



**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**

<b>Name of Company</b> WESTMOR FLUID SOLUTIONS	<b>Email Address</b> RYAN . MARTIN @WESTMOR-IND.COM	<b>Application Date</b> 2-20-15	
<b>Mailing Address</b> 14044 W FREEWAY DRIVE	<b>City</b> COLUMBUS	<b>State</b> MN	<b>Zip Code</b> 55038-9705
<b>Telephone Number</b> 763-571-8110	<b>Cell Phone Number</b>	<b>Fax Number</b> 763-571-1789	

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>1500 gpm</u> <input checked="" type="checkbox"/> 4. Stationary Bulk (fuel or oil): Max. Flow Rate: <u>1500 gpm</u> <input checked="" type="checkbox"/> 5. LPG <input checked="" type="checkbox"/> 6. Stationary LPG <input checked="" type="checkbox"/> 7. Fertilizer: Max. Flow Rate: <u>1500 gpm</u> <input type="checkbox"/> 8. Chemical <input checked="" type="checkbox"/> 9. Anhydrous <input checked="" 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
1517	BRENT GILBERTSON	1, 2, 3, 4, 5, 6, 7, 9, 10
1663	CLIFFORD SWANSON	1, 2, 3, 4, 5, 6, 7, 9, 10
1511	SCOTT FISH	1, 2, 3, 4, 5, 6, 7, 9, 10
1550	TERRY FREEMAN	1, 2, 3, 4, 5, 6, 7, 9, 10

Continued on Page 2



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

5, 50, 100, 500, 1000, 1500 S.V.P.	GALLON REFINED FUELS PROVERS


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 type="checkbox"/> Copy enclosed <input checked="" 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 Rino Hartin, 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.

  
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

**Bauske, Shelly A.**

---

**From:** Ryan Hartin <ryan.hartin@westmor-ind.com>  
**Sent:** Tuesday, April 21, 2015 9:53 AM  
**To:** Bauske, Shelly A.  
**Subject:** Re: Quick Question  
**Attachments:** 20150421093850371.pdf

Hi Shelly,  
Steve does still work with us.

Our SVP is going in next month, I'll send the cert once I get it.

I attached our current certs for all our provers.

*Thank you,*  
*Ryan Hartin*  
*Westmor Fluid Solutions, LLC*  
**Direct 651-842-2551**  
**Main 763-571-8110**

On Mon, Apr 20, 2015 at 9:30 AM, Bauske, Shelly A. <[sbauske@nd.gov](mailto:sbauske@nd.gov)> wrote:

Hi Ryan

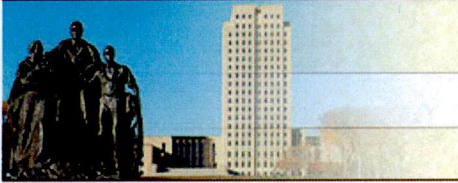
I'm working on your Registered Service Company application. Does Steve Pishler still work for you?

Also just a reminder to submit the calibration reports when the metrology for your standards is completed. Some of the standards are due in May, including your Small Volume Prover.

If you have any questions, please let me know.

Thank you!

North Dakota

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

# SECRETARY OF STATE NORTH DAKOTA

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## WESTMOR FLUID SOLUTIONS, LLC

### Corporation Details

**System ID:** 33198400**Phone:** (800) 835-6074**Type:** FOREIGN LIMITED LIABILITY COMPANY**Status:** Active & Good Standing**Original File Date:** 01/03/2013**Effective Date:** 01/03/2013**State of Origin:** Minnesota

### Nature of Business

SERVICE/SELL PARTS &amp; MANUFACTURE EQUIP FOR FLUID MOVEMENT

### Principal Office

7220 CENTRAL AVE NE FRIDLEY, MN 55432-3584

### Registered Agent

**SEARCH COMPANY OF NORTH DAKOTA LLC**

1501 N 12TH ST STE 1

BISMARCK, ND 58501-2713

Established Date: Jan 03, 2013

### 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.

[2014](#) (generates a forms-fillable pdf in a new pop-up window)[Return to Search Results](#)[Contact Us](#)[Disclaimer](#)[Privacy Policy](#)

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Will open a new window (pop-up).

