



**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 <i>Fairbanks Scales</i>	Email Address <i>r.louderback@fairbanks.com</i>	Application Date <i>12/20/17</i>	
Mailing Address <i>2500 Cleveland Ave N</i>	City <i>St. Paul</i>	State <i>MN</i>	Zip Code <i>55113</i>
Telephone Number <i>651-631-9287</i>	Cell Phone Number <i>651-283-3437</i>	Fax Number <i>651-631-2547</i>	

Select below all device types your company will certify:

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

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

Permit No.	Employee	Device Types Registered to Certify (list using device type numbers from above)
<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>
<i>1743</i>	<i>Dean Spilde</i>	<i>Scales - 1, 2, 3, 4, 6, 7</i>
<i>1744</i>	<i>Scott Wolf</i>	<i>Scales - 1, 2, 3, 4, 6, 7</i>

Application for Registration as a Registered Service Company  
Page 2

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

1- 5000# Test Cart	1- 3000# Test Cart
16- 1000# Test Weights	18- 1000# Test Weights
40- 25# Test Weights	19- 50# Test Weights
1- Metric Test Kit	1- 30 lb Weight Kit
1- AVDP Weight Kit	1- Metric Weight Kit

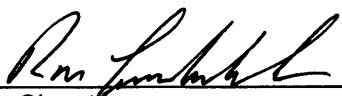
Additional Application Items (initial where appropriate):

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 Ron Louderback, 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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## FAIRBANKS SCALES INC.

### Corporation Details

**System ID:** 2987100 **Phone:** (816) 471-0231  
**Type:** FOREIGN BUSINESS CORPORATION  
**Status:** Active & Good Standing  
**Original File Date:** 03/31/1988 **Effective Date:** 03/31/1988  
**State of Origin:** Kansas

### Nature of Business

SALES AND SERVICE OF SCALES AND RELATED EQUIPMENT

### Principal Office

821 LOCUST ST KANSAS CITY, MO 64106-1908

### Registered Agent

**CORPORATION SERVICE COMPANY**  
1709 N 19TH ST STE 3  
BISMARCK, ND 58501-2121  
Established Date: Mar 01, 2010

### 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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Will open a new window (pop-up).

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Receipt Date: November 7, 2017  
Cal. Date: November 8, 2017  
Report Date: November 8, 2017

Report No.: 338427  
Set Serial No.: 031811K  
Barcode: 202171

## Calibration Certificate

FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: NONE  
Procedure: NIST SOP 8  
Technician ID: 11

Item(s) Submitted: 5000 lb Weight Cart  
Manufacturer: Kanawha  
Weight Type: NA  
Equipment ID: None  
Condition: Fair  
Temperature: 20.2 °C  
Pressure: 743.5 mmHg  
Relative Humidity: 49.5 %

Nominal Value	Serial No.	CM Correction (g)		NIST HB105-8 Tolerance		<i>k</i>	U (g)
		As Found	As Left	As Found	As Left		
5000 lb	031811K	30.	30.	Meets	Meets	2.07	60.

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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 105-8 (2003). 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 Alfvín

  
Metrologist

Receipt Date: November 14, 2017  
Cal. Date: November 15, 2017  
Report Date: November 15, 2017

Report No.: 338460  
Set Serial No.: 100512 K  
Barcode: 202170

## Calibration Certificate

FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: NONE  
Procedure: NIST SOP 8  
Technician ID: 11


Item(s) Submitted: 3000 lb Weight Cart  
Manufacturer: Kanawha  
Weight Type: NA  
Equipment ID: None  
Condition: Good  
Temperature: 21.0 °C  
Pressure: 735.1 mmHg  
Relative Humidity: 48.5 %

Nominal Value	Serial No.	CM Correction (g)		NIST HB105-8 Tolerance		<i>k</i>	U (g)
		As Found	As Left	As Found	As Left		
3000 lb	100512K	2857	-13	*	Meets	2.06	60.

\* Weight(s) as found exceed NIST HB105-8 Class F tolerance.

