

prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory Office: 118 West Capitol Avenue, Pierre, SD 57501

Lab: 1100 Otter Rd, Bldg D, Sturgis, SD 57785

Lab: 605-347-7541, Office: 605-773-3697, Cell: 605-280-4572

Email: ron.peterson@state.sd.us https://dps.sd.gov/inspections/weights-measures

CALIBRATION CERTIFICATE

Capital Scale (Big Red)

SA# 61

Certificate number: M25048

Physical Address:

Billing Address:

3021 Valley Forge Street

3021 Valley Forge Street

Bismarck, ND 58503

Bismarck, ND 58503

Contact: Travis Will

Phone: 701-255-1556

Received Date: 01/23/2025 Certificate Issued: 01/27/2025

luantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	As Lett In Tolerance
2	2000 lb Weight Carts	2	0	2	0	2
16	1000 lb Weights	16	14	7	0	16
20	50 lb Weights	20	13	15	0	20
1	Avoirdupois Kit	20	20	0	0	20
1	Metric Kit	14	14	0	0	14

Uncertainty Statement: The combined standard uncertainty includes the standard uncertainty reported for the standard and the standard uncertainty for the measurement process. The combined standard uncertainty is multiplied by a coverage factor k to provide an expanded uncertainty which defines an interval having a level of confidence of approximately 95 percent. The expanded uncertainty presented in this report is consistent with the 2008 ISO/IEC Guide to the Expression of Uncertainty in Measurement. The expanded uncertainty is not to be confused with a tolerance limit for the user during application. For weight carts, factors included on the inspection checklist have not been included in the calibration uncertainty. However, factors on the checklist may contribute measurement errors that are significant if not properly maintained during use.

Conformity Statement:

The artifacts submitted for this calibration are calibrated to NIST Handbook 105-1 (1990 or 2019), NIST Handbook 105-8 (2019), NIST Handbook 105-3 (2010), or ASTM E617 (2023), Standard Specification for Laboratory Weights and Precision Mass Standards specifications. The reported test values relate only to the observations made at the time and conditions of the test. Artifacts fully comply with all requirements (both specifications and tolerances) of the applicable documentary standard unless otherwise stated. Stated expanded uncertainties are less than one-third of the specified tolerances (maximum permissible errors, m.p.e.) for mass calibrations and less than the specified tolerances for volume calibrations. The correction value plus or minus the expanded uncertainty is within the stated tolerances. It is the decision rule of the SD State Metrology Laboratory that any cast weights determined to have a correction within 66 % of the upper tolerance or 50 % of the lower tolerance will be adjusted closer to zero mass correction, even if the mass correction originally met the applicable tolerance.

Traceability Statement:

The Standards of the SD Metrology Laboratory used for comparison are traceable to the International System of Units (SI) through the National Institute of Standards and Technology. The laboratory certificate number identified above is the unique report number to be used in referencing measurement traceability for artifacts identified in this report only.

Ron E Peterson, Metrologist

01/27/2025

CALIBRATION NVLAP LAB CODE 600384-0

Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of acceditation under lab code 600384-0. This certificate may not be used to claim product endorsement by NVLAP, NIST Office of Weights and Measures or any other government agency, and may not be reproduced, except in full without written approval from this laboratory.

Ver 20250114

1 of 9



Lab: 1100 Otter Rd, Bldg D Sturgls, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Big Red)

Calibration Date:

01/27/2025

Certificate Number: M25048

Environmental conditions at time of test:

Temperature: 19.55 °C

Humidity: 48.63 %

Pressure: 666.88 mmhg

Test method used: SOP 33 Calibrations of Weight Carts, May 2019

Test equipment used: Recently calibrated weights and a Mettler SLS510 Load Cell with IND570 Indicator.

Vaisala PT301

Condition of Carts: Used but in good condition

Manufacturer: Unk

SN:

541094

Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (Ib)	Condition as Left
2000	2.40	1090	0.05	23	0.11	2.01	0.70	Adjusted

Notes:

The values reported relate only to those observations made at the time and conditions of the test. This calibration certifiate, so numbered, may not be reproduced, except in full, without approval of the laboratory.

The above weight cart was allowed to come to environmental equilibrium in the laboratory prior to calibration. The weight cat was adjusted if needed and as noted above to as close as practical to zero error. All fluid levels must be maintained as close to reference levels as possible during use. Any maintenance, repairs or damage to weight cart or its components will likely result in an out-of-tolerance condition; therefore, maintenance or replacement of components such as batteries, tires, filters, etc. will require recalibration of the weight cart prior to subsequent use.

Conformity Assessment:

The weight cart identified on this calibration certificate complies with NIST Handbook 1058, 2019 specifications and tolerances. Additional details regarding the assessment are included in the associated checklist that is an integral part of this calibration certificate. The weight cart was found (or adjusted) to within the specified tolerances.