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Receipt Date: November 4, 2014  
 Test Date: November 5, 2014  
 Report Date: November 5, 2014

State Test No.: 333355  
 Serial No.: 7312 B  
 Bar Code: 200758

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 32  
 Technician ID: 18

Item(s) Submitted: 5 Gallon Measure  
 Manufacturer: Seraphin  
 Material: Mild Steel  
 Equipment Number: None  
 Condition: Good  
 Temperature: 19. °C  
 Pressure: 734.9 mmHg  
 Relative Humidity: 37. %

Nominal Volume		Error (in <sup>3</sup> )	Volume Contained At Zero Line (gallons)	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion (/°F)
5 gal	As Found	-0.42	4.9982	0.62	0.0000186
	As Left	-0.01	4.9999	0.62	

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

This measure or prover has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds, a drain time of 10 seconds after cessation of full flow and at a reference temperature of 60 °F.

The measure or prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

Benjamin FitzPatrick

*Benjamin FitzPatrick*  
 Deputy Director

Reviewed by:

Mark Nicollet

*Mark Nicollet*  
 Quality Manager



Receipt Date: November 4, 2014  
 Test Date: November 5, 2014  
 Report Date: November 5, 2014

State Test No.: 333354  
 Serial No.: 46801  
 Bar Code: 200668

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 32  
 Technician ID: 18

Item(s) Submitted: 5 Gallon Measure  
 Manufacturer: Seraphin  
 Material: Mild Steel  
 Equipment Number: None  
 Condition: Fair  
 Temperature: 19. °C  
 Pressure: 734.9 mmHg  
 Relative Humidity: 37. %

Nominal Volume		Error (in <sup>3</sup> )	Volume	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion (°F)
			Contained At Zero Line (gallons)		
5 gal	As Found	-0.54	4.9977	0.62	0.0000186
	As Left	-0.11	4.9995	0.62	

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

This measure or prover has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds, a drain time of 10 seconds after cessation of full flow and at a reference temperature of 60 °F.

The measure or prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

Benjamin FitzPatrick

Deputy Director

Reviewed by:

Mark Nicollet

Quality Manager



Receipt Date: November 4, 2014  
Test Date: November 5, 2014  
Report Date: November 5, 2014

State Test No.: 333353  
Serial No.: 07-05341  
Bar Code: 200667

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
14044 W. FREEWAY DRIVE  
COLUMBUS, MN 55038  
Contact: Ryan Hartin  
Phone: 763-502-9613  
PO Number: None  
SOP: 32  
Technician ID: 18

Item(s) Submitted: 5 Gallon Measure  
Manufacturer: Seraphin  
Material: Stainless Steel  
Equipment Number: None  
Condition: Excellent  
Temperature: 19. °C  
Pressure: 734.9 mmHg  
Relative Humidity: 37. %

Nominal Volume		Error (in <sup>3</sup> )	Volume Contained At Zero Line (gallons)	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion (°F)
5 gal	As Found	-0.18	4.9992	0.62	0.0000265
	As Left	-0.18	4.9992	0.62	

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

This measure or prover has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds, a drain time of 10 seconds after cessation of full flow and at a reference temperature of 60 °F.

The measure or prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

Benjamin FitzPatrick

Deputy Director

Reviewed by:

Mark Nicollet

Quality Manager

Receipt Date: November 18, 2014  
 Test Date: November 21, 2014  
 Report Date: December 2, 2014



State Test No.: 333426  
 Serial No.: 051271555-0103  
 Barcode: 202102

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 33  
 Technician ID: 18

Item(s) Submitted: 100 Gallon Prover  
 Manufacturer: Determan Brownie Inc  
 Material: Stainless Steel (304)  
 Description: Dry Bottom  
 Condition: Excellent  
 Temperature: 20.°C  
 Pressure: 737.1 mmHg  
 Relative Humidity: 24. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(°F)
100 gal	As Found	99.976	-5.6	3.0	0.0000288
	As Left	99.997	-0.4	3.0	

Neck Calibration: No neck calibration was done 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 and at a reference temperature of 60 °F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

Benjamin FitzPatrick

*Benjamin FitzPatrick*  
 Deputy Director

Reviewed by:

Mark Nicollet

*Mark Nicollet*  
 Quality Manager

Receipt Date: May 5, 2014  
Test Date: May 6, 2014  
Report Date: May 6, 2014



State Test No.: 332500  
Serial No.: 10903211-8  
Bar Code: 017845

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
7220 CENTRAL AVE NE  
MINNEAPOLIS, MN 55432  
Contact: Ryan Hartin  
Phone: 763-502-9613  
PO Number: None  
SOP: 33  
Technician ID: 08

