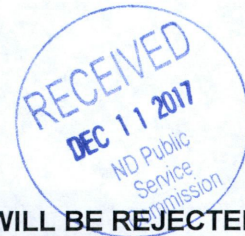




APPLICATION FOR REGISTRATION AS A REGISTERED SERVICE COMPANY

Public Service Commission
SFN 51277 (2/2014)



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

Name of Company Westmor Fluid Solutions, LLC.	Email Address ryan.hartin@westmor-ind.com	Application Date 11/13/2017	
Mailing Address 14044 W Freeway Drive	City Columbus	State MN	Zip Code 55038-9705
Telephone Number 763-571-8110	Cell Phone Number 651-842-2551	Fax Number 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: _____ <input checked="" type="checkbox"/> 4. Stationary Bulk (fuel or oil): Max. Flow Rate: _____ <input checked="" type="checkbox"/> 5. LPG <input checked="" type="checkbox"/> 6. Stationary LPG <input checked="" type="checkbox"/> 7. Fertilizer: Max. Flow Rate: _____ <input type="checkbox"/> 8. Chemical <input 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)
<i>e.g. 1001</i>	<i>e.g. John Doe</i>	<i>e.g. Scales - 2, 3, 6, 8; e.g. Liquid - 1, 2, 6</i>
1511	Scott Fish	1,2,3,4,7,10
1550	Terry Freeman	1,2,3,4,7,10
1517	Brent Gilbertson	1,2,3,4,5,6,7,10
1485	Steve Pishler	1,2,3,4,5,6,7,10
1663	Clifford Swanson	1,2,3,4,7,10
1762	Michael Woessner	1,2,3,4,7,10

Continued on Page 2

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

Prover Certs are attached.	

Additional Application Items (initial where appropriate):

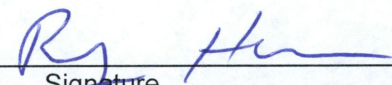
Standardized Test Report	<u> </u> Copy enclosed
	<u> x </u> No change in report filed previously
Tested and Approved Sticker	<u> </u> Copy enclosed
	<u> x </u> No change in sticker filed previously
Photocopy of Crimped Lead Wire Seal	<u> </u> Copy enclosed
	<u> x </u> No change in crimped lead wire seal filed previously

Public Company Listing:

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

Yes No

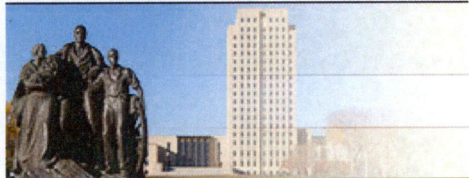
I am RYAN HARTIN, and have authority to represent this company.
 By signing this application, I declare that I have examined this form and accompanying documentation, and to the best of my knowledge and belief, the facts stated and documentation provided is true, correct, and complete.



 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



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 & MANUFACTURE EQUIP FOR FLUID MOVEMENT

Principal Office

14044 FREEWAY DR W HUGO, MN 55038-9705

Registered Agent

SEARCH COMPANY OF NORTH DAKOTA LLC
 1709 N 19TH ST STE 3
 BISMARCK, ND 58501-2121
 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.


[2017](#) (generates a forms-fillable pdf in a new pop-up window)

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 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: June 12, 2017
Cal. Date: June 13, 2017
Report Date: June 13, 2017

Report No.: 337827
Set Serial No.: None
Barcode: 201189

Calibration Certificate


WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 8
Technician ID: 11

Item(s) Submitted: Cast Hand Weights
Manufacturer: Rice Lake
Weight Type: II
Equipment ID: None
Condition: Fair/Glossy Paint
Temperature: 19.4 °C
Pressure: 732.6 mmHg
Relative Humidity: 50.7 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
25 lb		-63	-63	F	F	2.02	52
25 lb		-323	-323	F	F	2.02	52
25 lb		467	467	F	F	2.02	52
25 lb		-93	-93	F	F	2.02	52
25 lb		77	77	F	F	2.02	52
25 lb		-83	-83	F	F	2.02	52
25 lb		97	97	F	F	2.02	52
25 lb		527	527	F	F	2.02	52
25 lb		437	437	F	F	2.02	52
25 lb		-633	-633	F	F	2.02	52
25 lb		-93	-93	F	F	2.02	52
25 lb		757	757	F	F	2.02	52
25 lb		-803	-803	F	F	2.02	52
25 lb		-103	-103	F	F	2.02	52
25 lb		-63	-63	F	F	2.02	52
25 lb		-493	-493	F	F	2.02	52
25 lb		417	417	F	F	2.02	52
25 lb		227	227	F	F	2.02	52
25 lb		57	57	F	F	2.02	52
25 lb		-643	-643	F	F	2.02	52

The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm³ density and an air density of 1.2 mg/cm³ at 20 °C. The items listed above have been calibrated using the Standards of the State of Minnesota which are currently in control. These standards are traceable to the SI through NIST. Calibration processes were monitored and found to be in control. All of the tolerances and specifications were evaluated according to NIST Handbook 105-1 (1990). Uncertainty calculations contain the components in NIST SOP 8 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 items identified in this report only.