The above weight cart was compared with standards of the State of South Dakota, which are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) and have current calibration values. The assigned cetificate number provides documented evidence for measurement traceability.

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Ron E Peterson, Metrologist

01/27/2025



Metrology Lab Lab: 1100 Otter Rd, Bldg D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



Inspection Checklist for Weight Cart

Calibrated fo	r:	Capital Scale (Big Red)			Certificate n	umber:	M25048
Calibration D	ate:	01/28/2025					
Manufacture	er:	Unk		Date of Mani	ufacture	Unk	
Model Numb	er:	Unk		ID/SN Numbe	er		541094
				4			
✓	Nominal Mas	ss of Weight Cart	2000 lbs		Suitably mar	ked: Yes/No	Yes
✓	Powered by:	Electric/gener	ator 🗸	Diesel		Gasoline	
✓	Fluid Levels:	Engine O	il] '		, ,	
		Hydraulic F	luid		S	ealed: Yes/No	
		Bat	tery 🗸	1	S	ealed: Yes/No	Yes
	-	Liquid Fu	ıel	Refer	ence Line Pre	sent: Yes/No	
✓	Fluid drain to	ubes extend beyond the	body of the cart:		Yes	1 '	
✓	Number of a	ıxles:		2			
✓	Number /Siz	e of Tires	16x5x11.25	18x7x12.125			
✓	Sealed whee	el bearings: Yes/No	,	/es			
✓	Drain holes p	present in locations wher	re water may acc	umulate: Yes/N	lo	Yes	
✓	Weight restr	raint railing permanently	fixed and solid:	Yes/No		Yes	
✓	Adjusting ca	vity accessible: Yes/No	Yes		Approximate	capacity:(lbs)	100
✓	Adjusting ca	vity sealed: Yes/No	Yes				
✓	Service brak	es functioning properly: '	Yes/No	Yes	1		
✓	Parking brak	es functioning properly:	Yes/No	Yes	1		
	Remote con	trol functioning properly	: Yes/No		1		
	_				•		
	General con	dition at time of calibrati	ion (note any acc	umulated dirt/	debris, dama	ge, loose parts	, or evidence of
✓	tampering o	r unauthorized entry of s	seals).				
	List and you						
	list and repo	ort any repair and mainte exhaust system, wheels o	hanged welding	d, parts replace	ed, etc., Leaks	repaired, new	battery,
✓	the last calib	oration.	indinged, Welding	periorinea, et	c. include any	comments or	cnanges since
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Ron E Peterson, Metrologist

01/27/2025

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Lab: 1100 Otter Rd, Bldg D Sturgls, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Big Red)

Calibration Date:

01/27/2025

Certificate Number: M25048

Environmental conditions at time of test:

Temperature: 19.45 °C

Humidity: 48.83 %

Pressure: 666.92 mmhg

Test method used: SOP 33 Calibrations of Weight Carts, May 2019

Test equipment used: Recently calibrated weights and a Mettler SLS510 Load Cell with IND570 Indicator.

Vaisala PT301

Condition of Carts: Used but in good condition

SN: Unk

Manufacturer: Unk

Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
2000	11.89	5398	0.05	23	0.11	2.01	0.70	Adjusted

Notes:

The values reported relate only to those observations made at the time and conditions of the test. This calibration certifiate, so numbered, may not be reproduced, except in full, without approval of the laboratory.

The above weight cart was allowed to come to environmental equilibrium in the laboratory prior to calibration. The weight cart was adjusted if needed and as noted above to as close as practical to zero error. All fluid levels must be maintained as close to reference levels as possible during use. Any maintenance, repairs or damage to weight cart or its components will likely result in an out-of-tolerance condition; therefore, maintenance or replacement of components such as batteries, tires, filters, etc. will require recalibration of the weight cart prior to subsequent use.

Conformity Assessment:

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The above weight cart was compared with standards of the State of South Dakota, which are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) and have current calibration values. The assigned cetificate number provides documented evidence for measurement traceability.