Item(s) Submitted: 100 Gallon Prover  
Manufacturer: Brownie  
Material: ss  
Description: Dry Bottom  
Condition: Good  
Temperature: 19.6°C  
Pressure: 735.1 mmHg  
Relative Humidity: 41. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(°F)
100 gal	As Found	99.996	-0.8	3.0	0.0000265
	As Left	99.996	-0.8	3.0	

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

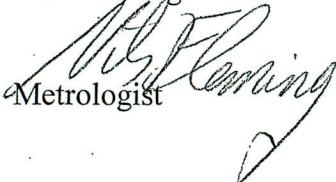
This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of flow and at a reference temperature of 60°F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

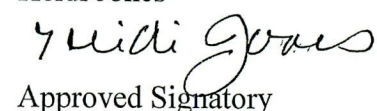
Nils Fleming



Metrologist

Reviewed by:

Heidi Jones



Approved Signatory



Weights & Measures Metrology Laboratory  
 14305 Southcross Drive #150  
 Burnsville, MN 55306-7008  
 651.539.1555 FAX 651.539.1553



Receipt Date: May 5, 2014  
 Test Date: May 6, 2014  
 Report Date: May 6, 2014

State Test No.: 332501  
 Serial No.: 060810915-0201  
 Bar Code: 200748

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 7220 CENTRAL AVE NE  
 MINNEAPOLIS, MN 55432  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 33  
 Technician ID: 08

Item(s) Submitted: 100 Gallon Prover  
 Manufacturer: Determan Brownie Inc  
 Material: ss  
 Description: Dry Bottom  
 Condition: Good  
 Temperature: 19.6°C  
 Pressure: 736.5 mmHg  
 Relative Humidity: 39. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
100 gal	As Found	100.034	7.8	3.0	0.0000288
	As Left	100.000	0.0	3.0	

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

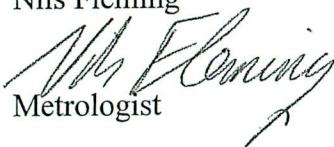
This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of flow and at a reference temperature of 60°F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

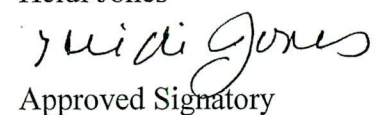
Nils Fleming



Metrologist

Reviewed by:

Heidi Jones



Approved Signatory

Receipt Date: July 28, 2014  
 Test Date: July 31, 2014  
 Report Date: July 31, 2014



State Test No.: 332865  
 Serial No.: 051320997-0102  
 Bar Code: 202342

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: NONE  
 SOP: 33  
 Technician ID: 07

Item(s) Submitted: 100 Gallon Prover  
 Manufacturer: Determan Brownie Inc  
 Material: SS  
 Description: Dry Bottom  
 Condition: Excellent  
 Temperature: 26.9°C  
 Pressure: 737.1 mmHg  
 Relative Humidity: 40. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
100 gal	As Found	99.993	-1.6	3.0	0.0000265
	As Left	99.993	-1.6	3.0	

Neck Calibration: No neck calibration was done 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 flow and at a reference temperature of 60°F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Mark Nicollet

  
 Quality Manager

Reviewed by:

Kari Anderson

  
 Metrologist

Receipt Date: October 6, 2014  
 Test Date: October 6, 2014  
 Report Date: October 7, 2014



State Test No.: 333205  
 Serial No.: 031111168-0103  
 Bar Code: 201898

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 33  
 Technician ID: 18

Item(s) Submitted: 100 Gallon Prover  
 Manufacturer: DETERMAN BROWNIE INC  
 Material: Stainless Steel  
 Description: Dry Bottom  
 Condition: Good  
 Temperature: 18.4 °C  
 Pressure: 723.6 mm Hg  
 Relative Humidity: 40. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(°F)
100 gal	As Found	99.974	-5.9	3.0	0.0000265
	As Left	99.996	-0.9	3.0	

Neck Calibration: No neck calibration was done 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 and at a reference temperature of 60 °F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

Benjamin FitzPatrick  
  
 Deputy Director

Reviewed by:  
 Kari Anderson  
  
 Metrologist



Weights & Measures Metrology Laboratory  
 14305 Southcross Drive #150  
 Burnsville, MN 55306-7008  
 651.539.1555 FAX 651.539.1553

