

Asset No **013762**

Work Order No. **303078868**



Manufacturer: ASHCROFT  
 Description: ~~VACUUM GAUGE~~ *Pressure Gauge*  
 Model: 0 to 30 in. Hg  
 Serial No. 13762  
 Div ID/Loc.  
 Interval: 12 M  
 Cal. Procedure:  
 Cal. Data Sheet: *Pressure Gauges - 29 Mar 06 PNC*

Charge/Project No. OHD20.131 1.20  
 Div/Client DIV20  
 Contact DON BANNON  
 Mail Stop B57  
 Phone 5118

**Special Instructions**

**RUSH**

Requested by:   
DON BANNON

**Policy on service to our customers**

The Institute Calibration Laboratory (Laboratory) seeks the customer's cooperation to clarify work requests before and during work. Customers may witness calibrations with prior arrangement. The recall interval is determined by the customer. Cost for adjustments or repairs are made where the cost is less than 50 percent of the instrument replacement cost or less than \$500 unless otherwise instructed in Special Instructions above. As-found/As-left measurements are recorded and provided to the customer pass or fail. The customer is responsible for providing the manufacturer manual/information or other proposed method/procedure if not available in the Laboratory. The customer will be notified if the proposed method/procedure is inappropriate or out-dated. Deviations from calibration methods/procedures (Limited Calibration) where technically justified shall be approved by the customer before release

**JAN 30 2008**

Date Picked Up

Picked Up By

**Work Summary**

Date	Emp.	Hours	Remarks

# SOUTHWEST RESEARCH INSTITUTE

6220 CULEBRA ROAD • POST OFFICE DRAWER 28510 • SAN ANTONIO, TEXAS, 78228-0510 • TEL (210) 522-5215 • FAX (210) 522-3692

**To:** Don Bannon, Div 20, Bldg 57  
**From:** Walt Hill, Manager  
Institute Calibration Laboratory  
**Date:** Jan. 30, 2008  
**Subject:** Out-of-tolerance Notice

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The purpose of this notice is to alert you of a condition, which may have caused erroneous measurements affecting safety or the quality of products or services your organization provides. The attached as-found readings are provided for your evaluation to determine if the instrument listed below had an impact and if further action is required.

When the as-found results are near the specification limit, +/- a margin less than the measurement uncertainty, it is not possible to state in-tolerance or out-of-tolerance with a 95% level of confidence. It is the Institute Calibration Laboratory policy that the client is made aware of this situation because the end-user is taking some of the risk that the instrument listed below may not meet the end-user measurement requirements.

Your review/evaluation should be conducted in accordance with your organizational quality policy and procedural requirements. If we can be of further assistance, please contact the Calibration Laboratory at 522-5215.

**Manufacturer:** Ashcroft                      **Model:** 0-30 IN. HG  
**Description:** Pressure Gauge                      **Serial Number:** 13762  
**Asset Number:** 13762                      **User ID Number:**  
**Last Calibration:** Unknown

**Date Received for Service:** Jan. 29, 2008    **Work Order Number:** 303078868

**Service Requested:** Scheduled calibration

**Remarks:** Unit exceeds limits. Please see Measurement Report.

Southwest Research Institute  
Calibration Laboratory  
Measurement Report

Work Order:	303078868	Mfr:	Ashcroft	Technician:	PWC
Asset No:	013762	Model:	0-30 in/Hg	Cal Date:	30-Jan-08
Serial No:	13762	Type:	Pressure Gauge		
Remarks:	ASME Grade B Tolerance (2% Middle Half, 3% First and Last Quarter of Dial)				
	Referenced to 0°C.				

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found
Pressure	in/Hg	in/Hg	in/Hg	in/Hg	in/Hg	Result
	0.0	4.8	4.8	0.9	0.29	Fail
	7.5	12.0	4.5	0.6	0.29	Fail
	15.0	19.5	4.5	0.6	0.29	Fail
	22.5	26.9	4.4	0.6	0.29	Fail
	28.5	Overrange	#VALUE!	0.9	0.29	#####
	22.5	26.9	4.4	0.6	0.29	Fail
	15.0	19.5	4.5	0.6	0.29	Fail
	7.5	12.0	4.5	0.6	0.29	Fail
	0.0	4.7	4.7	0.9	0.29	Fail

END OF REPORT



# SOUTHWEST RESEARCH INSTITUTE®

6220 Culebra Road, P.O. Drawer 28510  
Institute Quality Systems  
Institute Calibration Laboratory  
Phone: 210-522-5215 Fax 210-522-4834



Calibration Laboratory  
Certificate #0972-01

## Certificate of Calibration

**Submitted By:** DIV20

**Address:** B57

**Contact:** DON BANNON

**Manufacturer / Model:** ASHCROFT / 0 to 30 in. Hg

**Description:** PRESSURE GAUGE

**Serial No:** 13762

**Asset No:** 013762

**Procedure:** PRESSURE GAGES - 29 MAR 06

**Work Order:** 303078868

**Date Issued:** Jan 30, 2008

**Calibration Date:** Jan 30, 2008

**\*Calibration Due:** Jan 30, 2009

**Calibration Location:** Bldg. 64

**Environment:** Temp. 68.0°F Hum. 40 %RH

**\*\*Data Type:** AS-LEFT

**DivID/Location:** 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. \*\*Found/Left = adjustment and/or repair was not required, As Left = adjusted and/or repaired was required. The client has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance. See Remarks or attached Measurement Report with the same Work Order number for data.

Reported uncertainty calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM) and represents an expanded uncertainty with a coverage factor of k=2 to approximate a 95% confidence level.

**Remarks:** ASME Grade B Tolerance (2% Middle Half, 3% First and Last Quarter of Dial)

### Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
005259	340119B	MENSOR	5014	PRESSURE CALIBRATOR	May 30, 08

*Walter Anthony Romero*

Reviewed by: ( ) srk (x) mar ( ) wgh

*Perry Carpenter*

Measurements by: Perry Carpenter  
Metrology Technician

Southwest Research Institute  
Calibration Laboratory  
Measurement Report

Work Order:	303078868	Mfr:	Ashcroft	Technician:	PWC
Asset No:	013762	Model:	0-30 in/Hg	Cal Date:	30-Jan-08
Serial No:	13762	Type:	Pressure Gauge		
Remarks:	ASME Grade B Tolerance (2% Middle Half, 3% First and Last Quarter of Dial)				
	Referenced to 0°C.				

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Left
Pressure	in/Hg	in/Hg	in/Hg	in/Hg	in/Hg	Result
	0.0	0.0	0.0	0.9	0.29	Pass
	7.5	7.9	0.4	0.6	0.29	Pass
	15.0	15.3	0.3	0.6	0.29	Pass
	22.5	22.7	0.2	0.6	0.29	Pass
	28.5	28.5	0.0	0.9	0.29	Pass
	22.5	22.7	0.2	0.6	0.29	Pass
	15.0	15.5	0.5	0.6	0.29	Pass
	7.5	7.9	0.4	0.6	0.29	Pass
	0.0	0.0	0.0	0.9	0.29	Pass

END OF REPORT