Ron E Peterson, Metrologist

01/27/2025



Lab: 1100 Otter Rd, Bldg D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



Inspection Checklist for Weight Cart Calibrated for: Capital Scale (Big Red) Certificate number: M25048 Calibration Date: 01/28/2025 Manufacturer: Unk Date of Manufacture Unk **Model Number:** Unk ID/SN Number Unk Nominal Mass of Weight Cart 2000 lbs Suitably marked: Yes/No Yes Powered by: Electric/generator Diesel Gasoline Fluid Levels: **Engine Oil** Hydraulic Fluid Sealed: Yes/No / Battery Sealed: Yes/No Yes Liquid Fuel Reference Line Present: Yes/No Fluid drain tubes extend beyond the body of the cart: Yes/No Yes Number of axles: / Number /Size of Tires 16x5x11.25 18x7x12.125 1 Sealed wheel bearings: Yes/No Yes Drain holes present in locations where water may accumulate: Yes/No Yes Weight restraint railing permanently fixed and solid: Yes/No Yes Adjusting cavity accessible: Yes/No Yes Approximate capacity:(lbs) 100 Adjusting cavity sealed: Yes/No Yes Service brakes functioning properly: Yes/No Yes Parking brakes functioning properly: Yes/No Yes Remote control functioning properly: Yes/No General condition at time of calibration (note any accumulated dirt/debris, damage, loose parts, or evidence of tampering or unauthorized entry of seals). List and report any repair and maintenance performed, parts replaced, etc., Leaks repaired, new battery, carburetor, exhaust system, wheels changed, welding performed, etc. Include any comments or changes since the last calibration.

Ron E Peterson, Metrologist

01/27/2025

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Lab: 1100 Otter Rd, Bldg. D Sturgls, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Big Red)

Temperature: 19.48 °C

Certificate number:

M25048

Calibration Date:

01/27/2025

Purchase Order Number:

0

Environmental conditions at time of test:

Humidity: 47.5 %

Pressure: 666.7 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019

Test equipment used: Lab standards traceable to the SI, an XPE604KMC balance, and a Vaisala PTU301

Condition of Weights: Cleaned and painted

Artifact(s):

16 - 1000 lb weights

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Nominal	CN/ID	Correction		Correction	and the second second second second	NIST Class F	Uncertainty	Moreon	Condition
	SN/ID	lb	g	lb	g	Tolerance (g)	g	k	As Left
1000 lb	13.10	-0.02	-9.8	-0.02	-9.8	45	4.7	2.0	In-Tolerance
1000 lb	13.11	-0.05	-21.4	-0.05	-21.4	45	4.7	2.0	In-Tolerance
1000 lb	13.12	-0.07	-32.7	0.00	0.0	45	4.7	2.0	Adjusted
1000 lb	13,13	-0.03	-15.8	-0.03	-15.8	45	4.7	2.0	In-Tolerance
1000 lb	13.18	-0.07	-29.9	0.00	0.0	45	4.7	2.0	Adjusted
1000 lb	13.19	-0.06	-27.9	0.00	0.1	45	4.7	2.0	Adjusted
1000 lb	13.20	-0.02	-7.0	-0.02	-7.0	45	4.7	2.0	In-Tolerance
1000 lb	13.20	-0.09	-39.9	0.00	0.0	45	4.7	2.0	Adjusted
1000 lb	13.21	-0.04	-16.2	-0.04	-16.2	45	4.7	2.0	In-Tolerance
1000 lb	13.22	-0.07	-30.7	0.00	-0.1	45	4.7	2.0	Adjusted
1000 lb	13.23	-0.02	-8.0	-0.02	-8.0	45	4.7	2.0	In-Tolerance
1000 lb	13.24	-0.07	-33.8	0.00	0.2	45	4.7	2.0	Adjusted
1000 lb	13.25	-0.04	-16.9	-0.04	-16.9	45	4.7	2.0	In-Tolerance
1000 lb	13.27	-0.05	-21.3	-0.05	-21.3	45	4.7	2.0	In-Tolerance
1000 lb	13.28	-0.03	-14.2	-0.03	-14.2	45	4.7	2.0	In-Tolerance
1000 lb	13.29	-0.09	-39.7	0.00	0.0	45	4.7	2.0	Adjusted
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^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist

01/27/2025

South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab

Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Big Red)

Certificate number:

M25048

Calibration Date:

01/27/2025

Purchase Order Number:

Environmental conditions at time of test:

Temperature: 20.2 °C

Humidity: 46.3 %

Pressure: 667.3 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

20 50 lb weights

Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty	M 18 225	Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
50 lb	03	-3318	57	2300	200	2.02	Adjusted
50 lb	09	-1823	7	2300	200	2.02	Adjusted
50 lb	19	-2138	77	2300	200	2.02	Adjusted
50 lb	29	-2533	-8	2300	200	2.02	Adjusted
50 lb	32	-1148	-1148	2300	200	2.02	In-Tolerance
50 lb	42	-1433	7	2300	200	2.02	Adjusted
50 lb	43	-1933	47	2300	200	2.02	Adjusted
50 lb	44	-2328	17	2300	200	2.02	Adjusted
50 lb	45	-1853	42	2300	200	2.02	Adjusted
50 lb	51	-1903	7	2300	200	2.02	Adjusted
50 lb	60	-2183	-23	2300	200	2.02	Adjusted
50 lb	11B	-2353	77	2300	200	2.02	Adjusted
50 lb	11C	-728	-728	2300	200	2.02	In-Tolerance
50 lb	Α	-3333	7	2300	200	2.02	Adjusted
50 lb	В	-718	-718	2300	200	2.02	In-Tolerance
50 lb	К	-1848	47	2300	200	2.02	Adjusted
50 lb	L	-1368	47	2300	200	2.02	Adjusted
50 lb	N	-318	-318	2300	200	2.02	In-Tolerance
50 lb	Р	-1233	-23	2300	200	2.02	Adjusted
50 lb	Υ	-808	-808	2300	200	2.02	In-Tolerance