Receipt Date: May 12, 2014  
 Test Date: May 13, 2014  
 Report Date: May 13, 2014



State Test No.: 332529  
 Serial No.: 0314542120  
 Bar Code: 202504

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 7220 CENTRAL AVE NE  
 MINNEAPOLIS, MN 55432  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 33  
 Technician ID: 08

Item(s) Submitted: 100 Gallon Prover  
 Manufacturer: Westmor Fluid Solutions  
 Material: ss  
 Description: Dry Bottom  
 Condition: New  
 Temperature: 20.1°C  
 Pressure: 739.4 mmHg  
 Relative Humidity: 44. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
100 gal	As Found	100.050	11.7	3.0	0.0000288
	As Left	100.003	0.7	3.0	

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

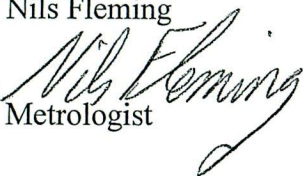
This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of flow and at a reference temperature of 60°F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Nils Fleming



Metrologist

Reviewed by:

Heidi Jones



Reviewer



Receipt Date: November 4, 2014  
Test Date: November 4, 2014  
Report Date: November 4, 2014

State Test No.: 333356  
Serial No.: 3978131-4  
Bar Code: 018636

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
14044 W. FREEWAY DRIVE  
COLUMBUS, MN 55038  
Contact: Ryan Hartin  
Phone: 763-502-9613  
PO Number: None  
SOP: 33  
Technician ID: 18

Item(s) Submitted: 100 Gallon Prover  
Manufacturer: Brownie  
Material: Mild Steel  
Description: Dry Bottom  
Condition: Good  
Temperature: 20.4°C  
Pressure: 735. mmHg  
Relative Humidity: 41. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
100 gal	As Found	99.988	-2.9	3.0	0.0000186
	As Left	99.988	-2.9	3.0	

Neck Calibration: No neck calibration was done 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 and at a reference temperature of 60 °F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

Benjamin FitzPatrick

*Benjamin FitzPatrick*  
Deputy Director

Reviewed by:

Kari Anderson

*Kari Anderson*  
Metrologist



Weights & Measures Metrology Laboratory  
 14305 Southcross Drive #150  
 Burnsville, MN 55306-7008  
 651.539.1555 FAX 651.539.1553

Receipt Date: May 15, 2014  
 Test Date: May 19, 2014  
 Report Date: May 19, 2014



State Test No.: 332537  
 Serial No.: 3610-02  
 Bar Code: 200685

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 7220 CENTRAL AVE NE  
 MINNEAPOLIS, MN 55432  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 33  
 Technician ID: 08

Item(s) Submitted: 100 Gallon Prover  
 Manufacturer: Brownie  
 Material: ms  
 Description: Dry Bottom  
 Condition: Good  
 Temperature: 19.7°C  
 Pressure: 734.1 mmHg  
 Relative Humidity: 46. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
100 gal	As Found	100.006	1.4	3.0	0.0000186
	As Left	100.006	1.4	3.0	

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

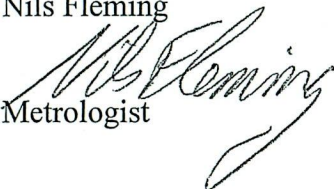
This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of flow and at a reference temperature of 60°F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Nils Fleming



Metrologist

Reviewed by:

Heidi Jones



Laboratory Administrator

Receipt Date: January 5, 2015  
 Test Date: January 7, 2015  
 Report Date: January 7, 2015



State Test No.: 333605  
 Serial No.: 888231104  
 Barcode: 019269

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: NONE  
 SOP: 33  
 Technician ID: 07

Item(s) Submitted: 100 Gallon Prover  
 Manufacturer: Brownie  
 Material: Stainless Steel  
 Description: Dry Bottom  
 Condition: Good  
 Temperature: 19.9°C  
 Pressure: 757.1 mmHg  
 Relative Humidity: 23. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
100 gal	As Found	99.957	-9.9	3.0	0.0000265
	As Left	100.003	0.7	3.0	

Neck Calibration: No neck calibration was done 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 and at a reference temperature of 60 °F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

Mark Nicollet

*Mark Nicollet*  
 Quality Manager

Reviewed by:

Benjamin FitzPatrick

*Benjamin FitzPatrick*

Deputy Director



Receipt Date: November 3, 2014  
 Test Date: November 4, 2014  
 Report Date: November 4, 2014

