



APPLICATION FOR REGISTRATION AS A REGISTERED SERVICE COMPANY

Public Service Commission
SFN 51277 (2/2014)



TYPE OR PRINT - AN INCOMPLETE OR ILLEGIBLE APPLICATION WILL BE REJECTED

Name of Company Westmor Industries	Email Address Dispatches@westmor-ind.com	Application Date	
Mailing Address PO Box 683	City Morris	State MN	Zip Code 56267
Telephone Number 320-589-2100	Cell Phone Number 800-992-8981	Fax Number 320-589-2206	

Select below all device types your company will certify:

Scales (include maximum capacity, if applicable)	Liquid (include maximum flow rate, if applicable)
<input type="checkbox"/> 1. Rail <input type="checkbox"/> 2. Truck <input type="checkbox"/> 3. Livestock <input type="checkbox"/> 4. Hopper: Max. Capacity: _____ <input type="checkbox"/> 5. Belt <input type="checkbox"/> 6. Over 30 lbs.: Max. Capacity: _____ <input type="checkbox"/> 7. 30 lbs. or less <input type="checkbox"/> 8. Class II (indicate on your calibration report which weight kit is Class II certified) <input type="checkbox"/> 9. Other: Please List:	<input checked="" type="checkbox"/> 1. Retail Fuel (less than 20 gal. per minute) <input checked="" type="checkbox"/> 2. High Flow Retail Fuel (20 gal. per minute or greater) <input checked="" type="checkbox"/> 3. Vehicle Tank: Max. Flow Rate: <u>80</u> <input type="checkbox"/> 4. Stationary Bulk (fuel or oil): Max. Flow Rate: _____ <input checked="" type="checkbox"/> 5. LPG <input type="checkbox"/> 6. Stationary LPG <input type="checkbox"/> 7. Fertilizer: Max. Flow Rate: _____ <input type="checkbox"/> 8. Chemical <input type="checkbox"/> 9. Anhydrous <input type="checkbox"/> 10. Loading Rack <input type="checkbox"/> 11. Other: Please List:

List below all persons employed by your company as a North Dakota Registered Service Person and the device types they are registered to certify (attach a separate sheet to list additional employees):

Permit No.	Employee	Device Types Registered to Certify (list using device type numbers from above)
e.g. 1001	e.g. John Doe	e.g. Scales - 2, 3, 6, 8; e.g. Liquid - 1, 2, 6
	please see attached	



List below all field standards (attach current calibration reports):

14 5gal pavers (refined fuel)	* Calibration reports attached
1- shared DEF can (Def only)	for all *
1- 100gal refined fuel - skip	
1- 100gal LPG - skip	
1- 250gal refined fuel - skip	
1- 200gal LPG - skip	
2- 100 gal refined fuel - mobile	
1- 50gal refined fuel - mobile	

Additional Application Items (initial where appropriate):

Standardized Test Report	<input type="checkbox"/> Copy enclosed
	<input checked="" type="checkbox"/> No change in report filed previously
Tested and Approved Sticker	<input checked="" type="checkbox"/> Copy enclosed <i>just in case!</i>
	<input type="checkbox"/> No change in sticker filed previously
Photocopy of Crimped Lead Wire Seal	<input type="checkbox"/> Copy enclosed
	<input checked="" type="checkbox"/> No change in crimped lead wire seal filed previously

Public Company Listing:

Include my company information on your registered service company list for public contact.

Yes No

I am Kristin McNeill, and have authority to represent this company. By signing this application, I declare that I have examined this form and accompanying documentation, and to the best of my knowledge and belief, the facts stated and documentation provided is true, correct, and complete.

Kristin McNeill
Signature

Send Completed Application and Related Documents To:

Public Service Commission
600 E Boulevard Ave Dept 408
Bismarck ND 58505-0480
Telephone: (701) 328-2400
Fax: (701) 328-2410



ND Permit #	Tech Name	Seal 1	Seal #2	Device Types (all Liquid)
1504	Fred Lembcke	WM	463	3, 5
1665	Doug Tipler	WM	264	1, 2
1681	Jim Hippen	WM	731	3, 5
1682	Dan Murphy	WM	270	3, 5
1683	Jeff Stallman	WM	730	1, 2, 3, 5
1690	Rick Anderson	WM	761	3, 5
1698	Zach Arnold	WM	728	1, 2
1700	Chris Tolifson	WM	790	1, 2
1708	Cole Swenson	WM	808	3, 5
1709	Chris Kepner	WM	812	3, 5
1732	Reed Fox	WM	RF	1, 2
1760	Dustin Keyes	WM	1047	1, 2
1764	David Gass	WM	1054	3, 5
1765	Darin Bouressa	WM	1024	1, 2, 3, 5
1774	Brandon Tambornino	WM	1053	3, 5
1778	Cory Schroeder	WM	1025	1, 2
1793	Shawn Knutson	WM	1108	3, 5