Pete Whebbe


Metrologist

Reviewed by:

Erik Alfvin


Metrologist



Receipt Date: June 12, 2017
Cal. Date: June 13, 2017
Report Date: June 13, 2017

Report No.: 337826
Serial No.: 24360
Barcode: 201188

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 21
Technician ID: 11

Item(s) Submitted: 25 Gallon LPG Prover
Manufacturer: Arrow
Material: Mild Steel
Description: Zero Bottom
Condition: Good
Temperature: 23.9 °C
Pressure: 731.3 mmHg
Relative Humidity: 54.6 %
Standard H₂O Temp. 16.3 °C
Artifact H₂O Temp.: 17.2 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
25	As Found (at 100 psig)	25.0356	8.2	2.16	1.5	0.0000186
	As Left (at 100 psig)	25.0356	8.2			


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 (2016). 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.

Pete Whebbe


Metrologist

Reviewed by:

Erik Alfvin


Metrologist



Receipt Date: June 12, 2017
Cal. Date: June 13, 2017
Report Date: June 13, 2017

Report No.:
Serial No.:
Barcode:

Pressure Correction Chart

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
SOP: NIST SOP 21
Technician ID: 11

Item(s) Submitted: 25 Gallon LPG Prover
Manufacturer: Arrow
Material: Mild Steel
Description: Zero Bottom
Condition: Good
Temperature: 23.9 °C
Pressure: 731.3 mmHg
Relative Humidity: 54.6 %

Pressure Gauge Reading (psig)	Corrected Volume (gal)
0	24.978
10	24.986
20	24.994
30	25.002
40	25.010
50	25.018
60	25.021
70	25.025
80	25.029
90	25.032
100	25.036
110	25.040
120	25.043
130	25.047
140	25.050
150	25.054
160	25.058
170	25.062
180	25.066
190	25.071
200	25.075

Pete Whebbe

Metrologist



CALIBRATION

NVLAP LAB CODE 105003-0



Receipt Date: June 12, 2017
Cal. Date: June 14, 2017
Report Date: June 14, 2017

Report No.: 337825
Serial No.: 28816
Barcode: 019785

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 21
Technician ID: 11

Item(s) Submitted: 100 Gallon LPG Prover
Manufacturer: Arrow
Material: Mild Steel
Description: Zero Bottom
Condition: Good
Temperature: 23.4 °C
Pressure: 731.3 mmHg
Relative Humidity: 52.1 %
Standard H₂O Temp. 15.5 °C
Artifact H₂O Temp.: 16.0 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found (at 100 psig)	99.9147	-19.7	2.02	5.3	0.0000186
	As Left (at 100 psig)	99.9147	-19.7			

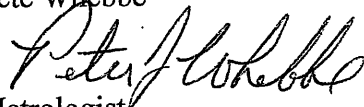
Neck Calibration: No neck calibration was performed at this time.

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 (2016). 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.

Pete Whebbe


Metrologist

Reviewed by:

Erik Alfvin


Metrologist



Receipt Date: June 12, 2017
Cal. Date: June 14, 2017
Report Date: June 14, 2017

Report No.:
Serial No.:
Barcode:

Pressure Correction Chart

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
SOP: NIST SOP 21
Technician ID: 11

Item(s) Submitted: 100 Gallon LPG Prove
Manufacturer: Arrow
Material: Mild Steel
Description: Zero Bottom
Condition: Good
Temperature: 23.4 °C
Pressure: 731.3 mmHg
Relative Humidity: 52.1 %

Pressure Gauge Reading (psig)	Corrected Volume (gal)
0	99.754
10	99.780
20	99.807
30	99.833
40	99.859
50	99.886
60	99.892
70	99.897
80	99.903
90	99.909
100	99.915
110	99.924
120	99.932
130	99.941
140	99.950
150	99.959
160	99.963
170	99.967
180	99.970
190	99.974
200	99.978