State Test No.: 333346  
 Serial No.: 5956670-01  
 Bar Code: 019278

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 33  
 Technician ID: 18

Item(s) Submitted: 500 Gallon Prover  
 Manufacturer: Brownie  
 Material: Mild Steel  
 Description: Dry Bottom  
 Condition: Good  
 Temperature: 20.°C  
 Pressure: 737.2 mmHg  
 Relative Humidity: 41. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
500 gal	As Found	499.560	-101.6	3.0	0.0000186
	As Left	500.007	1.7	3.0	

Neck Calibration: No neck calibration was done 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 and at a reference temperature of 60 °F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

Reviewed by:

Mark Nicollet

*Mark Nicollet*  
 Quality Manager

Benjamin FitzPatrick

*Benjamin FitzPatrick*

Deputy Director



Receipt Date: November 18, 2014  
 Test Date: November 19, 2014  
 Report Date: November 20, 2014

State Test No.: 333427  
 Serial No.: 031271251-0101  
 Barcode: 202101

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 33  
 Technician ID: 18

Item(s) Submitted: 500 Gallon Prover  
 Manufacturer: Determan Brownie Inc  
 Material: Stainless Steel (304)  
 Description: Dry Bottom  
 Condition: Excellent  
 Temperature: 18.6°C  
 Pressure: 734.7 mmHg  
 Relative Humidity: 32. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
500 gal	As Found	500.046	10.7	3.0	0.0000288
	As Left	500.007	1.6	3.0	

Neck Calibration: No neck calibration was done 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 and at a reference temperature of 60 °F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

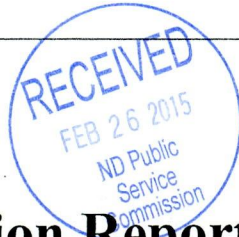
Benjamin FitzPatrick  
  
 Deputy Director

Reviewed by:  
 Kari Anderson  
  
 Metrologist



Weights & Measures Metrology Laboratory  
 14305 Southcross Drive #150  
 Burnsville, MN 55306-7008  
 651.539.1555 FAX 651.539.1553

Receipt Date: May 19, 2014  
 Test Date: May 21, 2014  
 Report Date: May 21, 2014



State Test No.: 332553  
 Serial No.: 100110260-0101  
 Bar Code: 200071

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 7220 CENTRAL AVE NE  
 MINNEAPOLIS, MN 55432  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 33  
 Technician ID: 08

Item(s) Submitted: 500 Gallon Prover  
 Manufacturer: Determan Brownie Inc.  
 Material: ss  
 Description: Dry Bottom  
 Condition: Good  
 Temperature: 21.2°C  
 Pressure: 737.4 mmHg  
 Relative Humidity: 53. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(°F)
500 gal	As Found	500.045	10	14	0.0000265
	As Left	500.002	0	14	

Neck Calibration: No neck calibration was done 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 flow and at a reference temperature of 60°F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Nils Fleming  
  
 Metrologist

Reviewed by:  
 Heidi Jones  
  
 Laboratory Administrator

Receipt Date: October 6, 2014  
 Test Date: October 7, 2014  
 Report Date: October 7, 2014



State Test No.: 333206  
 Serial No.: 090610694-0101  
 Bar Code: 201203

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: NONE  
 SOP: 33  
 Technician ID: 13

Item(s) Submitted: 1000 Gallon Prover  
 Manufacturer: Determan Brownie  
 Material: Stainless Steel  
 Description: Dry Bottom  
 Condition: Good  
 Temperature: 21.1°C  
 Pressure: 729.1 mmHg  
 Relative Humidity: 43. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
1000 gal	As Found	999.954	-10.7	28.0	0.0000265
	As Left	999.954	-10.7	28.0	

Neck Calibration: No neck calibration was done 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 and at a reference temperature of 60 °F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95 %.

Results apply to item identified in this report only.