Cancel

Cancel

Cancel



WESTMOR

PIPELINE TO PUMP

TESTED AND APPROVED

Westmor Industries, LLC
Morris, MN
1-800-992-8981

Jan	Feb	Mar	Apr	May	June
July	Aug	Sept	Oct	Nov	Dec
16	17	18	19	20	21

WESTMOR

PIPELINE TO PUMP

TESTED AND APPROVED

Westmor Industries, LLC
Morris, MN
1-800-992-8981

Jan	Feb	Mar	Apr	May	June
July	Aug	Sept	Oct	Nov	Dec
16	17	18	19	20	21

Same info - 2 sizes used depending on application

North Dakota

nd.gov Official Portal for
North Dakota State GovernmentNorth Dakota
LEGENDARY

SECRETARY OF STATE NORTH DAKOTA

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WESTMOR INDUSTRIES, LLC

Corporation Details

System ID: 17312000**Phone:** (800) 992-8981**Type:** FOREIGN LIMITED LIABILITY COMPANY**Status:** Active & Good Standing**Original File Date:** 08/31/2001**Effective Date:** 08/31/2001**State of Origin:** Minnesota

Nature of Business

SERVICING/SALES/INSTALLATION OF GAS PUMPING EQUIPMENT

Principal Office

3 DEVELOPMENT DR PO BOX 683 MORRIS, MN 56267-0683

Registered Agent

STUART STREGE

109 FRANCIS DR

HANKINSON, ND 58041-4112

Established Date: Feb 08, 2016

Generate an Annual Report To File

To Generate a Annual Report form to be filed with the Secretary of State, select the appropriate year of the report you intend to file. This report does not contain details of a report previously filed with the Secretary of State. The annual report years reflected are an indication of the various report forms available in this site and is not an indication that an entity needs to file reports for all years. Missing years indicate that the forms for the missing year have not yet been deployed to the website, or have already been removed, and can be obtained by contacting the Secretary of State.

[2016](#) (generates a forms-fillable pdf in a new pop-up window)[Return to Search Results](#)[Contact Us](#)[Disclaimer](#)[Privacy Policy](#)

We use Secure Sockets Layer (SSL) encryption technology to ensure your information is secure and protected.

Will open a new window (pop-up).

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Receipt Date: November 7, 2016
Cal. Date: November 22, 2016
Report Date: November 22, 2016

Report No.: 336741
Serial No.: 16-94908
Barcode: 203111

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: SERAPHIN
Material: Stainless Steel
Type: Measure
Condition: New
Temperature: 18.0 °C
Pressure: 738.8 mmHg
Relative Humidity: 45.2 %
Standard H₂O Temp.: 18.7 °C
Artifact H₂O Temp.: 18.6 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
5	As Found	5.0006	0.13	2.06	0.24	0.0000265
	As Left	5.0006	0.13			

Neck Calibration: Neck scale plate meets NIST Handbook 105-3 specifications.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet

Quality Manager

Reviewed by:

Pete Whebbe

Metrologist



Receipt Date: November 7, 2016
Cal. Date: November 22, 2016
Report Date: November 22, 2016

Report No.: 336742
Serial No.: 16-94119
Barcode: 203112

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: SERAPHIN
Material: Stainless Steel
Type: Measure
Condition: New
Temperature: 18.0 °C
Pressure: 738.8 mmHg
Relative Humidity: 45.2 %
Standard H₂O Temp.: 18.7 °C
Artifact H₂O Temp.: 18.7 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
5	As Found	5.0001	0.02	2.06	0.24	0.0000265
	As Left	5.0001	0.02			

Neck Calibration: Neck scale plate meets NIST Handbook 105-3 specifications.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

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Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet

Mark Nicollet
Quality Manager

Reviewed by:

Pete Whebbe

Pete Whebbe
Metrologist



Receipt Date: December 6, 2016
Cal. Date: December 7, 2016
Report Date: December 7, 2016