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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 105-8 (2003). 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 Alfvén

  
Metrologist



Receipt Date: November 7, 2017  
 Cal. Date: November 8, 2017  
 Report Date: November 8, 2017

Report No.: 338428  
 Set Serial No.: 614-26 thru 614-41  
 Barcode: 200739

## Calibration Certificate

**FAIRBANKS**  
 2500 CLEVELAND AVENUE NORTH  
 ROSEVILLE, MN 55113-2728  
 Contact: RON LOUDERBACK  
 Phone: 651-815-9000  
 PO Number: NONE  
 Procedure: NIST SOP 8  
 Technician ID: 11

Item(s) Submitted: Cast Cube Weights  
 Manufacturer: Western Iron Works  
 Weight Type: II  
 Equipment ID: None  
 Condition: Fair  
 Temperature: 19.8 °C  
 Pressure: 743.5 mmHg  
 Relative Humidity: 48.9 %

Nominal Value	Serial No.	CM Correction (g)		NIST HB105-1 Class		k	U (g)
		As Found	As Left	As Found	As Left		
1000 lb	614-26	30.5	30.5	F	F	2.01	1.5
1000 lb	614-27	17.5	17.5	F	F	2.01	1.5
1000 lb	614-28	5.5	5.5	F	F	2.01	1.5
1000 lb	614-29	28.5	28.5	F	F	2.01	1.5
1000 lb	614-30	15.5	15.5	F	F	2.01	1.5
1000 lb	614-31	10.5	10.5	F	F	2.01	1.5
1000 lb	614-32	-7.5	-7.5	F	F	2.01	1.5
1000 lb	614-33	39.5	39.5	F	F	2.01	1.5
1000 lb	614-34	29.5	29.5	F	F	2.01	1.5
1000 lb	614-35	-14.5	-14.5	F	F	2.01	1.5
1000 lb	614-36	-15.5	-15.5	F	F	2.01	1.5
1000 lb	614-37	38.5	38.5	F	F	2.01	1.5
1000 lb	614-38	3.5	3.5	F	F	2.01	1.5
1000 lb	614-39	16.5	16.5	F	F	2.01	1.5
1000 lb	614-40	-0.5	-0.5	F	F	2.01	1.5
1000 lb	614-41	-22.5	-22.5	F	F	2.01	1.5

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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: November 14, 2017  
Cal. Date: November 15, 2017  
Report Date: November 15, 2017

Report No.: 338461  
Set Serial No.: 614-51 thru 68  
Barcode: 201271

## Calibration Certificate

FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: NONE  
Procedure: NIST SOP 8  
Technician ID: 11

Item(s) Submitted: Cast Cube Weights  
Manufacturer: Rice Lake  
Weight Type: II  
Equipment ID: None  
Condition: Fair  
Temperature: 20.9 °C  
Pressure: 734.5 mmHg  
Relative Humidity: 49.2 %

Nominal Value		Serial No.	CM Correction (g)		NIST HB105-1 Class		k	U (g)
			As Found	As Left	As Found	As Left		
1000	lb	614-51	-35.5	-35.5	F	F	2.01	1.5
1000	lb	614-52	-16.5	-16.5	F	F	2.01	1.5
1000	lb	614-53	-37.5	-37.5	F	F	2.01	1.5
1000	lb	614-54	-31.5	-31.5	F	F	2.01	1.5
1000	lb	614-55	-3.5	-3.5	F	F	2.01	1.5
1000	lb	614-56	-4.5	-4.5	F	F	2.01	1.5
1000	lb	614-57	-12.5	-12.5	F	F	2.01	1.5
1000	lb	614-58	-9.5	-9.5	F	F	2.01	1.5
1000	lb	614-59	6.5	6.5	F	F	2.01	1.5
1000	lb	614-60	-30.5	-30.5	F	F	2.01	1.5
1000	lb	614-61	-15.5	-15.5	F	F	2.01	1.5
1000	lb	614-62	-16.5	-16.5	F	F	2.01	1.5
1000	lb	614-63	-36.5	-36.5	F	F	2.01	1.5
1000	lb	614-64	10.5	10.5	F	F	2.01	1.5
1000	lb	614-65	-29.5	-29.5	F	F	2.01	1.5
1000	lb	614-66	-25.5	-25.5	F	F	2.01	1.5
1000	lb	614-67	5.5	5.5	F	F	2.01	1.5
1000	lb	614-68	-33.5	-33.5	F	F	2.01	1.5

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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: November 14, 2017  
Cal. Date: November 15, 2017  
Report Date: November 15, 2017