Reviewed by:

Mark Nicollet

*Mark Nicollet*  
 Quality Manager

Kari Anderson

*Kari Anderson*  
 Metrologist



Weights & Measures Metrology Laboratory  
 14305 Southcross Drive #150  
 Burnsville, MN 55306-7008  
 651.539.1555 FAX 651.539.1553

Receipt Date: May 12, 2014  
 Test Date: May 14, 2014  
 Report Date: May 14, 2014



State Test No.: 332530  
 Serial No.: 0114527708  
 Bar Code: 202505

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 7220 CENTRAL AVE NE  
 MINNEAPOLIS, MN 55432  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 33  
 Technician ID: 08

Item(s) Submitted: 1000 Gallon Prover  
 Manufacturer: Westmor Fluid Solutions  
 Material: ss  
 Description: Dry Bottom  
 Condition: New  
 Temperature: 19.9°C  
 Pressure: 742.5 mmHg  
 Relative Humidity: 45. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
1000 gal	As Found	1000.023	5	28	0.0000288
	As Left	1000.023	5	28	

Neck Calibration: Approved.

This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of flow and at a reference temperature of 60°F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Nils Fleming

Metrologist

Reviewed by:

Heidi Jones

Reviewer



Receipt Date: July 28, 2014  
 Test Date: July 31, 2014  
 Report Date: July 31, 2014

State Test No.: 332866  
 Serial No.: 11978368-1  
 Bar Code: 202358

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 14044 W. FREEWAY DRIVE  
 COLUMBUS, MN 55038  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: NONE  
 SOP: 33  
 Technician ID: 13

Item(s) Submitted: 1000 Gallon Prover  
 Manufacturer: Determan Brownie Inc  
 Material: SS  
 Description: Dry Bottom  
 Condition: Excellent  
 Temperature: 24.9°C  
 Pressure: 738.1 mmHg  
 Relative Humidity: 54. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
1000 gal	As Found	999.970	-7	28	0.0000265
	As Left	999.970	-7	28	

Neck Calibration: No neck calibration was done 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 flow and at a reference temperature of 60°F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Kari Anderson

*Kari Anderson*  
 Metrologist

Reviewed by:

Mark Nicollet

*Mark Nicollet*  
 Quality Manager

Receipt Date: May 5, 2014  
Test Date: May 5, 2014  
Report Date: May 5, 2014



State Test No.: 332498  
Serial No.: 060810915-0101  
Bar Code: 200749

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
7220 CENTRAL AVE NE  
MINNEAPOLIS, MN 55432  
Contact: Ryan Hartin  
Phone: 763-502-9613  
PO Number: None  
SOP: 33  
Technician ID: 08

Item(s) Submitted: 1000 Gallon Prover  
Manufacturer: Determan Brownie Inc  
Material: ss  
Description: Dry Bottom  
Condition: Good  
Temperature: 19.°C  
Pressure: 736.4 mmHg  
Relative Humidity: 38. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
1000 gal	As Found	999.900	-23	28	0.0000288
	As Left	1000.011	3	28	

Neck Calibration: No neck calibration was done 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 flow and at a reference temperature of 60°F.

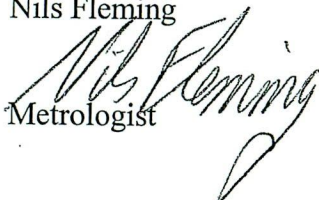
The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Nils Fleming

Metrologist



Reviewed by:

Heidi Jones



Approved Signatory



Weights & Measures Metrology Laboratory  
 14305 Southcross Drive #150  
 Burnsville, MN 55306-7008  
 651.539.1555 FAX 651.539.1553

Receipt Date: May 23, 2014  
 Test Date: May 27 & 28, 2014  
 Report Date: May 28, 2014



State Test No.: 332573  
 Serial No.: 090610694-0201  
 Bar Code: 200498

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 7220 CENTRAL AVE NE  
 MINNEAPOLIS, MN 55432  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: NONE  
 SOP: 33  
 Technician ID: 07

Item(s) Submitted: 1500 Gallon Prover  
 Manufacturer: Determan Brownie  
 Material: SS  
 Description: Dry Bottom  
 Condition: Excellent  
 Temperature: 23.3°C  
 Pressure: 735.4 mmHg  
 Relative Humidity: 63. %

Nominal Volume		Volume (gallons)	Error (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
1500 gal	As Found	1499.942	-13	45	0.0000265
	As Left	1499.942	-13	45	

Neck Calibration: No neck calibration was done 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 flow and at a reference temperature of 60°F.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Mark Nicollet

  
 Metrologist

Reviewed by:  
 Nils Fleming

  
 Technical Manager



Weights & Measures Metrology Laboratory  
 14305 Southcross Drive #150  
 Burnsville, MN 55306-7008  
 651.539.1555 FAX 651.539.1553