Report No.: 336872
Serial No.: 09-04013/ID S5005
Barcode: 013189

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 11

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Stainless Steel
Type: Measure
Condition: Good/Dirty
Temperature: 18.1 °C
Pressure: 738.3 mmHg
Relative Humidity: 37.6 %
Standard H₂O Temp.: 15.3 °C
Artifact H₂O Temp.: 15.5 °C

Nominal Volume (gal)		Calibrated		<i>k</i>	U (in ³) CCE (°F)	
		Volume (gal)	Error (in ³)			
5	As Found	5.0000	0.01	2.06	0.24	0.0000265
	As Left	5.0000	0.01			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Pete Whebbe

Metrologist

Reviewed by:

Mark Nicollet

Quality Manager



Receipt Date: December 6, 2016
Cal. Date: December 7, 2016
Report Date: December 7, 2016

Report No.: 336874
Serial No.: 47071
Barcode: 017974

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 11

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Mild Steel
Type: Measure
Condition: Good/Dirty
Temperature: 18.1 °C
Pressure: 738.3 mmHg
Relative Humidity: 37.6 %
Standard H₂O Temp.: 14.5 °C
Artifact H₂O Temp.: 14.6 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	4.9995	-0.12	2.06	0.24	0.0000186
	As Left	4.9995	-0.12			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Pete Whebbe

Metrologist

Reviewed by:
Mark Nicollet

Quality Manager



Receipt Date: December 6, 2016
Cal. Date: December 7, 2016
Report Date: December 7, 2016

Report No.: 336869
Serial No.: 49830
Barcode: 018057

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 11

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Mild Steel
Type: Measure
Condition: Good/Dirty
Temperature: 18.1 °C
Pressure: 738.3 mmHg
Relative Humidity: 37.6 %
Standard H₂O Temp.: 14.4 °C
Artifact H₂O Temp.: 14.6 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	5.0004	0.09	2.06	0.24	0.0000186
	As Left	5.0004	0.09			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Pete Whebbe

Metrologist

Reviewed by:
Mark Nicollet

Quality Manager



Receipt Date: November 7, 2016
Cal. Date: November 18, 2016
Report Date: November 22, 2016

Report No.: 336738
Serial No.: 13-91602
Barcode: 202628

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: SERAPHIN
Material: Stainless Steel
Type: Measure
Condition: Good
Temperature: 20.3 °C
Pressure: 728.2 mmHg
Relative Humidity: 50.2 %
Standard H₂O Temp.: 17.2 °C
Artifact H₂O Temp.: 17.2 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
5	As Found	4.9993	-0.17	2.06	0.24	0.0000265
	As Left	4.9993	-0.17			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet

Quality Manager

Reviewed by:

Pete Whebbe

Metrologist



Receipt Date: November 7, 2016
Cal. Date: November 18, 2016
Report Date: November 22, 2016

Report No.: 336739
Serial No.: 09-06215
Barcode: 200732

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: SERAPHIN
Material: Stainless Steel
Type: Measure
Condition: Good/Dirty
Temperature: 20.3 °C
Pressure: 728.2 mmHg
Relative Humidity: 50.2 %
Standard H₂O Temp.: 18.1 °C
Artifact H₂O Temp.: 18.0 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
5	As Found	4.9997	-0.07	2.06	0.24	0.0000265
	As Left	4.9997	-0.07			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet

Quality Manager

Reviewed by:

Pete Whebbe

Metrologist



Receipt Date: December 5, 2016
Cal. Date: December 7, 2016
Report Date: December 8, 2016

Report No.: 336871
Serial No.: 14-92082
Barcode: 202630

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 11

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Stainless Steel
Type: Measure
Condition: Good
Temperature: 18.1 °C
Pressure: 738.3 mmHg
Relative Humidity: 37.6 %
Standard H₂O Temp.: 14.6 °C
Artifact H₂O Temp.: 14.7 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	4.9991	-0.20	2.06	0.24	0.0000265
	As Left	4.9991	-0.20			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

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CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Pete Whebbe

Metrologist

Reviewed by:
Mark Nicollet

Quality Manager



Receipt Date: December 22, 2016
Cal. Date: December 23, 2016
Report Date: December 23, 2016

Report No.: 336982
Serial No.: R 1002/29748
Barcode: 200384

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Ellisco
Material: Mild Steel
Type: Measure
Condition: Fair/Dirty
Temperature: 18.7 °C
Pressure: 732.8 mmHg
Relative Humidity: 49.9 %
Standard H₂O Temp.: 15.7 °C
Artifact H₂O Temp.: 15.7 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	5.0015	0.34	2.06	0.24	0.0000186
	As Left	5.0002	0.04			

Neck Calibration: No neck calibration was performed at this time.