Pete Whebbe

Metrologist



CALIBRATION

Receipt Date: November 17, 2016
 Cal. Date: November 17, 2016
 Report Date: November 17, 2016

Report No.: 336796
 Serial No.: 2063
 Barcode: 201332

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: NONE
 SOP: 21
 Technician ID: 07

Item(s) Submitted: 100 Gallon LPG Prover
 Manufacturer: Gas Service & Supply
 Material: Mild Steel
 Description: Zero Bottom
 Condition: Good*
 Temperature: 19.6 °C
 Pressure: 727.5 mmHg
 Relative Humidity: 48.3 %
 Standard H₂O Temp. 15.2 °C
 Artifact H₂O Temp.: 15.4 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
100	As Found (at 100 psig)	100.047	10.8	2.02	5.3	0.0000186
	As Left (at 100 psig)	100.047	10.8			

* Levels are not accurate and could not be adjusted. Level to the prover neck.

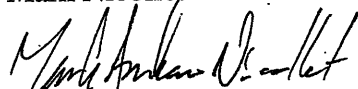
Neck Calibration: No neck calibration was performed at this time.

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

Mark Nicollet


 Quality Manager

Reviewed by:

Erik Alfvin


 Metrologist

Receipt Date: November 17, 2016
 Cal. Date: November 17, 2016
 Report Date: November 17, 2016

Report No.: 336796
 Serial No.: 2063
 Barcode: 201332


Pressure Correction Chart

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: NONE
 SOP: 21
 Technician ID: 7

Item(s) Submitted: 100 Gallon LPG Prover
 Manufacturer: Gas Service & Supply
 Material: Mild Steel
 Description: Zero Bottom
 Condition: Good*
 Temperature: 19.6 °C
 Pressure: 727.5 mmHg
 Relative Humidity: 48.3 %

Pressure Gauge Reading (psig)	Corrected Volume (gal)
0	99.932
10	99.945
20	99.957
30	99.970
40	99.982
50	99.995
60	100.005
70	100.016
80	100.026
90	100.037
100	100.047
110	100.053
120	100.059
130	100.066
140	100.072
150	100.078
160	100.088
170	100.098
180	100.107
190	100.117
200	100.127

Mark Nicollet


 Quality Manager



Receipt Date: October 30, 2017
Cal. Date: November 1, 2017
Report Date: November 1, 2017

Report No.: 338377
Serial No.: 46801
Barcode: 200668

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Mild Steel
Type: Measure
Condition: Good
Temperature: 19.2 °C
Pressure: 728.3 mmHg
Relative Humidity: 40.9 %
Standard H₂O Temp.: 17.3 °C
Artifact H₂O Temp.: 17.4 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	5.00022	0.05	2.05	0.25	0.0000186
	As Left	5.00022	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


Metrologist

Reviewed by:

Erik Alfvén


Metrologist



Receipt Date: October 30, 2017
Cal. Date: November 1, 2017
Report Date: November 1, 2017

Report No.: 338378
Serial No.: 7312 B
Barcode: 200758

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Mild Steel
Type: Measure
Condition: Good
Temperature: 19.2 °C
Pressure: 728.3 mmHg
Relative Humidity: 40.9 %
Standard H₂O Temp.: 17.4 °C
Artifact H₂O Temp.: 17.5 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	5.00091	0.21	2.05	0.25	0.0000186
	As Left	5.00091	0.21			

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:

Erik Alfvén

Metrologist



Receipt Date: October 30, 2017
Cal. Date: November 1, 2017
Report Date: November 1, 2017

Report No.: 338379
Serial No.: 07-05341
Barcode: 200667

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 5 Gallon Measure
Manufacturer: Seraphin
Material: Stainless Steel
Type: Measure
Condition: Good
Temperature: 19.2 °C
Pressure: 728.3 mmHg
Relative Humidity: 40.9 %
Standard H₂O Temp.: 17.5 °C
Artifact H₂O Temp.: 17.5 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
5	As Found	4.99811	-0.44	2.05	0.25	0.0000265
	As Left	5.00006	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:

Erik Alfvén


Metrologist



Receipt Date: October 30, 2017
Cal. Date: November 2, 2017
Report Date: November 2, 2017

Report No.: 338375
Serial No.: 888231104
Barcode: 019269

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: None
Procedure: NIST SOP 19
Technician ID: 19

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Brownie
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 19.4 °C
Pressure: 734.7 mmHg
Relative Humidity: 43.3 %
Standard H₂O Temp.: 16.2 °C
Artifact H₂O Temp.: 16.2 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found	99.9977	-0.5	2.00	2.3	0.0000288
	As Left	99.9977	-0.5			

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

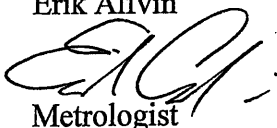
This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow.