Report No.: 338463  
Set Serial No.: 614-  
Barcode: 201849

## Calibration Certificate

FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: NONE  
Procedure: NIST SOP 8  
Technician ID: 11

Item(s) Submitted: Cast Hand Weights  
Manufacturer: Assorted  
Weight Type: II  
Equipment ID: Eric's HD Truck  
Condition: Fair  
Temperature: 21.2 °C  
Pressure: 737.9 mmHg  
Relative Humidity: 49.7 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
50 lb	614-476	-1346	-1346	F	F	2.01	56
50 lb	614-492	1094	1094	F	F	2.01	56
50 lb	614-352	844	844	F	F	2.01	56
50 lb	614-459	-1636	-1636	F	F	2.01	56
50 lb	614-504	2644	154	*	F	2.01	56
50 lb	614-480	1494	1494	F	F	2.01	56
50 lb	614-461	704	704	F	F	2.01	56
50 lb	614-356	-1986	-1986	F	F	2.01	56
50 lb	614-354	-696	-696	F	F	2.01	56
50 lb	614-450	-626	-626	F	F	2.01	56
50 lb	614-489	1854	1854	F	F	2.01	56
50 lb	614-505	2014	2014	F	F	2.01	56
50 lb	614-462	-576	-576	F	F	2.01	56
50 lb	614-454	14	14	F	F	2.01	56
50 lb	614-494	1424	1424	F	F	2.01	56
50 lb	614-455	574	574	F	F	2.01	56
50 lb	614-499	2654	74	*	F	2.01	56
50 lb	614-469	1654	1654	F	F	2.01	56
50 lb	614-500	1954	1954	F	F	2.01	56

614-484 is no longer sealable by approved means and is removed from commercial service.

\* Weight(s) as found exceed NIST Class F Tolerance.

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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

*Peter J. Whebbe*  
Metrologist

Reviewed by:

Erik Alfvin

*Erik Alfvin*  
Metrologist



Receipt Date: November 7, 2017  
Cal. Date: November 8, 2017  
Report Date: November 8, 2017

Report No.: 338426  
Set Serial No.: 614-900 to 939  
Barcode: 200740

## Calibration Certificate

FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: NONE  
Procedure: NIST SOP 8  
Technician ID: 11

Item(s) Submitted: Cast Hand Weights  
Manufacturer: Fairbanks  
Weight Type: II  
Equipment ID: None  
Condition: Good  
Temperature: 20.3 °C  
Pressure: 739.7 mmHg  
Relative Humidity: 49.2 %

Nominal Value		Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
			As Found	As Left	As Found	As Left		
25	lb	614-900	1027	1027	F	F	2.02	52
25	lb	614-901	387	387	F	F	2.02	52
25	lb	614-902	-63	-63	F	F	2.02	52
25	lb	614-903	697	697	F	F	2.02	52
25	lb	614-904	1227	-43	*	F	2.02	52
25	lb	614-905	-273	-273	F	F	2.02	52
25	lb	614-906	-63	-63	F	F	2.02	52
25	lb	614-907	-53	-53	F	F	2.02	52
25	lb	614-908	857	857	F	F	2.02	52
25	lb	614-909	587	587	F	F	2.02	52
25	lb	614-910	1147	287	*	F	2.02	52
25	lb	614-911	87	87	F	F	2.02	52
25	lb	614-912	777	777	F	F	2.02	52
25	lb	614-913	757	757	F	F	2.02	52
25	lb	614-914	-303	-303	F	F	2.02	52
25	lb	614-915	1087	27	*	F	2.02	52
25	lb	614-916	1317	417	*	F	2.02	52
25	lb	614-917	1197	-93	*	F	2.02	52
25	lb	614-918	727	727	F	F	2.02	52
25	lb	614-919	307	307	F	F	2.02	52
25	lb	614-920	727	727	F	F	2.02	52
25	lb	614-921	377	377	F	F	2.02	52
25	lb	614-922	387	387	F	F	2.02	52
25	lb	614-923	787	787	F	F	2.02	52
25	lb	614-924	397	397	F	F	2.02	52
25	lb	614-925	1487	167	*	F	2.02	52

\* Weight(s) as found exceed NIST HB105-1 Class F tolerance.