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

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Ron E Peterson, Metrologist

01/27/2025

South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab

Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Plerre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Big Red)

Certificate number:

M25048

Calibration Date:

01/28/2025

Purchase Order Number:

Environmental conditions at time of test:

Temperature: 21 °C

Humidity: 45.5 %

Pressure: 665.4 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LDSC, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301 Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

20 piece Avoirdupois Kit

SN 010813A

Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty	EMBRANA.	Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
5 lb	1	67	67	230	20	2.04	In-Tolerance
5 lb	2	66	66	230	20	2.04	In-Tolerance
5 lb	3	65	65	230	20	2.04	In-Tolerance
5 lb	4	62	62	230	20	2.04	In-Tolerance
5 lb	5	64	64	230	20	2.04	In-Tolerance
1 lb	1	23.5	23.5	70	6.1	2.04	In-Tolerance
1 lb	2	22.5	22.5	70	6.1	2.04	In-Tolerance
1 lb	3	24.5	24.5	70	6.1	2.04	In-Tolerance
1 lb	4	16.5	16.5	70	6.1	2.04	In-Tolerance
1 lb	5	26.5	26.5	70	6.1	2.04	In-Tolerance
8 oz		21.2	21.2	45	4.0	2.04	In-Tolerance
4 oz		9.4	9.4	23	2.0	2.03	In-Tolerance
2 oz		3.52	3.52	11	0.95	2.04	In-Tolerance
1 oz		1.65	1.65	5.4	0.48	2.03	In-Tolerance
0.5 oz		0.98	0.98	2.8	0.25	2.04	In-Tolerance
0.25 oz		0.38	0.38	1.7	0.15	2.03	In-Tolerance
0.125 oz		0.61	0.61	1.3	0.12	2.03	In-Tolerance
0.0625 oz		0.173	0.173	1.1	0.095	2.03	In-Tolerance
0.03125 oz		0.218	0.218	0.87	0.077	2.03	In-Tolerance
0.03125 oz		0.323	0.323	0.87	0.077	2.03	In-Tolerance
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^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

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Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist

01/28/2025

South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab

Lab: 1100 Otter Rd, Bldg. D Sturgls, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Big Red)

Certificate number:

M25048

Calibration Date:

01/28/2025

Purchase Order Number:

Environmental conditions at time of test:

Temperature: 21 °C

Humidity: 45.5 %

Pressure: 665.4 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

14 piece Avoirdupois Kit

SN 11905E

	11905E	21/1		siece Avoir aupois Kit		, ii cii dec(5).	
Condition		Uncertainty	NIST Class F	Correction as Left	Correction as Found		Nominal
As Left	k	mg	Tolerance (mg)	mg	mg	SN/ID	
In-Tolerance	2.04	17	200	42	42	2	2 kg
In-Tolerance	2.04	8.7	100	33.0	33.0		1 kg
In-Tolerance	2.04	6.1	70	27.5	27.5		500 g
In-Tolerance	2.04	3.4	40	13.3	13.3		200 g
In-Tolerance	2.04	3.4	40	17.9	17.9		200 g
In-Tolerance	2.04	1.7	20	9.9	9.9		100 g
In-Tolerance	2.04	0.86	10	5.18	5.18		50 g
In-Tolerance	2.04	0.34	4	2.70	2.70		20 g
In-Tolerance	2.04	0.34	4	0.99	0.99		20 g
In-Tolerance	2.04	0.17	2	0.42	0.42		10 g
In-Tolerance	2.04	0.13	1.5	0.65	0.65		5 g
In-Tolerance	2.04	0.095	1.1	0.711	0.711		2 g
In-Tolerance	2.04	0.095	1.1	0.151	0.151	7.41	2 g
In-Tolerance	2.04	0.078	0.9	0.342	0.342		1 g
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Ron E Peterson, Metrologist

01/28/2025



prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory

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Email: ron.peterson@state.sd.us https://dps.sd.gov/inspections/weights-measures

CALIBRATION CERTIFICATE

Capital Scale (Shop)

SA# 61

Certificate number: M25049

Physical Address:

Billing Address:

3021 Valley Forge Street

3021 Valley Forge Street

Bismarck, ND 58503

Bismarck, ND 58503

Contact: Travis Will

Phone: 701-255-1556

Received Date: 01/23/2025 Certificate Issued: 01/27/2025

Artifacts Submitted and Summan, of Decultar

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	As Left In Tolerance
20	50 lb Weights	20	19	7	1	19
3	25 lb and 10 lb cast Weights	3	3	0	0	3
1	Metric Kit	21	21	0	0	21
2	Avoirdupois Kits	30	30	0	0	30

Uncertainty Statement: The combined standard uncertainty includes the standard uncertainty reported for the standard and the standard uncertainty for the measurement process. The combined standard uncertainty is multiplied by a coverage factor k to provide an expanded uncertainty which defines an interval having a level of confidence of approximately 95 percent. The expanded uncertainty presented in this report is consistent with the 2008 ISO/IEC Guide to the Expression of Uncertainty in Measurement. The expanded uncertainty is not to be confused with a tolerance limit for the user during application. For weight carts, factors included on the inspection checklist have not been included in the calibration uncertainty. However, factors on the checklist may contribute measurement errors that are significant if not properly maintained during use.

Conformity Statement:

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Ron E Peterson, Metrologist

01/27/2025

NVLAP LAB CODE 600384-0

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Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Shop)

Certificate number:

M25049

Calibration Date:

01/27/2025

Purchase Order Number:

Environmental conditions at time of test:

Temperature: 19.5 °C

Humidity: 45.3 %

Serial#

Pressure: 666.4 mmhg Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019 Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

20 50 lb weights

Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
50 lb	04	-1358	-18	2300	200	2.02	Adjusted
50 lb	11	-248	-248	2300	200	2.02	In-Tolerance
50 lb	13	72	72	2300	200	2.02	In-Tolerance
50 lb	15	-868	-868	2300	200	2.02	In-Tolerance
50 lb	18	-1208	17	2300	200	2.02	Adjusted
50 lb	20	-1023	-1023	2300	200	2.02	In-Tolerance
50 lb	21	762	762	2300	200	2.02	In-Tolerance
50 lb	24	-808	-808	2300	200	2.02	In-Tolerance
50 lb	33	-1008	-1008	2300	200	2.02	In-Tolerance
50 lb	34	-1213	2	2300	200	2.02	Adjusted
50 lb	34	-268	-268	2300	200	2.02	in-Tolerance
50 lb	37	32	32	2300	200	2.02	In-Tolerance
50 lb	39	-673	Broken Shoulder	2300	200	2.02	Reject
50 lb	40	-873	-873	2300	200	2.02	In-Tolerance
50 lb	70	-1958	27	2300	200	2.02	Adjusted
50 lb	71	-1193	2	2300	200	2.02	Adjusted
50 lb	72	-403	-403	2300	200	2.02	In-Tolerance
50 lb	77	-128	-128	2300	200	2.02	In-Tolerance
50 lb	11F	-1618	27	2300	200	2.02	Adjusted
50 lb	AAA	-1303	-13	2300	200	2.02	Adjusted
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^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service. The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be

reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist

01/27/2025

Lab: 1100 Otter Rd, Bldg. D Sturgls, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Shop)

Certificate number:

M25049

Calibration Date:

01/24/2025

Purchase Order Number:

Environmental conditions at time of test:

Temperature: 21.2 °C

Humidity: 45.5 %

Serial#

Pressure: 667.1 mmhg Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

3 Avoirdupois Weight(s)

	Artifactis).	3	Avoiraupois weight(s)				
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
25 lb		-274	-274	1100	120	2.02	In-Tolerance
10 lb	S	235	235	450	39	2.04	In-Tolerance
10 lb	1	-28	-28	450	39	2.04	In-Tolerance
							III TOTAL ALICE
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							-
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					-		-
					-		

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

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Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist

Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Shop)

Certificate number:

M25049

Calibration Date:

01/24/2025

Purchase Order Number:

Environmental conditions at time of test:

Humidity: 45 %

Serial# 11111A

Temperature: 21 °C

Pressure: 667.3 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019 Test equipment used: Lab standards traceable to the SI, XPR64003LDSC, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