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

Receipt Date: May 8, 2017
 Cal. Date: May 11, 2017
 Report Date: May 11, 2017

Report No.: 337722
 Serial No.: 060810915-0201
 Barcode: 200748

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: None
 Procedure: NIST SOP 19
 Technician ID: 19

Item(s) Submitted: 100 Gallon Prover
 Manufacturer: Determan Brownie Inc
 Material: Stainless Steel (304)
 Type: No Bottom Zero
 Condition: Good
 Temperature: 21.8 °C
 Pressure: 739.3 mmHg
 Relative Humidity: 43.2 %
 Standard H₂O Temp.: 11.2 °C
 Artifact H₂O Temp.: 11.3 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found	100.0008	0.2	2.00	2.3	0.0000288
	As Left	100.0008	0.2			

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.

Erik Alfvin

 Metrologist

Reviewed by:
 Mark Nicollet


 Quality Manager



Receipt Date: July 28, 2017
Cal. Date: August 1, 2017
Report Date: August 1, 2017

Report No.: 338022
Serial No.: 051320997-0102
Barcode: 202342

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Determan Brownie Inc
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 24.7 °C
Pressure: 738.2 mmHg
Relative Humidity: 50.4 %
Standard H₂O Temp.: 16.8 °C
Artifact H₂O Temp.: 16.9 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found	99.9874	-2.9	2.00	2.3	0.0000288
	As Left	99.9874	-2.9			

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.

Pete Whebbe


Metrologist

Reviewed by:

Erik Alfvén


Metrologist

Receipt Date: February 13, 2017
 Cal. Date: February 16, 2017
 Report Date: February 16, 2017

Report No.: 337230
 Serial No.: 0615785533-2
 Barcode: 202963

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: None
 SOP: 19
 Technician ID: 19

Item(s) Submitted: 100 Gallon Prover
 Manufacturer: Westmor Fluid Solutions
 Material: Stainless Steel (304)
 Type: No Bottom Zero
 Condition: Good
 Temperature: 18.8 °C
 Pressure: 729.7 mmHg
 Relative Humidity: 39.9 %
 Standard H₂O Temp.: 6.3 °C
 Artifact H₂O Temp.: 6.4 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found	99.985	-3.6	2.00	2.3	0.0000288
	As Left	99.985	-3.6			

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.

Erik Alfvin



Metrologist

Reviewed by:

Pete Whebbe



Metrologist



Receipt Date: October 2, 2017
Cal. Date: October 3, 2017
Report Date: October 3, 2017

Report No.: 338290
Serial No.: 031111168-0103
Barcode: 201898

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Determan Brownie
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 22.3 °C
Pressure: 739.9 mmHg
Relative Humidity: 58.1 %
Standard H₂O Temp.: 17.5 °C
Artifact H₂O Temp.: 17.5 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found	99.9897	-2.4	2.00	2.3	0.0000288
	As Left	99.9897	-2.4			

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.

Pete Whebbe


Metrologist

Reviewed by:

Erik Alfvén


Metrologist

Receipt Date: May 12, 2017
Cal. Date: May 16, 2017
Report Date: May 16, 2017

Report No.: 337733
Serial No.: 314542120
Barcode: 202504

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Westmor Fluid Solutions
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 22.3 °C
Pressure: 725.8 mmHg
Relative Humidity: 52.6 %
Standard H₂O Temp.: 12.8 °C
Artifact H₂O Temp.: 12.7 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
100	As Found	99.9898	-2.4	2.00	2.3	0.0000288
	As Left	99.9898	-2.4			

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.

Pete Whebbe

Metrologist

Reviewed by:

Erik Alfvin

Metrologist

Receipt Date: June 5, 2017
 Cal. Date: June 6, 2017
 Report Date: June 6, 2017

Report No.: 337796
 Serial No.: 1214688350-2
 Barcode: 202754

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: NONE
 Procedure: NIST SOP 19
 Technician ID: 11

Item(s) Submitted: 100 Gallon Prover
 Manufacturer: Westmor Fluid Solutions
 Material: Stainless Steel (304)
 Type: No Bottom Zero
 Condition: Good
 Temperature: 22.2 °C
 Pressure: 739.8 mmHg
 Relative Humidity: 43.2 %
 Standard H₂O Temp.: 13.6 °C
 Artifact H₂O Temp.: 13.8 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found	99.9890	-2.5	2.00	2.3	0.0000288
	As Left	99.9890	-2.5			

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.