Receipt Date: November 7, 2017  
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Report Date: November 8, 2017

Report No.: 338426  
Set Serial No.: 614-900 to 939  
Barcode: 200740

Continued,

## Calibration Certificate

FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: NONE  
Procedure: NIST SOP 8  
Technician ID: 11

Item(s) Submitted: Cast Hand Weights  
Manufacturer: Fairbanks  
Weight Type: II  
Equipment ID: None  
Condition: Good  
Temperature: 20.3 °C  
Pressure: 739.7 mmHg  
Relative Humidity: 49.2 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
25 lb	614-926	-123	-123	F	F	2.02	52
25 lb	614-927	97	97	F	F	2.02	52
25 lb	614-928	717	717	F	F	2.02	52
25 lb	614-929	247	247	F	F	2.02	52
25 lb	614-930	387	387	F	F	2.02	52
25 lb	614-931	-303	-303	F	F	2.02	52
25 lb	614-932	1257	-13	*	F	2.02	52
25 lb	614-933	757	757	F	F	2.02	52
25 lb	614-934	1277	117	*	F	2.02	52
25 lb	614-935	737	737	F	F	2.02	52
25 lb	614-936	427	427	F	F	2.02	52
25 lb	614-937	987	987	F	F	2.02	52
25 lb	614-938	607	607	F	F	2.02	52
25 lb	614-939	707	707	F	F	2.02	52

\* Weight(s) as found exceed NIST HB105-1 Class F tolerance.

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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: November 7, 2017  
 Cal. Date: November 8, 2017  
 Report Date: November 8, 2017

Report No.: 338431  
 Set Serial No.: Fuel Sub Wts  
 Barcode: 200514

## Calibration Certificate


FAIRBANKS  
 2500 CLEVELAND AVENUE NORTH  
 ROSEVILLE, MN 55113-2728  
 Contact: RON LOUDERBACK  
 Phone: 651-815-9000  
 PO Number: NONE  
 Procedure: NIST SOP 8  
 Technician ID: 11

Item(s) Submitted: 8 oz Fuel Substitution Weights  
 Manufacturer: Rice Lake  
 Weight Type: II  
 Equipment ID: None  
 Condition: Good  
 Temperature: 19.5 °C  
 Pressure: 739.5 mmHg  
 Relative Humidity: 46.9 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
8 oz		14.9	14.9	F	F	2.03	1.3
8 oz		18.7	18.7	F	F	2.03	1.3
8 oz		10.8	10.8	F	F	2.03	1.3
8 oz		11.9	11.9	F	F	2.03	1.3
8 oz		8.7	8.7	F	F	2.03	1.3
8 oz		15.9	15.9	F	F	2.03	1.3
8 oz		16.6	16.6	F	F	2.03	1.3
8 oz		17.0	17.0	F	F	2.03	1.3
8 oz		9.5	9.5	F	F	2.03	1.3

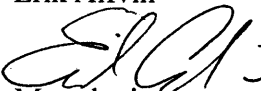
The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> at 20 °C. The 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: November 14, 2017  
 Cal. Date: November 20, 2017  
 Report Date: November 20, 2017

Report No.: 338466  
 Set Serial No.: Fuel Sub Weights  
 Barcode: 203127

## Calibration Certificate


FAIRBANKS  
 2500 CLEVELAND AVENUE NORTH  
 ROSEVILLE, MN 55113-2728  
 Contact: RON LOUDERBACK  
 Phone: 651-815-9000  
 PO Number: NONE  
 Procedure: NIST SOP 8  
 Technician ID: 11

Item(s) Submitted: Satin Stainless Ring Weights  
 Manufacturer: Unknown  
 Weight Type: II  
 Equipment ID: None  
 Condition: Good  
 Temperature: 19.4 °C  
 Pressure: 722.9 mmHg  
 Relative Humidity: 50.9 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
8 OZ		25.7	25.7	F	F	2.03	1.3
8 OZ		20.1	20.1	F	F	2.03	1.3
8 OZ		21.2	21.2	F	F	2.03	1.3
8 OZ		21.7	21.7	F	F	2.03	1.3
8 OZ		20.6	20.6	F	F	2.03	1.3
8 OZ		28.6	28.6	F	F	2.03	1.3
8 OZ		25.4	25.4	F	F	2.03	1.3
8 OZ		20.8	20.8	F	F	2.03	1.3
8 OZ		17.9	17.9	F	F	2.03	1.3