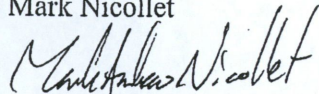
This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

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CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
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Mark Nicollet


Quality Manager

Reviewed by:
Pete Whebbe

Metrologist



14305 SOUTHCROSS DRIVE #150
BURNSVILLE, MN 55306-7008
MN.GOV/COMMERCE/
651.539.1555 FAX 952.435.4040
AN EQUAL OPPORTUNITY EMPLOYER

Receipt Date: December 22, 2016
Cal. Date: December 23, 2016
Report Date: December 23, 2016

Report No.: 336983
Serial No.: R 1003
Barcode: 018411

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Ellisco
Material: Mild Steel
Type: Measure
Condition: Fair/Dirty
Temperature: 18.7 °C
Pressure: 732.8 mmHg
Relative Humidity: 49.9 %
Standard H₂O Temp.: 15.5 °C
Artifact H₂O Temp.: 15.4 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	4.9999	-0.03	2.06	0.24	0.0000186
	As Left	4.9999	-0.03			

Neck Calibration: No neck calibration was performed at this time.

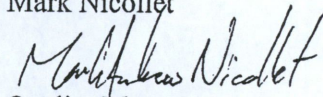
This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

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Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet



Quality Manager

Reviewed by:
Pete Whebbe

Metrologist



Receipt Date: December 22, 2016
Cal. Date: December 23, 2016
Report Date: December 23, 2016

Report No.: 336981
Serial No.: R 1004
Barcode: 200812

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Mild Steel
Type: Measure
Condition: Fair
Temperature: 18.7 °C
Pressure: 732.8 mmHg
Relative Humidity: 49.9 %
Standard H₂O Temp.: 15.5 °C
Artifact H₂O Temp.: 15.6 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	5.0000	0.00	2.06	0.24	0.0000186
	As Left	5.0000	0.00			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet

Quality Manager

Reviewed by:
Pete Whebbe

Metrologist



Receipt Date: December 22, 2016
Cal. Date: December 23, 2016
Report Date: December 23, 2016

Report No.: 336984
Serial No.: 05-01101
Barcode: 200809

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Stainless Steel
Type: Measure
Condition: Good
Temperature: 18.7 °C
Pressure: 732.8 mmHg
Relative Humidity: 49.9 %
Standard H₂O Temp.: 15.6 °C
Artifact H₂O Temp.: 15.6 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	5.0008	0.19	2.06	0.24	0.0000265
	As Left	5.0008	0.19			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet

Quality Manager

Reviewed by:
Pete Whebbe

Metrologist



Receipt Date: December 19, 2016
Cal. Date: December 27, 2016
Report Date: December 27, 2016

Report No.: 336955
Serial No.: "Tipler"
Barcode: 200564

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Stainless Steel
Type: Measure
Condition: Good/Dirty
Temperature: 18.4 °C
Pressure: 737.6 mmHg
Relative Humidity: 44.3 %
Standard H₂O Temp.: 15.4 °C
Artifact H₂O Temp.: 15.3 °C

Nominal Volume (gal)	Calibrated		k	U (in ³)	CCE (°F)
	As Found	As Left			
5	5.0005	5.0005	0.13	2.06	0.24
			0.13		0.0000265

Neck Calibration: No neck calibration was performed at this time.

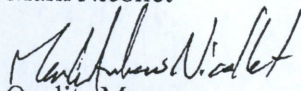
This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet


Quality Manager

Reviewed by:
Erik Alfvín

Metrologist



Receipt Date: December 5, 2016
Cal. Date: December 7, 2016
Report Date: December 7, 2016

Report No.: 336873
Serial No.: 14-92099
Barcode: 202633

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 11

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Stainless Steel
Type: Measure
Condition: Good
Temperature: 18.1 °C
Pressure: 738.3 mmHg
Relative Humidity: 37.6 %
Standard H₂O Temp.: 13.7 °C
Artifact H₂O Temp.: 13.9 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	4.9974	-0.59	2.06	0.24	0.0000265
	As Left	5.0002	0.05			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Pete Whebbe

