/V + 0.3 μ V 6 μ V/V + 0.5 μ V 8 μ V/V + 30 μ V 8 μ V/V + 0.1 mV	HP 3458A OPT 02	OEM and GIDEP Sourced Calibration Procedures
DC Current - Source	(0 to 220) μ A 220 μ A to 2.2 mA (2.2 to 22) mA (22 to 220) mA 220 mA to 2.2 A (2.2 to 3) A (3 to 11) A (11 to 20.5) A	50 μ A/A + 8 nA 50 μ A/A + 8 nA 50 μ A/A + 0.08 μ A 60 μ A/A + 0.8 μ A 80 μ A/A + 25 μ A 380 μ A/A + 40 μ A 500 μ A/A + 500 μ A 1000 μ A/A + 750 μ A	Fluke 5700A 5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures
DC Current - Measure	(10 to 100) μ A 100 μ A to 1 mA (1 to 10) mA (10 to 100) mA 100 mA to 1 A	20 μ A/A + 0.8 nA 20 μ A/A + 5 nA 20 μ A/A + 50 nA 35 μ A/A + 500 nA 110 μ A/A + 10 μ A	HP 3458A OPT 02	OEM and GIDEP Sourced Calibration Procedures



PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Volts – Source	<p>(0 to 2.2) mV (10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz</p> <p>(2.2 to 22) mV (10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz</p> <p>(22 to 220) mV (10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz</p> <p>220 mV to 2.2 V (10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz</p>	<p>550 $\mu\text{V/V} + 4.5 \mu\text{V}$ 210 $\mu\text{V/V} + 4.5 \mu\text{V}$ 105 $\mu\text{V/V} + 4.5 \mu\text{V}$ 370 $\mu\text{V/V} + 4.5 \mu\text{V}$ 850 $\mu\text{V/V} + 7 \mu\text{V}$ 1.1 $\text{mV/V} + 13 \mu\text{V}$ 1.7 $\text{mV/V} + 25 \mu\text{V}$ 3.4 $\text{mV/V} + 25 \mu\text{V}$</p> <p>550 $\mu\text{V/V} + 5 \mu\text{V}$ 210 $\mu\text{V/V} + 5 \mu\text{V}$ 105 $\mu\text{V/V} + 5 \mu\text{V}$ 370 $\mu\text{V/V} + 5 \mu\text{V}$ 850 $\mu\text{V/V} + 7 \mu\text{V}$ 1.1 $\text{mV/V} + 12 \mu\text{V}$ 1.7 $\text{mV/V} + 25 \mu\text{V}$ 3.4 $\text{mV/V} + 25 \mu\text{V}$</p> <p>550 $\mu\text{V/V} + 13 \mu\text{V}$ 210 $\mu\text{V/V} + 8 \mu\text{V}$ 105 $\mu\text{V/V} + 8 \mu\text{V}$ 320 $\mu\text{V/V} + 8 \mu\text{V}$ 850 $\mu\text{V/V} + 25 \mu\text{V}$ 1.1 $\text{mV/V} + 25 \mu\text{V}$ 1.7 $\text{mV/V} + 35 \mu\text{V}$ 3.4 $\text{mV/V} + 80 \mu\text{V}$</p> <p>500 $\mu\text{V/V} + 80 \mu\text{V}$ 160 $\mu\text{V/V} + 25 \mu\text{V}$ 75 $\mu\text{V/V} + 6 \mu\text{V}$ 120 $\mu\text{V/V} + 16 \mu\text{V}$ 250 $\mu\text{V/V} + 70 \mu\text{V}$ 430 $\mu\text{V/V} + 130 \mu\text{V}$ 1.1 $\text{mV/V} + 350 \mu\text{V}$ 2.2 $\text{mV/V} + 850 \mu\text{V}$</p>	Fluke 5700A	OEM and GIDEP Sourced Calibration Procedures



PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Volts – Source (cont.)	(2.2 to 22) V (10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz (22 to 220) V (10 to 20) Hz (20 to 40) Hz 40 Hz to 20 kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (300 to 500) kHz 500 kHz to 1 MHz (220 to 1 100) V (15 to 50) Hz 50 Hz to 1 kHz	500 μV/V + 800 μV 160 μV/V + 250 μV 75 μV/V + 60 μV 120 μV/V + 160 μV 250 μV/V + 350 μV 500 μV/V + 1.5 mV 1.3 mV/V + 4.3 mV 2.7 mV/V + 8.5 mV 500 μV/V + 8 mV 160 μV/V + 2.5 mV 80 μV/V + 0.8 mV 220 μV/V + 3.5 mV 500 μV/V + 8 mV 1.5 mV/V + 90 mV 4.7 mV/V + 90 mV 115 mV/V + 190 mV 400 μV/V + 16 mV 80 μV/V + 3.5 mV	Fluke 5700A	OEM and GIDEP Sourced Calibration Procedures
AC Voltage – Measure	(0 to 10) mV (1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz 300 kHz to 1MHz (1 to 4) MHz (4 to 8) MHz	0.3 mV/V + 3 μV 0.2 mV/V + 1.1 μV 0.3 mV/V + 1.1 μV 1 mV/V + 1.1 μV 5 mV/V + 1.1 μV 40 mV/V + 2 μV 12 mV/V + 5 μV 70 mV/V + 7 μV 200 mV/V + 8 μV	HP 3458A OPT 02	OEM and GIDEP Sourced Calibration Procedures



PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Voltage – Measure (cont.)	(10 to 100) mV (1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz 300 kHz to 1 MHz (1 to 4) MHz (4 to 8) MHz (8 to 10) MHz 100 mV to 1 V (1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz 300 kHz to 1 MHz (1 to 4) MHz (4 to 8) MHz (8 to 10) MHz (1 to 10) V (1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz 300 kHz to 1 MHz (1 to 4) MHz (4 to 8) MHz (8 to 10) MHz (10 to 100) V (1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz 300 kHz to 1 MHz	72 μV/V + 4 μV 72 μV/V + 2 μV 142 μV/V + 2 μV 302 μV/V + 2 μV 802 μV/V + 2 μV 3 mV/V + 10 μV 10 mV/V + 10 μV 15 mV/V + 10 μV 40 mV/V + 8 μV 150 mV/V + 100 μV 72 μV/V + 40 μV 72 μV/V + 20 μV 142 μV/V + 20 μV 302 μV/V + 20 μV 802 μV/V + 20 μV 3 mV/V + 0.1 mV 10 mV/V + 0.1 mV 15 mV/V + 0.1 mV 40 mV/V + 0.8 mV 150 mV/V + 1 mV 72 μV/V + 0.4 mV 72 μV/V + 0.2 mV 142 μV/V + 0.2 mV 302 μV/V + 0.2 mV 802 μV/V + 0.2 mV 3.0 mV/V + 1 mV 10 mV/V + 1 mV 15 mV/V + 1 mV 40 mV/V + 8 mV 150 mV/V + 10 mV 0.2 mV/V + 4 mV 0.2 mV/V + 2 mV 0.2 mV/V + 2 mV 0.35 mV/V + 2 mV 1.2 mV/V + 2 mV 4.0 mV/V + 10 mV 15 mV/V + 10 mV	HP 3458A OPT 02	OEM and GIDEP Sourced Calibration Procedures



PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Current – Source (Cont.)	(3 to 11) A (45 to 100) Hz 100Hz to 1 kHz (1 to 5) kHz (11 to 20.5) A (45 to 100) Hz 100Hz to 1 kHz (1 to 5) kHz	0.6 mA/A + 2 mA 1.0 mA/A + 2 mA 30 mA/A + 2 mA 1.2 mA/A + 5 mA 1.5 mA/A + 5 mA 30 mA/A + 5 mA	Fluke 5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures
AC Current – Measure	(5 to 100) μA (10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 1 kHz 100 μA to 1 mA (10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 5 kHz (5 to 20) kHz (20 to 50) kHz (50 to 100) kHz (1 to 10) mA (10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 5 kHz (5 to 20) kHz (20 to 50) kHz (50 to 100) kHz (10 to 100) mA (10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 5 kHz (5 to 20) kHz (20 to 50) kHz (50 to 100) kHz 100 mA to 1 A (10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 5 kHz (5 to 20) kHz (20 to 50) kHz	4 mA/A + 30 nA 1.5 mA/A + 30 nA 0.6 mA/A + 30 nA 0.6 mA/A + 30 nA 4 mA/A + 0.2 μ A 1.5 mA/A + 0.2 μ A 0.6 mA/A + 0.2 μ A 0.3 mA/A + 0.2 μ A 0.6 mA/A + 0.2 μ A 4 mA/A + 0.4 μ A 5.5 mA/A + 1.5 μ A 4 mA/A + 2 μ A 1.5 mA/A + 2 μ A 0.6 mA/A + 2 μ A 0.3 mA/A + 2 μ A 0.6 mA/A + 2 μ A 4 mA/A + 4 μ A 5.5 mA/A + 15 μ A 4 mA/A + 20 μ A 1.5 mA/A + 20 μ A 0.6 mA/A + 20 μ A 0.3 mA/A + 20 μ A 0.6 mA/A + 20 μ A 4 mA/A + 40 μ A 5.5 mA/A + 150 μ A 4 mA/A + 200 μ A 1.6 mA/A + 200 μ A 0.8 mA/A + 200 μ A 1 mA/A + 200 μ A 3 mA/A + 200 μ A 10 mA/A + 400 μ A	HP 3458A OPT 02	OEM and GIDEP Sourced Calibration Procedures

PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Capacitance - Source	(0.19 to 0.4) nF @10 Hz to 10 kHz (0.4 to 1.1) nF @10 Hz to 10 kHz (1.1 to 3.3) nF @10 Hz to 3 kHz (3.3 to 11) nF @10 Hz to 1 kHz (11 to 33) nF @10 Hz to 1 kHz (33 to 110) nF @10 Hz to 1 kHz (110 to 330) nF @10 Hz to 1 kHz (0.33 to 1.1) μF @(10 to 600) Hz (1.1 to 3.3) μF @(10 to 300) Hz (3.3 to 11) μF @(10 to 150) Hz (11 to 33) μF @(10 to 120) Hz (33 to 110) μF @(10 to 80) Hz (110 to 330) μF @(0 to 50) Hz (0.33 to 1.1) mF @(0 to 20) Hz (1.1 to 3.3) mF @(0 to 6) Hz (3.3 to 11) mF @(0 to 2) Hz (11 to 33) mF @(0 to 0.6) Hz (33 to 110) mF @(0 to 0.2) Hz	5 mF/F + 0.01 nF 5 mF/F + 0.01 nF 5 mF/F + 0.01 nF 2.5 mF/F + 0.01 nF 2.5 mF/F + 0.1 nF 2.5 mF/F + 0.1 nF 2.5 mF/F + 0.3 nF 2.5 mF/F + 1 nF 2.5 mF/F + 3 nF 2.5 mF/F + 10 nF 4 mF/F + 30 nF 4.5mF/F + 100 nF 4.5 mF/F + 300 nF 4.5 mF/F + 1 uF 4.5 mF/F + 3 uF 4.5 mF/F + 10 uF 7.5 mF/F + 30 uF 11 mF/F + 100 uF	5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures
Calibration of Oscilloscopes DC Signal into 50 Ω Load DC Signal into 1 MΩ Load	0 V to ± 6.6 V 0 V to ± 130 V	2.5 mV/V + 40 μV 0.5 mV/V + 40 μV	5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures

PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Amplitude Squarewave 50 Ω Load 1 MΩ Load	1 mV to 6.6 Vp-p 10 Hz to 10 kHz 1 mV to 130 Vp-p 10 Hz to 10 kHz	2.5 mV/V + 40 μV 1.0 mV/V + 40 μV	5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures
Edge Specs into 50 Ω Load-Source Rise Time Amplitude (Peak to Peak) Frequency of Test Signal	≤ 300 ps 5 mV to 2.5 V 1 kHz to 10 MHz	+0 ps /-100 ps 20 mV/V + 200 μV 2.5 parts in 10 ⁶ of setting		
Leveled Sine Wave - Flatness Relative to 50 kHz [5 mV to 5.5 V]	50 kHz to 100 MHz (100 to 300) MHz (300 to 600) MHz (600 to 1100) MHz	15 mV/V + 100 μV 20 mV/V + 100 μV 40 mV/V + 100 μV 50 mV/V + 100 μV		
Time Marker into 50 Ω Load-Source Spike or Square Wave Spike, Square, 20% Pulse Spike or Square Wave Square or Sine Wave Sine Wave	5 sec to 50 ms 20 ms to 100 ns 50 ns to 20 ns 10 ns 5 ns to 1 ns	(25 + tx1000) parts in 10 ⁶ 2.5 parts in 10 ⁶ 2.5 parts in 10 ⁶ 2.5 parts in 10 ⁶ 2.5 parts in 10 ⁶		
Wave Generator - Source Amplitude (10 Hz to 10 kHz) Square, Sine, Triangle into 1 MΩ Square, Sine, Triangle into 50 Ω Frequency	1.8 mV to 55 V p-p 1.8 mV to 2.5 V p-p 10 Hz to 100 kHz	30 mV/V + 100 μV 30 mV/V + 100 μV 25 parts in 10 ⁶ + 15 mHz		
Pulse Generator- Source Width Period(50 Hz to 5 MHz)	4 ns to 45 ns 45 ns to 500 ns 20 ms to 200 ns	5% ± 500 ps 5% ± 4 ns 2.5 parts in 10 ⁶		
DC Power - Source 33 mV to 1 000 V	0.33 to 330 mA 0.33 to 3 A 3 to 20.5 A	2.3 mV/V of Watts Output 2.2 mV/V of Watts Output 0.7 mV/V of Watts Output		

PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
AC Power -Source PF=1 (45 to 65) Hz	(33 to 330) mV (3.3 to 9) mA (9 to 33) mA (33 to 90) mA (90 to 330) mA (0.33 to 0.9) A (0.9 to 2.2) A (2.2 to 4.5) A (4.5 to 20.5) A (0.33 to 1 000) V (3.3 to 9) mA (9 to 33) mA (33 to 90) mA (90 to 330) mA (0.33 to 0.9) A (0.9 to 2.2) A (2.2 to 4.5) A (4.5 to 20.5) A	1.4 mV/V of Watts Output 1 mV/V of Watts Output 1.4 mV/V of Watts Output 1 mV/V of Watts Output 1.3 mV/V of Watts Output 1.1 mV/V of Watts Output 1.3 mV/V of Watts Output 1.1 mV/V of Watts Output 1.2 mV/V of Watts Output 0.8 mV/V of Watts Output 1.2 mV/V of Watts Output 0.8 mV/V of Watts Output 1.1 mV/V of Watts Output 0.9 mV/V of Watts Output 1.2 mV/V of Watts Output 1 mV/V of Watts Output	5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures
Electrical Simulation of Thermocouple Indicators Type "B" Type "C" Type "E" Type "J" Type "K"	(600 to 800) °C (800 to 1 000) °C (1 000 to 1 550) °C (1 550 to 1 820) °C (0 to 150) °C (150 to 650) °C (650 to 1 000) °C (1 000 to 1 800) °C (1 800 to 2 316) °C (-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1 000) °C (-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1 200) °C (-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1 000) °C (1 000 to 1 372) °C	0.44 °C 0.34 °C 0.30 °C 0.33 °C 0.30 °C 0.26 °C 0.31 °C 0.50 °C 0.84 °C 0.50 °C 0.16 °C 0.14 °C 0.16 °C 0.21 °C 0.27 °C 0.16 °C 0.14 °C 0.17 °C 0.23 °C 0.33 °C 0.18 °C 0.16 °C 0.26 °C 0.40 °C	5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures

PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Type "N"-	(-200 to -100) °C	0.40 °C	5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures
	(-100 to -25) °C	0.22 °C		
	(-25 to 120) °C	0.19 °C		
	(120 to 410) °C	0.18 °C		
	(410 to 1 300) °C	0.27 °C		
Type "R"	(0 to 250) °C	0.57 °C		
	(250 to 400) °C	0.35 °C		
	(400 to 1 000) °C	0.33 °C		
	(1 000 to 1 767) °C	0.40 °C		
Type "S"	(0 to 250) °C	0.47 °C		
	(250 to 1 000) °C	0.36 °C		
	(1 000 to 1 400) °C	0.37 °C		
	(1 400 to 1 767) °C	0.46 °C		
Type "T"	(-250 to -150) °C	0.63 °C		
	(-150 to 0) °C	0.24 °C		
	(0 to 120) °C	0.16 °C		
	(120 to 400) °C	0.14 °C		
Type "U"	(-200 to 0) °C	0.56 °C		
	(0 to 600) °C	0.27 °C		
Electrical Simulation of RTDs Pt 385 (100 Ω)	(-200 to 0) °C	0.05 °C	5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures
	(0 to 100) °C	0.07 °C		
	(100 to 300) °C	0.09 °C		
	(300 to 400) °C	0.10 °C		
	(400 to 630) °C	0.12 °C		
	(630 to 800) °C	0.23 °C		
Pt 385 (200 Ω)	(-200 to 100) °C	0.04 °C		
	(100 to 260) °C	0.05 °C		
	(260 to 300) °C	0.12 °C		
	(300 to 400) °C	0.13 °C		
	(400 to 600) °C	0.14 °C		
	(600 to 630) °C	0.16 °C		

PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Pt 385 (500 Ω)	(-200 to -80) °C	0.04 °C	5520A/SC1100	OEM and GIDEP Sourced Calibration Procedures
	(-80 to 100) °C	0.05 °C		
	(100 to 260) °C	0.06 °C		
	(260 to 400) °C	0.08 °C		
	(400 to 600) °C	0.19 °C		
	(600 to 630) °C	0.11 °C		
Pt 385 (1000 Ω)	(-200 to 0) °C	0.03 °C		
	(0 to 100) °C	0.04 °C		
	(100 to 260) °C	0.05 °C		
	(260 to 300) °C	0.06 °C		
	(300 to 600) °C	0.07 °C		
	(600 to 630) °C	0.23 °C		
Pt 3916 (100 Ω)	(-200 to -190) °C	0.25 °C		
	(-190 to -80) °C	0.04 °C		
	(-80 to 0) °C	0.05 °C		
	(0 to 100) °C	0.06 °C		
	(100 to 260) °C	0.07 °C		
	(260 to 300) °C	0.08 °C		
	(300 to 400) °C	0.09 °C		
	(400 to 600) °C	0.10 °C		
	(600 to 630) °C	0.23 °C		
Pt 3926 (100 Ω)	(-200 to 0) °C	0.05 °C		
	(0 to 100) °C	0.07 °C		
	(100 to 300) °C	0.09 °C		
	(300 to 400) °C	0.10 °C		
	(400 to 630) °C	0.12 °C		
PtNi 385 (120 Ω)	(-80 to 100) °C	0.08 °C		
	(100 to 260) °C	0.14 °C		

II. Time and Frequency*

PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*Frequency Time Base	10 MHz	1.0 part in 10 ¹² Hz per day avg.	Zyfer 380-210 GPS Frequency Standard	OEM and GIDEP Sourced Calibration Procedures

III. Thermodynamic

PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Calibration of Temperature Measuring Equipment	-196 °C -38 °C 0.010 °C 232 °C 420 °C	0.014 °C 0.012 °C 0.011 °C 0.021 °C 0.030 °C	Hart 1502A w/ 5628 Probe Using Dry Well	OEM and GIDEP Sourced Calibration Procedures
Calibration of Infrared Non-Contact Temperature Measuring Equipment	(33 to 100) °C (100 to 250) °C (250 to 400) °C	2.32 °C 4.62 °C 6.93 °C	Hart 9131 Infrared Black Body Source	
Humidity	(0 to 15) % RH (15 to 90) % RH (90 to 100) % RH	1.26 % 1.46 % 2.61%	Vaisala HMP46	

IV. Mechanical


PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Pressure Measuring Instruments (High)	(10 to 16 000) psi	106 parts in 10 ⁶	Ruska S9260-4 Deadweight Tester	OEM and GIDEP Sourced Calibration Procedures
Pressure (Low)	(2 to 600) psi	106 parts in 10 ⁶	Ruska S6390-4 Deadweight Tester	
Vacuum	(-0.3 to -30) inHg	106 parts in 10 ⁶	Ruska S6390-4 and S6410	
Torque Tools	20 in-oz to 600 ft-lb	1.04 %	CDI Torque Tester	

V. Dimensional

PARAMETER/ EQUIPMENT	RANGE	BEST MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(+)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Calipers Inside and Outside	Up to 20 in	$(580 + 1.8L) \mu\text{in}$	Grade 2 Gage Blocks	OEM and GIDEP Sourced Calibration Procedures Fowler Grade 2 Gage Blocks
Micrometers Inside and Outside	Up to 20 in	$(60 + 8L) \mu\text{in}$	Grade 2 Gage Blocks	
Height Gages	Up to 20 in Up to 26 in	$(51.3 + 8.3L) \mu\text{in}$ $(51.6 + 8L) \mu\text{in}$	Grade 2 Gage Blocks Webber 25 Reference Bar	

Notes:

1. Best Measurement Uncertainties (Expanded Uncertainty) are based on approximately a 95% confidence interval, using a coverage of $k=2$
2. This laboratory's capabilities include commercial and on-site calibration services. Since field (on-site) conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected in the field (on-site) than what is reported on the accredited scope.
3. Capabilities denoted by an asterisk (*) are depot-only, not available for on-site calibration activity.
4. The use of (L) signifies an expression of Length in inches.
5. The use of (t) signifies an expression of Time in seconds.
6. This scope is part of and must be included with the Certificate of Accreditation No. AC-1104



Vice-President