21 piece Metric Kit

SN 11111A

Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty	TITIE	Constitution Continue
	SN/ID	mg	mg	Tolerance (mg)	mg	k	Condition
5 kg	1	162	162	500	43	2.04	As Left
5 kg	2	142	142	500	43	2.04	In-Tolerance
2 kg	1	33	33	200	17		In-Tolerance
2 kg		44	44	200	17	2.04	In-Tolerance
1 kg		46.0	46.0	100	8.7	2.04	In-Tolerance
500 g	1	16.5	16.5	70		2.04	In-Tolerance
500 g	2	20.5	20.5	70	6.1	2.04	In-Tolerance
500 g	3	13.5	13.5	70	6.1	2.04	In-Tolerance
500 g	4	20.5	20.5	70	6.1	2.04	In-Tolerance
500 g	5	22.5	22.5		6.1	2.04	In-Tolerance
200 g	1	9.1	9.1	70	6.1	2.04	In-Tolerance
200 g	2	9.8		40	3.4	2.04	In-Tolerance
100 g		8.0	9.8	40	3.4	2.04	In-Tolerance
50 g		1.60	8.0	20	1.7	2.04	In-Tolerance
20 g			1.60	10	0.86	2.04	In-Tolerance
20 g		1.69	1.69	4	0.34	2.04	In-Tolerance
		1.23	1.23	4	0.34	2.04	In-Tolerance
10 g		0.53	0.53	2	0.17	2.04	In-Tolerance
5 g		0.72	0.72	1.5	0.13	2.04	In-Tolerance
2 g		0.286	0.286	1.1	0.095	2.04	In-Tolerance
2 g		0.571	0.571	1.1	0.095	2.04	In-Tolerance
1 g		0.152	0.152	0.9	0.078	2.04	In-Tolerance
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^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

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Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist

South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab

Lab: 1100 Otter Rd, Bldg. D Sturgls, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Shop)

Certificate number:

M25049

Calibration Date:

01/24/2025

Purchase Order Number:

Environmental conditions at time of test:

Serial# 11905B

Temperature: 21 °C

Humidity: 45 %

Pressure: 667.3 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LDSC, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

17 piece Avoirdupois Kit

SN 11905B

	Ai tilact(3)	. 17		SN 11905B				
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty	ENERGY.	Condition	
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left	
2 lb	1	27.4	27.4	91	7.9	2.04	In-Tolerance	
2 lb	2	11.4	11.4	91	7.9	2.04	In-Tolerance	
2 lb	3	12.4	12.4	91	7.9	2.04	In-Tolerance	
1 lb		21.5	21.5	70	6.1	2.04	In-Tolerance	
0.3 lb		-0.6	-0.6	27	3.9	2.04	In-Tolerance	
0.2 lb		1.0	1.0	18	1.6	2.04	In-Tolerance	
0.1 lb		4.32	4.32	9.1	0.78	2.04	In-Tolerance	
0.05 lb		0.47	0.47	4.5	0.39	2.04	In-Tolerance	
0.03 lb		-1.39	-1.39	2.7	0.39	2.04	In-Tolerance	
0.02 lb		0.23	0.23	1.8	0.16	2.04	In-Tolerance	
0.01 lb		-0.41	-0.41	1.5	0.13	2.04	In-Tolerance	
8 oz		10.2	10.2	45	4.0	2.04	In-Tolerance	
4 oz		-2.5	-2.5	23	2.0	2.03	In-Tolerance	
2 oz		4.48	4.48	11	0.95	2.04	In-Tolerance	
1 oz		0.62	0.62	5.4	0.48	2.03	In-Tolerance	
0.5 oz		0.11	0.11	2.8	0.25	2.04	In-Tolerance	
0.25 oz		0.37	0.37	1.7	0.15	2.03	In-Tolerance	
							-	

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

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Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

More At

Ron E Peterson, Metrologist



Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Shop)

Certificate number:

M25049

Calibration Date:

01/24/2025

Purchase Order Number:

Environmental conditions at time of test:

Serial# 11905A

Temperature: 21 °C

Humidity: 45 %

Pressure: 667.3 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

13 piece Avoirdupois Kit

SN 11905A

		15		3N 11905A				
ninal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition	
MUNICIPAL PROPERTY.	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left	
lb		67	67	450	39	2.04	In-Tolerance	
lb		99	99	450	39	2.04	In-Tolerance	
lb		-92	-92	230	20	2.04	In-Tolerance	
lb		34.4	34.4	91	7.9	2.04	In-Tolerance	
lb		20.4	20.4	91	7.9	2.04	In-Tolerance	
lb		-2.6	-2.6	70	6.1	2.04	In-Tolerance	
oz		14.2	14.2	45	4.0	2.04	In-Tolerance	
oz		-4.3	-4.3	23	2.0	2.03	In-Tolerance	
oz		3.01	3.01	5.4	0.48	2.03	In-Tolerance	
oz		3.01	3.01	5.4	0.48	2.03	In-Tolerance	
oz		1.75	1.75	5.4	0.48	2.03	In-Tolerance	
oz oz		1.53	1.53	2.8	0.25	2.04	In-Tolerance	
5 oz		-1.29	-1.29	1.7	0.15	2.03	In-Tolerance	
							1	
							-	
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							+	
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							+	