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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: November 14, 2017  
 Cal. Date: November 27, 2017  
 Report Date: November 28, 2017

Report No.: 338464  
 Set Serial No.: 614-724  
 Barcode: 017427

## Calibration Certificate

FAIRBANKS  
 2500 CLEVELAND AVENUE NORTH  
 ROSEVILLE, MN 55113-2728  
 Contact: RON LOUDERBACK  
 Phone: 651-815-9000  
 PO Number: NONE  
 Procedure: NIST SOP 8  
 Technician ID: 11

Item(s) Submitted: 30 lb Weight Kit w/fractions & dec.  
 Manufacturer: Rice Lake  
 Weight Type: I & II  
 Equipment ID: None  
 Condition: Fair  
 Temperature: 19.8 °C  
 Pressure: 724.1 mmHg  
 Relative Humidity: 47.7 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
5 . lb		-60.8	-60.8	F	F	2.03	6.0
5 .. lb		-40.8	-40.8	F	F	2.03	6.0
5 :: lb		5.2	5.2	F	F	2.03	6.0
5 ::: lb		-41.8	-41.8	F	F	2.03	6.0
5 :::. lb		45.2	45.2	F	F	2.03	6.0
1 . lb		-3.3	-3.3	F	F	2.03	1.6
1 .. lb		12.9	12.9	F	F	2.03	1.6
1 :: lb		-1.8	-1.8	F	F	2.03	1.6
1 ::: lb		-9.4	-9.4	F	F	2.03	1.6
1 :::. lb		14.1	14.1	F	F	2.03	1.6
8 . oz		-1.4	-1.4	F	F	2.03	1.3
0.2 . lb		5.08	5.08	F	F	2.03	0.22
0.2 .. lb		2.36	2.36	F	F	2.03	0.22
0.1 lb		2.20	2.20	F	F	2.03	0.14
0.05 lb		1.98	1.98	F	F	2.03	0.11
0.02 lb		0.745	0.745	F	F	2.03	0.066
0.02 . lb		0.777	0.777	F	F	2.03	0.066
0.01 lb		0.633	0.633	F	F	2.03	0.052
0.005 lb		0.675	0.675	F	F	2.03	0.073
0.002 lb		0.099	0.099	F	F	2.03	0.047
0.002 . lb		-0.250	-0.250	F	F	2.03	0.047
0.001 lb		0.506	0.506	F	F	2.03	0.041



Receipt Date: November 14, 2017  
Cal. Date: November 27, 2017  
Report Date: November 28, 2017

Report No.: 338464  
Set Serial No.: 614-724  
Barcode: 017427

Continued,

## Calibration Certificate

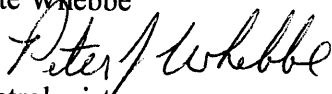
FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: NONE  
Procedure: NIST SOP 8  
Technician ID: 11

Item(s) Submitted: 30 lb Weight Kit w/fractions & dec.  
Manufacturer: Rice Lake  
Weight Type: I & II  
Equipment ID: None  
Condition: Fair  
Temperature: 19.8 °C  
Pressure: 724.1 mmHg  
Relative Humidity: 47.7 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
4 oz		11.82	11.82	F	F	2.00	0.22
2 oz		2.64	2.64	F	F	2.00	0.14
1 oz		-0.19	-0.19	F	F	2.00	0.11
1/2 oz		1.396	1.396	F	F	2.00	0.092
1/4 oz		0.046	0.046	F	F	2.00	0.056
1/8 oz		0.673	0.673	F	F	2.00	0.046
1/16 oz		0.299	0.299	F	F	2.00	0.070
1/32 oz		0.278	0.278	F	F	2.00	0.044

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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: November 7, 2017  
Cal. Date: November 9 & 13, 2017  
Report Date: November 13, 2017

Report No.: 338430  
Set Serial No.: 614-706  
Barcode: 200741

## Calibration Certificate

FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: NONE  
Procedure: NIST SOP 8  
Technician ID: 19

