



# SOUTHWEST RESEARCH INSTITUTE®

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Institute Quality Systems  
Institute Calibration Laboratory  
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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:** 303091228

**Date Issued:** 11-Nov-2009

**Date Calibrated:** 11-Nov-2009

**\* Date Due :** 11-May-2010

**\*\* Results:** FOUND-LEFT

**Temperature:** 67.0 °F

**Humidity:** 40 %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  $k=2$ .

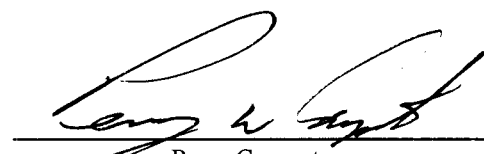
**Remarks:** Accuracy  $\pm 0.025\%$  of Full Scale.

### Standards Used

<u>Asset #</u>	<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Cal Date</u>	<u>Due Date</u>
002856	RUSKA	2468-714-69900	WEIGHT SET, CLASS S	17-Jul-2008	17-Jul-2010
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	12-Jun-2009	12-Jun-2010
013203	HASTINGS	DV-6M	VACUUM GAUGE	14-Jan-2009	14-Jan-2010

  
Walt Hill

Laboratory Manager

  
Perry Carpenter

Metrology Technician

Southwest Research Institute  
Calibration Laboratory  
Measurement Report

Work Order:	303091228	Mfr:	Paroscientific	Technician:	PWC
Asset No:	003972	Model:	740-45A	Type Data:	Found-left
Serial No:	60999	Type:	Pressure Indicator	Cal Date:	11-Nov-09

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

Function/Range	Test Point	TI Reading	Difference	+/- Limit	+/- Uncertainty	Result	% Limit
Pressure	psia	psia	psia	psia	psia		
	0.0039	0.0064	0.0025	0.0113	0.0023	Pass	22%
	4.5039	4.5047	0.0008			Pass	7%
	9.0039	9.0054	0.0015			Pass	13%
	13.5039	13.5058	0.0019			Pass	17%
	18.0039	18.0054	0.0015			Pass	13%
	22.5039	22.5055	0.0016			Pass	14%
	27.0039	27.0055	0.0016			Pass	14%
	31.5039	31.5050	0.0011			Pass	10%
	36.0039	36.0048	0.0009			Pass	8%
	40.5039	40.5056	0.0017			Pass	15%
	45.0039	45.0060	0.0021			Pass	19%
	40.5039	40.5050	0.0011			Pass	10%
	36.0039	36.0049	0.0010			Pass	9%
	31.5039	31.5049	0.0010			Pass	9%
	27.0039	27.0052	0.0013			Pass	12%
	22.5039	22.5057	0.0018			Pass	16%
	18.0039	18.0052	0.0013			Pass	12%
	13.5039	13.5054	0.0015			Pass	13%
	9.0039	9.0051	0.0012			Pass	11%
	4.5039	4.5045	0.0006			Pass	5%
	0.0039	0.0076	0.0037			Pass	33%

END OF REPORT