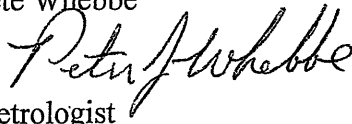
The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were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

Pete Whebbe

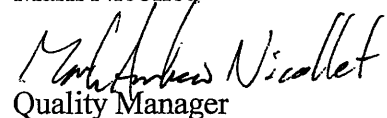
Metrologist



Reviewed by:

Mark Nicollet

Quality Manager





Receipt Date: August 25, 2017
Cal. Date: August 28, 2017
Report Date: August 28, 2017

Report No.: 338151
Serial No.: 1214688351-2
Barcode: 202839

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Westmor Fluid Solutions
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 23.1 °C
Pressure: 739.5 mmHg
Relative Humidity: 52.3 %
Standard H₂O Temp.: 17.7 °C
Artifact H₂O Temp.: 17.8 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found	100.0119	2.8	2.00	2.3	0.0000288
	As Left	100.0119	2.8			

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.

Pete Whebbe



Metrologist

Reviewed by:

Benjamin FitzPatrick



Deputy Director

Receipt Date: May 5, 2017
 Cal. Date: May 5, 2017
 Report Date: May 5, 2017

Report No.: 337713
 Serial No.: 051271555-0103
 Barcode: 202102

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: NONE
 Procedure: NIST SOP 19
 Technician ID: 07

Item(s) Submitted: 100 Gallon Prover
 Manufacturer: Determan Brownie, Inc.
 Material: Stainless Steel (304)
 Type: No Bottom Zero
 Condition: Excellent
 Temperature: 21.7 °C
 Pressure: 730.4 mmHg
 Relative Humidity: 49.0 %
 Standard H₂O Temp.: 11.1 °C
 Artifact H₂O Temp.: 11.2 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found	99.996	-1.0	2.00	2.3	0.0000288
	As Left	99.996	-1.0			

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 Nicolle


 Quality Manager

Reviewed by:

Erik Alfvín


 Metrologist



Receipt Date: October 30, 2017
Cal. Date: November 2, 2017
Report Date: November 2, 2017

Report No.: 338376
Serial No.: 3978131-4
Barcode: 018636

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: None
Procedure: NIST SOP 19
Technician ID: 19

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Brownie
Material: Stainless Steel
Type: No Bottom Zero
Condition: Good
Temperature: 19.2 °C
Pressure: 734.7 mmHg
Relative Humidity: 44.1 %
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)
100	As Found	99.9904	-2.2	2.00	2.3	0.0000265
	As Left	99.9904	-2.2			

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.

Erik Alfvin



Metrologist

Reviewed by:

Pete Whebbe



Metrologist



Receipt Date: July 27, 2017
Cal. Date: July 27, 2017
Report Date: July 27, 2017

Report No.: 338020
Serial No.: 3610-02
Barcode: 200685

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Brownie
Material: Mild Steel
Type: No Bottom Zero
Condition: Good
Temperature: 24.6 °C
Pressure: 739.1 mmHg
Relative Humidity: 53.1 %
Standard H₂O Temp.: 17.4 °C
Artifact H₂O Temp.: 17.6 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
100	As Found	99.9933	-1.5	2.00	2.3	0.0000186
	As Left	99.9933	-1.5			

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.

Pete Whebbe


Metrologist

Reviewed by:

Erik Alfvín


Metrologist

Receipt Date: April 24, 2017
Cal. Date: April 25, 2017
Report Date: April 25, 2017

Report No.: 337630
Serial No.: 5956670-01
Barcode: 019278

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 500 Gallon Prover
Manufacturer: Brownie
Material: Mild Steel
Type: No Bottom Zero
Condition: Good
Temperature: 20.7 °C
Pressure: 725.3 mmHg
Relative Humidity: 47.5 %
Standard H₂O Temp.: 10.3 °C
Artifact H₂O Temp.: 10.5 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
500	As Found	499.933	-15	2.02	25	0.0000186
	As Left	499.933	-15			

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.