Item(s) Submitted: AVDP Weight Kit - Class F  
Manufacturer: Rice Lake  
Weight Type: I & II  
Equipment ID: None  
Condition: Good  
Temperature: 19.5 °C  
Pressure: 746.4 mmHg  
Relative Humidity: 49.3 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
5 lb		12.2	12.2	F	F	2.03	6.0
5 . lb		6.2	6.2	F	F	2.03	6.0
5 .. lb		15.2	15.2	F	F	2.03	6.0
5 ... lb		5.2	5.2	F	F	2.03	6.0
5 :: lb		20.2	20.2	F	F	2.03	6.0
1 lb		12.6	12.6	F	F	2.03	1.6
1 . lb		16.7	16.7	F	F	2.03	1.6
1 .. lb		8.8	8.8	F	F	2.03	1.6
1 ... lb		15.8	15.8	F	F	2.03	1.6
1 :: lb		13.5	13.5	F	F	2.03	1.6
0.2 lb		2.01	2.01	F	F	2.03	0.22
0.2 . lb		3.22	3.22	F	F	2.03	0.22
0.1 lb		3.13	3.13	F	F	2.03	0.14
0.05 lb		0.86	0.86	F	F	2.03	0.11
0.02 lb		-0.433	-0.433	F	F	2.03	0.066
0.02 . lb		0.469	0.469	F	F	2.03	0.066
0.01 lb		0.792	0.792	F	F	2.03	0.052
0.005 lb		0.826	0.826	F	F	2.03	0.073
0.002 lb		0.064	0.064	F	F	2.03	0.047
0.002 . lb		0.205	0.205	F	F	2.03	0.047
0.001 lb		0.249	0.249	F	F	2.03	0.041



Receipt Date: November 7, 2017  
Cal. Date: November 9 & 13, 2017  
Report Date: November 13, 2017

Report No.: 338430  
Set Serial No.: 614-706  
Barcode: 200741

Continued,  
338430  
614-706  
200741

## Calibration Certificate

FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: NONE  
Procedure: NIST SOP 8  
Technician ID: 19

Item(s) Submitted: AVDP Weight Kit - Class F  
Manufacturer: Rice Lake  
Weight Type: I & II  
Equipment ID: None  
Condition: Good  
Temperature: 19.5 °C  
Pressure: 746.4 mmHg  
Relative Humidity: 49.3 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
8 oz		24.5	24.5	F	F	2.03	1.3
4 oz		8.63	8.63	F	F	2.00	0.22
2 oz		2.89	2.89	F	F	2.00	0.14
1 oz		1.62	1.62	F	F	2.00	0.11
1/2 oz		0.815	0.815	F	F	2.00	0.092
1/4 oz		1.125	1.125	F	F	2.00	0.056
1/8 oz		0.830	0.830	F	F	2.00	0.046
1/16 oz		0.216	0.216	F	F	2.00	0.070
1/32 oz		0.458	0.458	F	F	2.00	0.044
1/32 . oz		-0.020	-0.020	F	F	2.00	0.044

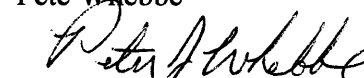
The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> at 20 °C. The 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.

Erik Alfvín

  
Metrologist

Reviewed by:

Pete Whebbe

  
Metrologist


Receipt Date: November 7, 2017  
Cal. Date: November 9, 2017  
Report Date: November 9, 2017

Report No.: 338429  
Set Serial No.: 614-808  
Barcode: 200738

## Calibration Certificate

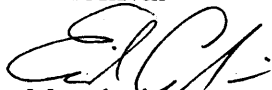
FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: None  
Procedure: NIST SOP 8  
Technician ID: 19

Item(s) Submitted: Metric Weight Kit - ASTM 4, 5, 6  
Manufacturer: Rice Lake  
Weight Type: I & II  
Equipment ID: None  
Condition: Good  
Temperature: 19.5 °C  
Pressure: 747.9 mmHg  
Relative Humidity: 47.8 %

Nominal Value	Serial No.	CM Correction (mg)		ASTM E617 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
5000 g		226	226	5	5	2.03	13
2000 g		69.1	69.1	5	5	2.02	5.7
2000 . g		82.1	82.1	5	5	2.02	5.7
1000 g		47.8	47.8	6	6	2.02	2.5
500 g		21.7	21.7	5	5	2.02	2.0
200 g		9.22	9.22	5	5	2.02	0.55
200 . g		11.26	11.26	5	5	2.02	0.55
100 g		-5.83	-5.83	5	5	2.02	0.25
50 g		2.45	2.45	5	5	2.02	0.16
20 g		0.77	0.77	5	5	2.02	0.11
20 . g		1.89	1.89	5	5	2.02	0.11
10 g		0.121	0.121	4	4	2.02	0.072
5 g		0.691	0.691	5	5	2.02	0.054
2 g		0.226	0.226	5	5	2.02	0.048
2 . g		0.560	0.560	5	5	2.02	0.048
1 g		0.427	0.427	5	5	2.05	0.039

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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 ASTM E617 (2013). 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.