Pete Whebbe
Metrologist

Reviewed by:

Mark Nicollet

Mark Nicollet
Quality Manager



DEF

14305 SOUTHCROSS DRIVE #150
BURNSVILLE, MN 55306-7008
MN.GOV/COMMERCE/
651.539.1555 FAX 952.435.4040
AN EQUAL OPPORTUNITY EMPLOYER

Receipt Date: November 7, 2016
Cal. Date: November 18, 2016
Report Date: November 22, 2016

Report No.: 336740
Serial No.: 11-89347
Barcode: 201917

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 5 Gallon Measure
Manufacturer: SERAPHIN
Material: Stainless Steel
Type: Measure
Condition: Good/Dirty
Temperature: 20.3 °C
Pressure: 728.2 mmHg
Relative Humidity: 50.2 %
Standard H₂O Temp.: 18.0 °C
Artifact H₂O Temp.: 18.0 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	4.9992	-0.19	2.06	0.24	0.0000265
	As Left	4.9992	-0.19			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet

Quality Manager

Reviewed by:

Pete Whebbe

Metrologist

mobile



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651.539.1555 FAX 952.435.4040
AN EQUAL OPPORTUNITY EMPLOYER

Receipt Date: December 27, 2016
Cal. Date: December 27, 2016
Report Date: December 27, 2016

Report No.: 336997
Serial No.: 061111194-0101
Barcode: 202680

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 50 Gallon Prover
Manufacturer: Determan Brownie
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Excellent
Temperature: 18.8 °C
Pressure: 738.1 mmHg
Relative Humidity: 36.3 %
Standard H₂O Temp.: 10.0 °C
Artifact H₂O Temp.: 10.4 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
50	As Found	49.995	-1.2	2.11	2.4	0.0000288
	As Left	49.995	-1.2			

Neck Calibration: No neck calibration was performed at this time.

This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

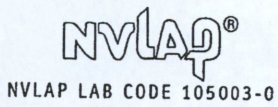
CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet

Quality Manager

Reviewed by:
Erik Alfvin

Metrologist



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Mobile



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Receipt Date: December 23, 2016
Cal. Date: December 27, 2016
Report Date: December 27, 2016

Report No.: 336990
Serial No.: 111164
Barcode: 201112

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Kleespie
Material: Mild Steel
Type: No Bottom Zero
Condition: Good
Temperature: 18.8 °C
Pressure: 739.1 mmHg
Relative Humidity: 39.9 %
Standard H₂O Temp.: 10.6 °C
Artifact H₂O Temp.: 10.7 °C

Nominal Volume (gal)	Calibrated		Error (in ³)	k	U (in ³)	CCE (°F)
	As Found	Volume (gal)				
100	As Found	99.998	-0.3	2.01	3.3	0.0000186
	As Left	99.998	-0.3			

Neck Calibration: No neck calibration was performed at this time.

This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

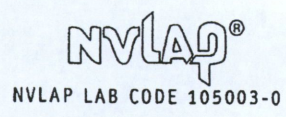
All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet
Mark Nicollet
Quality Manager

Reviewed by:
Erik Alfvin

Metrologist



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Mobile

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BURNSVILLE, MN 55306-7008
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AN EQUAL OPPORTUNITY EMPLOYER

Receipt Date: December 22, 2016
Cal. Date: December 22, 2016
Report Date: December 22, 2016

Report No.: 336977
Serial No.: 11-52086-01
Barcode: 201814

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Seraphin
Material: Stainless Steel
Type: No Bottom Zero
Condition: Good
Temperature: 18.7 °C
Pressure: 741.2 mmHg
Relative Humidity: 43.9 %
Standard H₂O Temp.: 10.3 °C
Artifact H₂O Temp.: 10.4 °C

Nominal		Calibrated			
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³) CCE (°F)
100	As Found	99.998	-0.6	2.01	3.3 0.0000265
	As Left	99.998	-0.6		

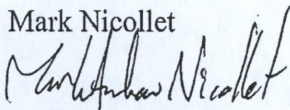
Neck Calibration: No neck calibration was performed at this time.