Receipt Date: June 16, 2014  
 Test Date: June 19, 2014  
 Report Date: June 19, 2014

State Test No.: 332687  
 Serial No.: 24360  
 Bar Code: 201188

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
 7220 CENTRAL AVE NE  
 MINNEAPOLIS, MN 55432  
 Contact: Ryan Hartin  
 Phone: 763-502-9613  
 PO Number: None  
 SOP: 34  
 Technician ID: 08

Item(s) Submitted: 25 Gallon LPG Prover  
 Manufacturer: Arrow  
 Material: ms  
 Description: Wet Bottom  
 Condition: Good  
 Temperature: 25.4°C  
 Pressure: 737.5 mmHg  
 Relative Humidity: 58. %

Nominal Volume	Error As Found (in <sup>3</sup> )	Error As Left (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(/°F)
25 gal	-2	-2	4	0.0000186

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

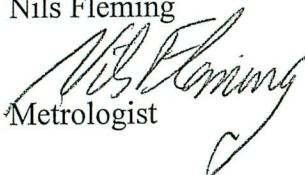
This prover has been calibrated as a "to contain after wet down" vessel at a reference temperature of 60°F and a reference pressure of 100 psig.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Nils Fleming



Metrologist

Reviewed by:

Mark Nicollet



Quality Manager



Receipt Date: June 16, 2014  
Test Date: June 19, 2014  
Report Date: June 19, 2014



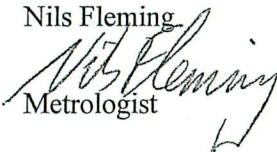
State Test No.: 332687  
Serial No.: 24360

## Pressure Correction Chart

WESTMOR FLUID SOLUTIONS LLC  
7220 CENTRAL AVE NE  
MINNEAPOLIS, MN 55432  
Contact: Ryan Hartin  
Phone: 763-502-9613  
PO Number: None  
SOP: 34  
Technician ID: 08

Item(s) Submitted: 25 Gallon LPG Prover  
Manufacturer: Arrow  
Material: ms  
Description: Wet Bottom  
Condition: Good  
Temperature: 25.4°C  
Pressure: 737.5 mmHg  
Relative Humidity: 58. %

Pressure Gauge Reading (PSIG)	Volume Correction (gal)
0	-0.061
10	-0.053
20	-0.045
30	-0.037
40	-0.029
50	-0.021
60	-0.019
70	-0.017
80	-0.015
90	-0.013
100	-0.011
110	-0.009
120	-0.007
130	-0.005
140	-0.003
150	-0.001
160	0.001
170	0.003
180	0.005
190	0.007
200	0.009

Nils Fleming  
  
Metrologist



Receipt Date: June 16, 2014  
Test Date: June 17, 2014  
Report Date: June 17, 2014

State Test No.: 332688  
Serial No.: 28816  
Barcode: 019785

## Calibration Report

WESTMOR FLUID SOLUTIONS LLC  
7220 CENTRAL AVE NE  
MINNEAPOLIS, MN 55432  
Contact: Ryan Hartin  
Phone: 763-502-9613  
PO Number: None  
SOP: 34  
Technician ID: 07

Item(s) Submitted: 100 gallon LPG Prover  
Manufacturer: ARROW  
Material: MS  
Description: Wet Bottom  
Condition: Good  
Temperature: 25.7°C  
Pressure: 732.5 mmHg  
Relative Humidity: 51. %

Nominal Volume	Error As Found (in <sup>3</sup> )	Error As Left (in <sup>3</sup> )	Uncertainty (in <sup>3</sup> )	Coefficient of Expansion(°F)
100 gal	9	9	10	0.0000186

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

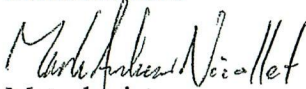
This prover has been calibrated as a "to contain after wet down" vessel at a reference temperature of 60°F and a reference pressure of 100 psig.

The prover listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota. 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.

The reported uncertainty conforms to NIST Technical Note 1297. The confidence interval is 95%.

Results apply to item identified in this report only.