Erik Alfvín



Metrologist

Reviewed by:

Pete Wnebke



Metrologist



Receipt Date: November 14, 2017  
 Cal. Date: November 30, 2017  
 Report Date: November 30, 2017

Report No.: 338465  
 Set Serial No.: 614-807/10 KG KIT  
 Barcode: 017426

## Calibration Certificate

FAIRBANKS  
 2500 CLEVELAND AVENUE NORTH  
 ROSEVILLE, MN 55113-2728  
 Contact: RON LOUDERBACK  
 Phone: 651-815-9000  
 PO Number: None  
 Procedure: NIST SOP 8  
 Technician ID: 19

Item(s) Submitted: Metric Weight Kit - Class F  
 Manufacturer: Rice Lake  
 Weight Type: I & II  
 Equipment ID: None  
 Condition: Good  
 Temperature: 19.5 °C  
 Pressure: 739.3 mmHg  
 Relative Humidity: 49.1 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
5000 g		194	194	F	F	2.03	13
2000 g		6.1	6.1	F	F	2.01	5.7
2000 g		75.1	75.1	F	F	2.01	5.7
1000 g		47.4	47.4	F	F	2.02	2.5
500 g		48.7	48.7	F	F	2.02	2.0
200 g		12.40	12.40	F	F	2.02	0.55
200 g		5.80	5.80	F	F	2.02	0.55
100 g		5.31	5.31	F	F	2.02	0.25
50 g		5.25	5.25	F	F	2.02	0.16
20 g		1.46	1.46	F	F	2.02	0.11
20 g		1.83	1.83	F	F	2.02	0.11
10 g		0.931	0.931	F	F	2.02	0.072
5 g		0.404	0.404	F	F	2.02	0.054
2 g		0.240	0.240	F	F	2.02	0.048
2 g		0.486	0.486	F	F	2.02	0.048
1 g		0.321	0.321	F	F	2.05	0.039



Receipt Date: November 14, 2017  
Cal. Date: November 30, 2017  
Report Date: November 30, 2017

Continued,  
Report No.: 338465  
Set Serial No.: 614-807/10 KG KIT  
Barcode: 017426

## Calibration Certificate

FAIRBANKS  
2500 CLEVELAND AVENUE NORTH  
ROSEVILLE, MN 55113-2728  
Contact: RON LOUDERBACK  
Phone: 651-815-9000  
PO Number: None  
Procedure: NIST SOP 8  
Technician ID: 19

Item(s) Submitted: Metric Weight Kit - Class F  
Manufacturer: Rice Lake  
Weight Type: I & II  
Equipment ID: None  
Condition: Good  
Temperature: 19.5 °C  
Pressure: 739.3 mmHg  
Relative Humidity: 49.1 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
0.5 g		0.302	0.302	F	F	2.05	0.021
0.2 g		0.219	0.219	F	F	2.04	0.016
0.1 g		0.145	0.145	F	F	2.05	0.015
0.05 g		0.157	0.157	F	F	2.06	0.011
0.01 g		-0.0036	-0.0036	F	F	2.05	0.0086
0.005 g		0.0271	0.0271	F	F	2.07	0.0074

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/cm<sup>3</sup> density and an air density of 1.2 mg/cm<sup>3</sup> 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.

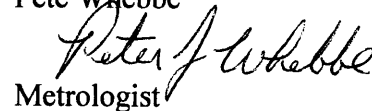
Erik Alfvín



Metrologist

Reviewed by:

Pete Whebbe



Metrologist



# United States Department of Commerce

## National Institute of Standards and Technology

Certificate of Metrological Traceability For:

# Minnesota

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


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

### Scope

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