

TRANSCAT® CERTIFICATE OF CALIBRATION

Trust in every measure

Customer: MESA LABORATORIES
12100 WEST 6TH AVE
LAKEWOOD, CO 80228



NVLAP LAB CODE
200730-0

PO Number: PO-004275

Certificate/SO Number: 5-A7O3W-20-1 Revision 0

Manufacturer: Druck/Unomat/GE Sensing/Kaye
Model Number: DPI 520
Description: Pressure Calibrator
Serial Number: 0417/97-4
ID: 10226

As-Found: In Tolerance
As-Left: In Tolerance

Calibration Date: June 30, 2016
Due Date: June 30, 2017

Calibrated To: Manufacturer Specification
Calibration Procedure: 1-AC19457-0

Transcat Calibration Laboratories have been audited and found in compliance with ISO/IEC 17025:2005. Accredited calibrations performed within the Lab's Scope of Accreditation are indicated by the presence of the Accrediting Body's Logo and Certificate Number on this Certificate of Calibration. Any measurements on an accredited calibration not covered by that Lab's Scope of Accreditation are listed in the notes section of the certificate. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, SCC, NRC, CLAS, ANAB or any agency of the Federal Government. NVLAP, NIST, SCC, NRC, CLAS or ANAB do not guarantee the accuracy of an individual calibration by accredited laboratories.

Transcat calibrations, as applicable, are performed in compliance with the requirements of the Transcat Quality Manual Revision I, ISO 9001:2008, ANSI/NCSL Z540.1-1994 (R2002), and ISO 10012:2003. When specified contractually, the requirements of ISO TS16949:2009, 10CFR21, 10CFR50 App. B and ASME NQA-1:2012 are also covered. Complete records of work performed are maintained by Transcat and are available for inspection. Laboratory standards used in the performance of this calibration are shown on the Supplemental Report.

Transcat documents the traceability of measurements to the SI units through the National Institute of Standards and Technology (NIST), or the National Research Council of Canada (NRC), or other recognized national measurement institutes (NMI) that are signatories to the CIPM Mutual Recognition Arrangement, or accepted fundamental and/or natural physical constants, or by the use of specified methods, consensus standards or ratio type measurements. Documentation supporting traceability information is available for review at a Transcat facility. The measured quantity and the measurement uncertainty are required for further dissemination of traceability.

Uncertainties are reported with a coverage factor $k=2$, providing a level of confidence of approximately 95%. All calibrations have been performed using processes having a TUR of 4:1 or better (3:1 for mass calibrations), unless otherwise noted on the Supplemental Report. The Test Uncertainty Ratio (TUR) is calculated in accordance with NCSL International RP-18. For mass calibrations: Conventional mass referenced to 8.0 g/cm³.

The results in this report relate only to the item calibrated or tested, and the determination of in or out of tolerance is specific to the model/serial no. referenced above based on the tolerances shown on the supplemental report; these tolerances are either the original equipment manufacturer's (OEM's) warranted specifications or the client's requested specifications. Any number of factors can cause a unit to drift out of tolerance at any time following its calibration. Limitations on the uses of this instrument are detailed in the OEM's operating instructions. This certificate may not be reproduced except in full, without the written approval of Transcat. Additional information, if applicable may be included on separate report(s).

Notes:

As-Found: In-Tolerance, No Adjustment Performed


Calibrated At:
1181 Brittmoore Road
Houston, TX 77043

Facility Responsible:
1181 Brittmoore Road
Houston, TX 77043
800-828-1470

Calibrated By:
 Digitally Signed By
Michael Valenzuela

Date: June 30, 2016

Michael Valenzuela
Calibration Technician

Reviewed By:
 Digitally Signed By
Josh Soileau for

Date: June 30, 2016

Scott Caine
Lab Manager

Unit Barcode: 
901B0020195

Date Received: June 15, 2016

TRANSCAT® SUPPLEMENTAL REPORT

Trust in every measure

CALIBRATION LAB DATA AS FOUND / AS LEFT

Customer: MESA LABORATORIES

PO Number: PO-004275

Certificate/SO Number: 5-A7O3W-20-1 Revision 0

Manufacturer: Druck/Unomat/GE Sensing/Kaye

Service Type: R9

Model Number: DPI 520

Description: Pressure Calibrator

Serial Number: 041797-4

Calibration Date: Jun 30, 2016

ID: 10226

Date Due: Jun 30, 2017

Calibration Procedure: 1-AC19457-0

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	Cal Process Measurement		Units	TUR
						Uncertainty (k=2; ±)	Uncertainty (k=2; ±)		
Ambient Pressure	14.50psia	±(0.025% Rdg + 1 LSD)	14.49	14.51	14.50 psia	2.8e-004	1.2e-002	psia	36.3 : 1
Pressure Linearity	10.12psia	±(0.005% FS + 1 LSD)	10.10	10.14	10.11 psia	1.9e-004	1.3e-002	psia	100.0 : 1
	20.34psia	±(0.005% FS + 1 LSD)	20.32	20.36	20.33 psia	3.9e-004	1.3e-002	psia	51.8 : 1
	39.27psia	±(0.005% FS + 1 LSD)	39.25	39.29	39.26 psia	7.5e-004	1.3e-002	psia	26.8 : 1
	59.47psia	±(0.025% Rdg + 1 LSD)	59.45	59.49	59.46 psia	1.1e-003	1.2e-002	psia	17.7 : 1
	79.85psia	±(0.025% Rdg + 1 LSD)	79.82	79.88	79.85 psia	1.5e-003	1.2e-002	psia	19.8 : 1
	100.48psia	±(0.025% Rdg + 1 LSD)	100.44	100.52	100.46 psia	1.9e-003	1.2e-002	psia	21.0 : 1
	119.45psia	±(0.025% Rdg + 1 LSD)	119.41	119.49	119.44 psia	2.3e-003	1.2e-002	psia	17.6 : 1
	139.83psia	±(0.025% Rdg + 1 LSD)	139.79	139.87	139.83 psia	2.7e-003	1.2e-002	psia	15.1 : 1
	160.03psia	±(0.025% Rdg + 1 LSD)	159.98	160.08	160.02 psia	3.0e-003	1.2e-002	psia	16.4 : 1
	180.44psia	±(0.025% Rdg + 1 LSD)	180.38	180.50	180.42 psia	3.4e-003	1.2e-002	psia	17.5 : 1
	199.56psia	±(0.025% Rdg + 1 LSD)	199.50	199.62	199.55 psia	3.8e-003	1.2e-002	psia	15.8 : 1
Hysteresis	119.45psia	±(0.025% Rdg + 1 LSD)	119.41	119.49	119.44 psia	2.3e-003	1.2e-002	psia	17.6 : 1
	100.48psia	±(0.025% Rdg + 1 LSD)	100.44	100.52	100.48 psia	1.9e-003	1.2e-002	psia	21.0 : 1

The column labeled Cal Process Uncertainty(CPU) does not include the short term component of the UUT. The column labeled Measurement Uncertainty includes both CPU and the short term component of the UUT. TUR is calculated using CPU. Note: Reported resolution of the UUT does not represent calibration uncertainty or accuracy of the UUT.

Revision 0

Field not applicable. (P = Pass, F = Fail)

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Certificate/SO Number: 5-A7O3W-20-1 Revision 0

F0177R2 03/22/16

TRANSCAT® SUPPLEMENTAL REPORT

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CALIBRATION LAB DATA AS FOUND / AS LEFT

Customer: MESA LABORATORIES

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Certificate/SO Number: 5-A7O3W-20-1 Revision 0

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	Cal Process Measurement Uncertainty (k=2; ±)	Units	TUR
Pressure Measure	79.85psia	±(0.025% Rdg + 1 LSD)	79.82	79.88	79.86 psia	1.5e-003	psia	19.8 : 1

As Found and As Left Data recorded on June 30, 2016

Temperature 69.6°F / 20.9°C Relative Humidity 49% Temp/RH Asset Dewk15

Asset	Manufacturer	Model	Description	Cal Date	Due Date	Traceability Numbers
DewK2	Hart Scientific	2626-H	Hygro-Thermometer, Probe,	Oct 17, 2015	Jul 31, 2016	17-&DEWK2-5-1
DW09	Fluke/DH Instruments	PG7601	Piston Gauge	Nov 11, 2015	Nov 30, 2016	5-&DW09-9-1

Remarks

As-Found: In-Tolerance, No Adjustment Performed

The column labeled Cal Process Uncertainty(CPU) does not include the short term component of the UUT. The column labeled Measurement Uncertainty includes both CPU and the short term component of the UUT. TUR is calculated using CPU.
Note: Reported resolution of the UUT does not represent calibration uncertainty or accuracy of the UUT.

Revision 0

Field not applicable. (P = Pass, F = Fail)

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Certificate/SO Number: 5-A7O3W-20-1 Revision 0

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