



SOUTHWEST RESEARCH INSTITUTE®

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Institute Quality Systems
Institute Calibration Laboratory
Phone: 210-522-5215 Fax 210-522-4834



Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Cost Center / Customer: DIV20 / DON BANNON

Mail Stop: B51

Manufacturer/Model: PAROSCIENTIFIC / 740-45A

Description: PRESSURE GAUGE DIGITAL

Serial Number: 60999

Asset Number: 003972

Procedure: PRESSURE, DIGITAL GAGES - 15 MAR 06

Work Order: 303098836

Date Issued: 30-Dec-2010

Date Calibrated: 30-Dec-2010

*** Date Due :** 30-Jun-2011

**** Results:** FOUND-LEFT

Temperature: 68.0 °F

Humidity: 38 %RH

Barometer: N/A

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 2005, ANSI/NCSL Z540-1-1994 and relevant requirements of the ISO 9000-2000 standard. This certificate shall not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. This certificate shall not be used to claim product endorsement by Southwest Research Institute, American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government. Results of this calibration relate only to the instrument described above at the time of calibration and does not imply any long term stability of the instrument.

*Determined by the customer, does not imply the instrument will remain within tolerance as any number of factors may cause an out-of-tolerance condition before this date. **Data type found in this certificate or attached measurement report must be interpreted as: Found-left - adjustment and/or repair was not performed, As-found - data is before unit is adjusted and/or repaired, As-left - data is after adjusted and/or repaired was performed. The customer has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance.

Measurement uncertainty calculated in accordance with the method described in the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM), for a confidence level of approximately 95 percent using a coverage factor of $k=2$.

Remarks: Accuracy $\pm 0.025\%$ of Full Scale.

Standards Used

<u>Asset #</u>	<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Cal Date</u>	<u>Due Date</u>
005141	RUSKA	2468-714-69900	WEIGHT SET, CLASS N/S	18-Feb-2010	18-Feb-2012
005332	RUSKA	2468-758	DEAD WEIGHT PISTON (2 - 50) psi	16-Apr-2009	16-Apr-2011
010442	RICE LAKE	1 MG - 100 G	WEIGHT SET, CLASS 1	8-Jun-2010	8-Jun-2011
016842	HASTINGS	DV-6R	VACUUM GAUGE	12-May-2010	12-May-2011

Walt Hill

Laboratory Manager

Perry Carpenter

Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303098836	Mfr:	Paroscientific	Technician:	PWC
Asset No:	003972	Model:	740-45A	Type Data:	Found-left
Serial No:	60999	Type:	Pressure Indicator	Cal Date:	30-Dec-10
Remarks:					

Function/Range	Test Point	TI Reading	Difference	+/- Limit	+/- Uncertainty	Result	% Limit
Pressure	psia	psia	psia	psia	psia		
	0.0039	0.0048	0.0009	0.0113	0.0023	Pass	8%
	4.5039	4.5036	-0.0003			Pass	3%
	9.0039	9.0039	0.0000			Pass	0%
	13.5039	13.5041	0.0002			Pass	2%
	18.0039	18.0038	-0.0001			Pass	1%
	22.5039	22.5038	-0.0001			Pass	1%
	27.0039	27.0034	-0.0005			Pass	4%
	31.5039	31.5033	-0.0006			Pass	5%
	36.0039	36.0027	-0.0012			Pass	11%
	40.5039	40.5037	-0.0002			Pass	2%
	45.0039	45.0044	0.0005			Pass	4%
	40.5039	40.5035	-0.0004			Pass	4%
	36.0039	36.0036	-0.0003			Pass	3%
	31.5039	31.5037	-0.0002			Pass	2%
	27.0039	27.0038	-0.0001			Pass	1%
	22.5039	22.5044	0.0005			Pass	4%
	18.0039	18.0045	0.0006			Pass	5%
	13.5039	13.5046	0.0007			Pass	6%
	9.0039	9.0044	0.0005			Pass	4%
	4.5039	4.5036	-0.0003			Pass	3%
	0.0039	0.0062	0.0023			Pass	20%

END OF REPORT