Mark Nicollet



Metrologist

Reviewed by:

Nils Fleming



Technical Manager

Receipt Date: June 16, 2014  
Test Date: June 17, 2014  
Report Date: June 17, 2014



State Test No.: 332688  
Serial No.: 28816

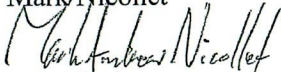
## Pressure Correction Chart

WESTMOR FLUID SOLUTIONS LLC  
7220 CENTRAL AVE NE  
MINNEAPOLIS, MN 55432  
Contact: Ryan Hartin  
Phone: 763-502-9613  
PO Number: None  
SOP: 34  
Technician ID: 07

Item(s) Submitted: 100 gallon LPG Prover  
Manufacturer: ARROW  
Material: MS  
Description: Wet Bottom  
Condition: Good  
Temperature: 25.7°C  
Pressure: 732.5 mmHg  
Relative Humidity: 51. %

Pressure Gauge Reading (PSIG)	Volume Correction (gal)
0	-0.159
10	-0.125
20	-0.091
30	-0.056
40	-0.022
50	0.012
60	0.017
70	0.023
80	0.028
90	0.034
100	0.039
110	0.049
120	0.059
130	0.069
140	0.079
150	0.089
160	0.095
170	0.102
180	0.109
190	0.116
200	0.122

Mark Nicollet



Metrologist

Sup-01  
water draw

**MICHIGAN DEPARTMENT OF AGRICULTURE  
& RURAL DEVELOPMENT**

**LABORATORY DIVISION**



**E.C. HEFFRON METROLOGY LABORATORY**



NVLAP Lab Code 2000408-0

940 Venture Lane  
Williamston, Michigan 48895  
517/655-8202  
517/655-8303 (Fax)

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## Calibration Report

TEST NO: MI-05-14-11842

TEST DATE: 5/2/2014

Page 1 of 2

**CALIBRATED FOR:**

Westmor Fluid Solutions  
1241 72<sup>nd</sup> Avenue NE  
Minneapolis, MN 55432



**CALIBRATED BY:**

Michigan Dept. of Agriculture  
E.C. Heffron Metrology Laboratory  
940 Venture Lane  
Williamston, MI 48895

CONTACT: Scott Fish

PHONE: (763) 571-8110

FAX: (763) 502-9862

S/N: 000045

MODEL NO: H44025  
(LR)IA251AAWWE

MFG: Flow MD

TEST ITEM: One 20-Gallon Small Volume Prover.

DATE OF ARRIVAL: 5/1/2014

TEST ITEM CONDITION ON ARRIVAL: Good

TEST METHOD: MI-14SVP, a gravimetric calibration procedure for use with small volume provers

This prover has been compared to the Standards of the State of Michigan which are traceable to the National Institute of Standards and Technology. NIST test numbers are on file.

The prover was calibrated to determine the volume of water delivered at 60° F from one run of the piston between two optical switches.

The volume for the item in this report is as found or as left at the time of calibration. The result applies only to the item calibrated.

The process used for calibrating this item meets the requirements of ANSI/NCSL Z540-1.

The prover was not adjusted.

Calibration processes were monitored and found to be in control. Uncertainty calculations conform to NIST Technical Note 1297. Components attributed to the effects of viscosity of the water were not included in the uncertainties. The combined standard uncertainty is multiplied by a coverage factor of  $k=2$  to report the expanded uncertainty, which defines an interval with a confidence level of approximately 95%.

The environmental conditions in the laboratory are maintained at:  
Temperature: 18°C - 27°C ± 2°C; maximum change 1°C/h.  
Relative Humidity (maximum per 4 hours): 40% to 60% ± 10%.

**CALIBRATED FOR:**  
 Westmor Fluid Solutions  
 1241 72<sup>nd</sup> Avenue NE  
 Minneapolis, MN 55432



TEST NO: MI-05-14-11842

S/N: 000045

TEST DATE: 5/2/2014

This report shall not be used to claim endorsement by NIST, WMD, NVLAP, or any agency of the U.S. Government or the State of Michigan.

Prover Constants:

Area Thermal Expansion Coef. (Ga)	$1.92 \times 10^{-5} / ^\circ\text{F}$
Detector Thermal Expansion Coef. (GI)	$9.60 \times 10^{-6} / ^\circ\text{F}$
Modulus of Elasticity (E)	$2.8 \times 10^7$ psi
Inside Diameter (ID)	17 in
Wall Thickness (WT)	0.582 in

The following volume was determined:

NOMINAL VALUE	VOLUME	UNCERTAINTY $\pm$ K = 2
20 gal	20.0096 gal	0.0019 gal

Signed:

*Nicholas A. Santos*

5/16/2014

*[Signature]*

5/16/2014

Calibrating Metrologist

Date Approved Signatory

Date