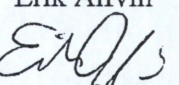
This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet

Quality Manager

Reviewed by:
Erik Alfvin

Metrologist

Stop



14305 SOUTHCROSS DRIVE #150
BURNSVILLE, MN 55306-7008
MN.GOV/COMMERCE/
651.539.1555 FAX 952.435.4040
AN EQUAL OPPORTUNITY EMPLOYER

Receipt Date: December 8, 2016
Cal. Date: December 9, 2016
Report Date: December 9, 2016

Report No.: 336896
Serial No.: 0414571571-1
Barcode: 202639

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: KRISTIN MCNEILL
Phone: 800-992-8981
PO Number: NONE
SOP: 19
Technician ID: 07

Item(s) Submitted: 100 Gallon Prover
Manufacturer: WESTMOR
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good/Dirty
Temperature: 19.3 °C
Pressure: 749.4 mmHg
Relative Humidity: 35.5 %
Standard H₂O Temp.: 12.3 °C
Artifact H₂O Temp.: 12.4 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	k	U (in ³)	CCE (°F)
100	As Found	100.006	1.4	2.01	3.3	0.0000288
	As Left	100.006	1.4			

Neck Calibration: No neck calibration was performed at this time.

This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow.

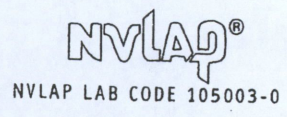
The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

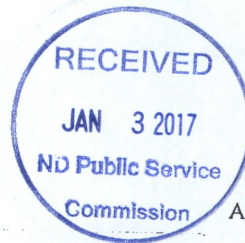
CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Mark Nicollet
Mark Nicollet
Quality Manager

Reviewed by:
Pete Whebbe
Pete Whebbe
Metrologist



Shop



14305 SOUTHCROSS DRIVE #150
 BURNSVILLE, MN 55306-7008
 MN.GOV/COMMERCE/
 651.539.1555 FAX 952.435.4040
 AN EQUAL OPPORTUNITY EMPLOYER

Receipt Date: December 5, 2016
 Cal. Date: December 6, 2016
 Report Date: December 6, 2016

Report No.: 336865
 Serial No.: 414574568
 Barcode: 202640

Calibration Certificate

WESTMOR INDUSTRIES
 3 DEVELOPMENT DRIVE
 MORRIS, MN 56267-0600
 Contact: Kristin McNeill
 Phone: 800-992-8981
 PO Number: None
 SOP: 19
 Technician ID: 19

Item(s) Submitted: 250 Gallon Prover
 Manufacturer: Westmor
 Material: Stainless Steel (304)
 Type: No Bottom Zero
 Condition: Good
 Temperature: 18.3 °C
 Pressure: 730.5 mmHg
 Relative Humidity: 39.5 %
 Standard H₂O Temp.: 13.3 °C
 Artifact H₂O Temp.: 13.5 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
250	As Found	250.010	2.3	2.01	5.8	0.0000288
	As Left	250.010	2.3			

Neck Calibration: No neck calibration was performed at this time.

This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
 Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Erik Alfvin

 Metrologist

Reviewed by:
 Pete Whebbe

 Metrologist

Shop



14305 SOUTHCROSS DRIVE #150
BURNSVILLE, MN 55306-7008
MN.GOV/COMMERCE/
651.539.1555 FAX 952.435.4040
AN EQUAL OPPORTUNITY EMPLOYER

Receipt Date: December 5, 2016
Cal. Date: December 7, 2016
Report Date: December 7, 2016

Report No.: 336866
Serial No.: LPNH-5
Barcode: 017111

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: Kristin McNeill
Phone: 800-992-8981
PO Number: None
SOP: 21
Technician ID: 19

Item(s) Submitted: 100 Gallon LPG
Manufacturer: Kleespie
Material: Mild Steel
Description: Zero Bottom
Condition: Good
Temperature: 18.1 °C
Pressure: 738.3 mmHg
Relative Humidity: 39.9 %
Standard H₂O Temp. 13.3 °C
Artifact H₂O Temp.: 13.7 °C

Nominal		Calibrated			
Volume (gal)		Volume (gal)	Error (in ³)	k	U (in ³) CCE (°F)
100	As Found (at 100 psig)	99.978	-5.1	2.02	5.3 0.0000186
	As Left (at 100 psig)	99.978	-5.1		

Neck Calibration: No neck calibration was performed at this time.

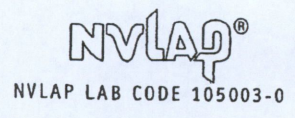
This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow. The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-4 (2010). Uncertainty calculations contain the components in NIST SOP 21 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F.