Pete Whebbe


Metrologist

Reviewed by:

Mark Nicollet


Quality Manager

Receipt Date: May 5, 2017
 Cal. Date: May 5, 2017
 Report Date: May 5, 2017

Report No.: 337712
 Serial No.: 031271251-0101
 Barcode: 202101

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: NONE
 Procedure: NIST SOP 19
 Technician ID: 07

Item(s) Submitted: 500 Gallon Prover
 Manufacturer: Determan Brownie, Inc.
 Material: Stainless Steel (304)
 Type: No Bottom Zero
 Condition: Excellent
 Temperature: 21.6 °C
 Pressure: 731.8 mmHg
 Relative Humidity: 47.9 %
 Standard H₂O Temp.: 10.5 °C
 Artifact H₂O Temp.: 10.7 °C

Nominal	Calibrated					
Volume (gal)	Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)	
500	As Found	499.966	-8	2.02	25	0.0000288
	As Left	499.966	-8			

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

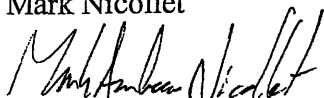
This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow.

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

Receipt Date: June 5, 2017
Cal. Date: June 5, 2017
Report Date: June 5, 2017

Report No.: 337795
Serial No.: 1214688350-1
Barcode: 202753

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 1000 Gallon Prover
Manufacturer: Westmor Fluid Solutions
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 23.2 °C
Pressure: 736.9 mmHg
Relative Humidity: 47.7 %
Standard H₂O Temp.: 13.2 °C
Artifact H₂O Temp.: 13.5 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
1000	As Found	999.9149	-20	2.02	49	0.0000288
	As Left	999.9149	-20			

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.

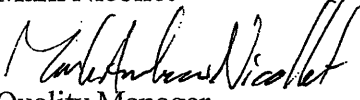
CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Pete Whebbe


Metrologist

Reviewed by:

Mark Nicollet


Quality Manager



Receipt Date: August 25, 2017
Cal. Date: August 28, 2017
Report Date: August 28, 2017

Report No.: 338150
Serial No.: 1214688351-1
Barcode: 202838

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 1000 Gallon Prover
Manufacturer: Westmor Fluid Solutions
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 22.9 °C
Pressure: 739.4 mmHg
Relative Humidity: 47.1 %
Standard H₂O Temp.: 17.2 °C
Artifact H₂O Temp.: 17.4 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
1000	As Found	999.959	-10	2.01	49	0.0000288
	As Left	999.959	-10			

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.

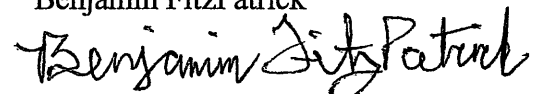
CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F
Conversion to SI unit: 1 gallon = 231 in³ = 0.00378541 m³.

Pete Whebbe


Metrologist

Reviewed by:

Benjamin FitzPatrick


Deputy Director



Receipt Date: October 2, 2017
Cal. Date: October 3, 2017
Report Date: October 3, 2017

Report No.: 338289
Serial No.: 090610694-0101
Barcode: 201203

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 1000 Gallon Prover
Manufacturer: Determan Brownie
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 21.8 °C
Pressure: 734.7 mmHg
Relative Humidity: 52.8 %
Standard H₂O Temp.: 16.9 °C
Artifact H₂O Temp.: 16.9 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
1000	As Found	1000.012	3	2.01	49	0.0000288
	As Left	1000.012	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.

Pete Whebbe


Metrologist

Reviewed by:

Erik Alfvén


Metrologist

Receipt Date: May 12, 2017
Cal. Date: May 16, 2017
Report Date: May 16, 2017

Report No.: 337734
Serial No.: 0114527708
Barcode: 202505

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 1000 Gallon Prover
Manufacturer: Westmor Fluid Solutions
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 22.3 °C
Pressure: 727.8 mmHg
Relative Humidity: 55.3 %
Standard H₂O Temp.: 12.5 °C
Artifact H₂O Temp.: 12.4 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
1000	As Found	999.992	-2	2.02	49	0.0000288
	As Left	999.992	-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.

Pete Whebbe

Metrologist



Reviewed by:

Erik Alfvén

Metrologist





Receipt Date: July 28, 2017
Cal. Date: August 1, 2017
Report Date: August 1, 2017

Report No.: 338025
Serial No.: 11978368-1
Barcode: 202341

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: NONE
Procedure: NIST SOP 19
Technician ID: 11

Item(s) Submitted: 1000 Gallon Prover
Manufacturer: Determan Brownie Inc
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 24.5 °C
Pressure: 739.2 mmHg
Relative Humidity: 50.7 %
Standard H₂O Temp.: 16.5 °C
Artifact H₂O Temp.: 16.7 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
1000	As Found	1000.045	10	2.01	49	0.0000288
	As Left	1000.045	10			

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.