Erik Alfvin
Erik Alfvin
Metrologist

Reviewed by:
Pete Whebbe
Peter J. Whebbe
Metrologist





Shup

14305 SOUTHCROSS DRIVE #150
BURNSVILLE, MN 55306-7008
MN.GOV/COMMERCE/
651.539.1555 FAX 952.435.4040
AN EQUAL OPPORTUNITY EMPLOYER

Receipt Date: December 8, 2016
Cal. Date: December 14, 2016
Report Date: December 14, 2016

Report No.: 336897
Serial No.: 45765
Barcode: 202718

Calibration Certificate

WESTMOR INDUSTRIES
3 DEVELOPMENT DRIVE
MORRIS, MN 56267-0600
Contact: Kristin McNeill
Phone: 800-992-8981
PO Number: None
SOP: 21
Technician ID: 19

Item(s) Submitted: 200 Gallon LPG Prover
Manufacturer: Arrow Tank
Material: Mild Steel
Description: Zero Bottom
Condition: Good
Temperature: 18.1 °C
Pressure: 742.2 mmHg
Relative Humidity: 49.5 %
Standard H₂O Temp.: 13.2 °C
Artifact H₂O Temp.: 13.7 °C

Nominal Volume (gal)		Calibrated		<i>k</i>	U (in ³)	CCE (°F)
		Volume (gal)	Error (in ³)			
200	As Found (at 100 psig)	200.040	9.2	2.02	7.5	0.0000186
	As Left (at 100 psig)	200.040	9.2			

Neck Calibration: No neck calibration was performed at this time.

This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow. The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-4 (2010). Uncertainty calculations contain the components in NIST SOP 21 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F.

Erik Alfvin
Erik Alfvin
Metrologist

Reviewed by:
Pete Whebbe
Peter J. Whebbe
Metrologist



Receipt Date: December 8, 2016
 Cal. Date: December 14, 2016
 Report Date: December 14, 2016

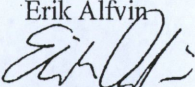
Report No.: 336897
 Serial No.: 45765
 Barcode: 202718

Pressure Correction Chart

WESTMOR INDUSTRIES
 3 DEVELOPMENT DRIVE
 MORRIS, MN 56267-0600
 Contact: Kristin McNeill
 Phone: 800-992-8981
 PO Number: None
 SOP: 21
 Technician ID: 19

Item(s) Submitted: 200 Gallon LPG Prover
 Manufacturer: Arrow Tank
 Material: Mild Steel
 Description: Zero Bottom
 Condition: Good
 Temperature: 18.1 °C
 Pressure: 742.2 mmHg
 Relative Humidity: 49.5 %

Pressure Gauge Reading (psig)	Corrected Volume (gal)
0	199.730
10	199.767
20	199.804
30	199.841
40	199.878
50	199.915
60	199.940
70	199.965
80	199.990
90	200.015
100	200.040
110	200.058
120	200.076
130	200.094
140	200.112
150	200.130
160	200.148
170	200.166
180	200.184
190	200.202
200	200.220

Erik Alfvin

 Metrologist

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Metrological Traceability For:

Minnesota

This laboratory has demonstrated evidence of an unbroken chain of metrological traceability of its standards to the international system of units (SI), documented measurement uncertainties, uses documented measurement procedures, successfully completed training and proficiency tests, documented calibration intervals, submitted a quality management system, and demonstrated suitable measurement assurance for the Scope listed on this certificate.

The Office of Weights and Measures Program assesses laboratories to NIST Handbook 143 - Program Handbook for State Weights and Measures Laboratories and ISO/IEC 17025:2005.

Scope

Mass Echelon II	Weight Carts	Volume Gravimetric, I
50 kg to 1 mg	10 000 lb to 2000 lb	20 L to 10 mL
1000 lb to 0.001 lb	Wheel Load Weighers	100 gal to 0.25 qt
4 oz to 0.03125 oz	20 000 lb to 2000 lb	Volume Transfer, II
Mass Echelon III	Railroad Test Cars	1500 gal to 5 gal
50 kg to 1 mg	110 000 lb to 80 000 lb	100 gal to 25 gal LPG
5000 lb to 0.001 lb		
4 oz to 0.03125 oz		



2016 to 2017

A handwritten signature in black ink, appearing to read "Carol T. Hoekert".

Carol T. Hoekert, Chief
NIST Office of Weights and Measures

Effective Dates: 2016-01-01 to 2017-12-31