Pete Whebbe


Metrologist

Reviewed by:

Erik Alfvín


Metrologist

Receipt Date: February 13, 2017
 Cal. Date: February 15, 2017
 Report Date: February 15, 2017

Report No.: 337229
 Serial No.: 0615785533-1
 Barcode: 202964

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: None
 SOP: 19
 Technician ID: 19

Item(s) Submitted: 1000 Gallon Prover
 Manufacturer: Westmor Fluid Solutions
 Material: Stainless Steel (304)
 Type: No Bottom Zero
 Condition: Good
 Temperature: 18.5 °C
 Pressure: 737.8 mmHg
 Relative Humidity: 44.9 %
 Standard H₂O Temp.: 6.7 °C
 Artifact H₂O Temp.: 7.0 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
1000	As Found	999.95	-11	2.02	49	0.0000288
	As Left	999.95	-11			

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

Receipt Date: May 8, 2017
 Cal. Date: May 10, 2017
 Report Date: May 10, 2017

Report No.: 337721
 Serial No.: 060810915-0101
 Barcode: 200749

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: None
 Procedure: NIST SOP 19
 Technician ID: 19

Item(s) Submitted: 1000 Gallon Prover
 Manufacturer: Determan Brownie Inc
 Material: Stainless Steel (304)
 Type: No Bottom Zero
 Condition: Good
 Temperature: 21.8 °C
 Pressure: 735.8 mmHg
 Relative Humidity: 43.8 %
 Standard H₂O Temp.: 11.4 °C
 Artifact H₂O Temp.: 11.4 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (°F)
1000	As Found	1000.059	14	2.02	49	0.0000288
	As Left	1000.059	14			

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.

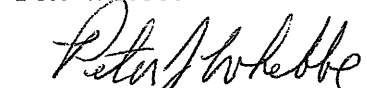
Erik Alfvin



Metrologist

Reviewed by:

Pete Whebbe



Metrologist

Receipt Date: May 30, 2017
 Cal. Date: June 1 & 2, 2017
 Report Date: June 2, 2017

Report No.: 337779
 Serial No.: 090610694-0201
 Barcode: 200498

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
 14044 W. FREEWAY DRIVE
 COLUMBUS, MN 55038
 Contact: Ryan Hartin
 Phone: 651-842-2551
 PO Number: None
 Procedure: NIST SOP 19
 Technician ID: 19

Item(s) Submitted: 1500 Gallon Prover
 Manufacturer: Determan Brownie
 Material: Stainless Steel (304)
 Type: No Bottom Zero
 Condition: Good
 Temperature: 22.5 °C
 Pressure: 737.6 mmHg
 Relative Humidity: 40.7 %
 Standard H₂O Temp.: 13.1 °C
 Artifact H₂O Temp.: 13.4 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
1500	As Found	1500.024	6	2.02	74	0.0000288
	As Left	1500.025	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.

Erik Alfvin



Metrologist

Reviewed by:

Pete Whebbe



Metrologist

**MICHIGAN DEPARTMENT OF AGRICULTURE
& RURAL DEVELOPMENT**
LABORATORY DIVISION



E.C. HEFFRON METROLOGY LABORATORY

NVLAP

NVLAP Lab Code 200408-0

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

This report shall not be reproduced, except in full, without the written approval of the Laboratory Division.

Calibration Report

TEST NO: MI-11-16-12950

TEST DATE: 11/2/2016

Page 1 of 2

CALIBRATED FOR:

Westmor Fluid Solutions
14044 West Freeway Drive
Columbus, MN 55038

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: 11/1/2016

TEST ITEM CONDITION ON ARRIVAL: Good

TEST METHOD: NISTIR 7383 SOP 26, For Gravimetric Calibration of Dynamic Volume Systems
Used as Standards

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/NC SL Z540-1.

The prover was not adjusted.

Calibration processes were monitored and found to be in control. The expanded uncertainty presented in this report is consistent with the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008). 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 to 27 °C; Maximum changes: ± 5 °C/12 hr and ± 3 °C/hr
Relative Humidity: 40 % to 60% ± 20 %/4 hr

CALIBRATED FOR:
Westmor Fluid Solutions
14044 West Freeway Drive
Columbus, MN 55038

TEST NO: MI-11-16-12950

S/N: 000045

TEST DATE: 11/2/2016

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. (Gd)	$9.60 \times 10^{-6} / ^\circ\text{F}$
Modulus of Elasticity (E)	2.8×10^7 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	20.0112 gal	0.0036 gal
5 gal	4.98786 gal	0.00065 gal

Signed:



11/4/2016



11/4/2016

Calibrating Metrologist

Date Approved Signatory

Date

Bauske, Shelly A.

From: Bauske, Shelly A.
Sent: Wednesday, March 28, 2018 10:29 AM
To: 'Crockford, Konrad S.'
Subject: FW: Calibration Report Request
Attachments: 20180327110713529.pdf

From: Scott Fish [mailto:scott.fish@westmor-ind.com]
Sent: Wednesday, March 28, 2018 10:24 AM
To: Ryan Hartin
Cc: Bauske, Shelly A.
Subject: Re: Calibration Report Request

CAUTION: This email originated from an outside source. Do not click links or open attachments unless you know they are safe.

Ryan,
We do a few Propane truck loading facilities with the SVP prover and that is about it.
Thanks,

--
Scott Fish
Field Service Manager

Westmor Fluid Solutions, LLC
14044 W Freeway Drive
Columbus, MN 55038
United States

P: [\(651\)-842-2553](tel:651-842-2553)
M: [\(612\) 363-0748](tel:612-363-0748)
E: scott.fish@westmor-ind.com



On Tue, Mar 27, 2018 at 12:25 PM, Ryan Hartin <ryan.hartin@westmor-ind.com> wrote:
Scott,
Are you using the 20 gallon SVP to certify devices in North Dakota?

Thank you,

Ryan Hartin

Westmor Industries, LLC
14044 W Freeway Drive
Columbus, MN 55038
United States

D: (651) 842-2551

P: (763) 571-8110

E: ryan.hartin@westmor-ind.com



----- Forwarded message -----

From: **Bauske, Shelly A.** <sbauske@nd.gov>

Date: Tue, Mar 27, 2018 at 11:43 AM

Subject: RE: Calibration Report Request

To: Ryan Hartin <ryan.hartin@westmor-ind.com>

Hi Ryan

Thank you for the updated certificates.

Are you using the 20 gallon SVP to certify devices in North Dakota?

From: Ryan Hartin [mailto:ryan.hartin@westmor-ind.com]

Sent: Tuesday, March 27, 2018 11:17 AM

To: Bauske, Shelly A.

Subject: Re: Calibration Report Request

CAUTION: This email originated from an outside source. Do not click links or open attachments unless you know they are safe.

Hi Shelly,

Attached are the updated certs. The 20 Gallon SVP only gets certified every 2 years and the 100 Gallon LPG Prover Serial #2063 is a stationary prover that is only used at our facility and could be taken off your list.

Thank you,

Ryan Hartin

Westmor Industries, LLC
14044 W Freeway Drive
Columbus, MN 55038
United States

D: (651) 842-2551

P: (763) 571-8110

E: ryan.hartin@westmor-ind.com



On Tue, Mar 27, 2018 at 10:41 AM, Bauske, Shelly A. <sbauske@nd.gov> wrote:

Good Morning Ryan

Please email me current Calibration Reports for the following:

Standard	Serial Number	Test Date	Due Date	Calibrated By	Bar Code
20 gallon SVP	45	11/2/2016	11/2/2017	MI	
100 gallon LPG prover	2063	11/17/2016	11/17/2017	MN	201332
5 gallon measure	7312B	11/2/2016	11/2/2017	MN	200758
5 gallon measure	46801	11/2/2016	11/2/2017	MN	200668
5 gallon measure	07-05341	11/2/2016	11/2/2017	MN	200667
100 gallon prover	0615785533-2	2/16/2017	2/16/2018	MN	202963

1000 gallon prover 0615785533-1 2/15/2017 2/15/2018 MN 202964

If you have any questions, please contact me. Thank you!

Shelly Bauske

Public Service Commission

600 E Boulevard Ave Dept 408

Bismarck ND 58505-0480

701-328-4070

701-328-2410 (fax)

sbauske@nd.gov

This transmission, email and any files transmitted with it, may be: (1) subject to the Attorney-Client Privilege, (2) an attorney work product, or (3) strictly confidential under federal or state law. If you are not the intended recipient of this message, you may not use, disclose, print, copy or disseminate this information. If you have received this transmission in error, notify the sender (only) and delete the message. This message may also be subject to disclosure under the North Dakota Open Records Laws.

United States Department of Commerce

Rational 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.

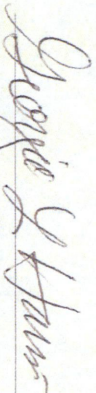
The Office of Weights and Measures Program assesses laboratories to NIST Handbook 143 - Program Handbook for State Weights and Measures Laboratories and ISO/IEC 17025:2005.

Scope

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



2017


Georgia L. Harris, Acting Chief
NIST Office of Weights and Measures

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

Amended: 2016-12-31

Scope modified for 2017.