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

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Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist



prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory

Office: 118 West Capitol Avenue, Pierre, SD 57501 Lab: 1100 Otter Rd, Bldg D, Sturgis, SD 57785

Lab: 605-347-7541, Office: 605-773-3697, Cell: 605-280-4572

Email: ron.peterson@state.sd.us https://dps.sd.gov/inspections/weights-measures

CALIBRATION CERTIFICATE

Capital Scale (Trailer)

SA# 61

Certificate number: M25050

Physical Address:

Billing Address:

3021 Valley Forge Street

3021 Valley Forge Street

Bismarck, ND 58503

Contact: Travis Will

Bismarck, ND 58503

Phone: 701-255-1556

Received Date: 01/23/2025 Certificate Issued: 01/27/2025

Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	As Left In Tolerance
4	1000 lb Weights	3	4	2	0	4
30	50 lb Weights	30	26	12	0	30
	,					

Uncertainty Statement: The combined standard uncertainty includes the standard uncertainty reported for the standard and the standard uncertainty for the measurement process. The combined standard uncertainty is multiplied by a coverage factor k to provide an expanded uncertainty which defines an interval having a level of confidence of approximately 95 percent. The expanded uncertainty presented in this report is consistent with the 2008 ISO/IEC Guide to the Expression of Uncertainty in Measurement. The expanded uncertainty is not to be confused with a tolerance limit for the user during application. For weight carts, factors included on the inspection checklist have not been included in the calibration uncertainty. However, factors on the checklist may contribute measurement errors that are significant if not properly maintained during use.

Conformity Statement:

The artifacts submitted for this calibration are calibrated to NIST Handbook 105-1 (1990 or 2019), NIST Handbook 105-8 (2019), NIST Handbook 105-3 (2010), or ASTM E617 (2023), Standard Specification for Laboratory Weights and Precision Mass Standards specifications. The reported test values relate only to the observations made at the time and conditions of the test. Artifacts fully comply with all requirements (both specifications and tolerances) of the applicable documentary standard unless otherwise stated. Stated expanded uncertainties are less than one-third of the specified tolerances (maximum permissible errors, m.p.e.) for mass calibrations and less than the specified tolerances for volume calibrations. The correction value plus or minus the expanded uncertainty is within the stated tolerances. It is the decision rule of the SD State Metrology Laboratory that any cast weights determined to have a correction within 66 % of the upper tolerance or 50 % of the lower tolerance will be adjusted closer to zero mass correction, even if the mass correction originally met the applicable tolerance.

Traceability Statement:

The Standards of the SD Metrology Laboratory used for comparison are traceable to the International System of Units (SI) through the National Institute of Standards and Technology. The laboratory certificate number identified above is the unique report number to be used in referencing measurement traceability for artifacts identified in this report only.

Ron E Peterson, Metrologist

01/27/2025

CALIBRATION

NVLAP LAB CODE 600384-0

Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of acceditation under lab code 600384-0. This certificate may not be used to claim product endorsement by NVLAP, NIST Office of Weights and Measures or any other government agency, and may not be reproduced, except in full without written approval from this laboratory.



Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Trailer)

Certificate number:

M25050

Calibration Date:

01/24/2025

Purchase Order Number:

Serial#

Environmental conditions at time of test:

Temperature: 19.8 °C Humidity: 44.6 % Pressure: 667 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019

Test equipment used: Lab standards traceable to the SI, an XPE604KMC balance, and a Vaisala PTU301

Condition of Weights: Cleaned and painted

Artifact(s):

4 - 1000 lb weights

Artifact(s).				1000 ib weights					
Nominal	A CHE LES THE STATE OF	Correction		Correctio		NIST Class F	Uncertainty		Condition
	SN/ID	lb	g	Ib	g	Tolerance (g)	g	k	As Left
1000 lb	13.14	-0.03	-12.3	-0.03	-12.3	45	4.7	2.0	In-Tolerance
1000 lb	13.15	-0.06	-29.3	0.00	-0.1	45	4.7	2.0	Adjusted
1000 lb	13.16	-0.05	-22.9	0.00	0.0	45	4.7	2.0	Adjusted
1000 lb	13.17	-0.02	-11.1	-0.02	-11.1	45	4.7	2.0	In-Tolerance
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			-			<u> </u>			
			-						
						<u> </u>			
							-		-
			†						-
						 			

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist



Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Trailer)

Certificate number:

M25050

Calibration Date:

01/27/2025

Purchase Order Number:

Environmental conditions at time of test:

Serial#

Temperature: 20 °C

Humidity: 48 %

Pressure: 667.2 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

20 50 lb weights

Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		I de la la company
	SN/ID	mg	mg	Tolerance (mg)	mg	k	Condition As Left
50 lb	02	-923	-923	2300	200	2.02	In-Tolerance
50 lb	7	-1118	-1118	2300	200	2.02	In-Tolerance
50 lb	08	-498	-498	2300	200	2.02	In-Tolerance
50 lb	10	-1018	-1018	2300	200	2.02	In-Tolerance
50 lb	16	-1258	-8	2300	200	2.02	Adjusted
50 lb	27	-383	-383	2300	200	2.02	In-Tolerance
50 lb	30	-423	-423	2300	200	2.02	In-Tolerance
50 lb	30	-44448	2	2300	200	2.02	Adjusted
50 lb	31	-2248	17	2300	200	2.02	Adjusted
50 lb	35	-1163	-1163	2300	200	2.02	In-Tolerance
50 lb	36	-2213	37	2300	200	2.02	Adjusted
50 lb	41	-1078.000	-1078	2300	200	2.02	In-Tolerance
50 lb	46	-518.000	-518	2300	200	2.02	In-Tolerance
50 lb	48	-1048.000	-1048	2300	200	2.02	In-Tolerance
50 lb	49	-483.000	-483	2300	200	2.02	In-Tolerance
50 lb	50	-753.000	-753	2300	200	2.02	In-Tolerance
50 lb	54	-1523.000	12	2300	200	2.02	Adjusted
50 lb	55	-1068.000	-1068	2300	200	2.02	In-Tolerance
50 lb	61	-1148.000	-1148	2300	200	2.02	In-Tolerance
50 lb	64	-1318.000	32	2300	200	2.02	Adjusted
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^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

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Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist

01/27/2025



Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Trailer)

Certificate number:

M25050

Calibration Date:

01/27/2025

Purchase Order Number:

Environmental conditions at time of test:

Serial#

Temperature: 20 °C

Humidity: 48 %

Pressure: 667.2 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019 Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

10 50 lb weights

Nominal		Correction as Found	Correction as Left	NICT CL 5	1	Actorities to the control	
	SN/ID	mg	mg	NIST Class F	Uncertainty		Condition
50 lb		-1948	The state of the s	Tolerance (mg)	mg	k	As Left
50 lb	· ·		22	2300	200	2.02	Adjusted
50 lb	A	907	907	2300	200	2.02	In-Tolerance
	В	-643	-643	2300	200	2.02	In-Tolerance
50 lb	E	-1943	27	2300	200	2.02	Adjusted
50 lb	J	-1473	-13	2300	200	2.02	Adjusted
50 lb	M	-2318	2	2300	200	2.02	Adjusted
50 lb	Р	-1858	-13	2300	200	2.02	Adjusted
50 lb	R	-1048	-1048	2300	200	2.02	In-Tolerance
50 lb	T	-158	-158	2300	200	2.02	In-Tolerance
50 lb	U	-1418	17	2300	200	2.02	Adjusted

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist

01/27/2025



prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory

Office: 118 West Capitol Avenue, Pierre, SD 57501 Lab: 1100 Otter Rd, Bldg D, Sturgis, SD 57785

Lab: 605-347-7541, Office: 605-773-3697, Cell: 605-280-4572

Email: ron.peterson@state.sd.us https://dps.sd.gov/inspections/weights-measures

CALIBRATION CERTIFICATE

Capital Scale (Wanda)

Certificate number: M26023

Physical Address:

Billing Address:

3021 Valley Forge St Bismarck, ND 58503

3021 Valley Forge St Bismarck, ND 58503

Contact: Travis Will
Phone: 701-255-1556

Received Date: 08/25/2025

Certificate Issued: 08/26/2025

2 2000 lb 16 1000	rtifact Weight Carts	Total Pieces	Recvd in Tol	Adjusted	Rejected	As Left In Tolerance
16 1000	200 0000 0000	2	2	4		
	He var to be a			1	0	2
20 501	lb Weights	16	16	0	0	16
301	b weights	20	19	2	0	20
1 Avoi	rdupois kit	20	20	0	0	20
1 M	etric kit	14	14	0	0	14

Uncertainty Statement: The combined standard uncertainty includes the standard uncertainty reported for the standard and the standard uncertainty for the measurement process. The combined standard uncertainty is multiplied by a coverage factor k to provide an expanded uncertainty which defines an interval having a level of confidence of approximately 95 percent. The expanded uncertainty presented in this report is consistent with the 2008 ISO/IEC Guide to the Expression of Uncertainty in Measurement. The expanded uncertainty is not to be confused with a tolerance limit for the user during application. For weight carts, factors included on the inspection checklist have not been included in the calibration uncertainty. However, factors on the checklist may contribute measurement errors that are significant if not properly maintained during use.

Conformity Statement:

The artifacts submitted for this calibration are calibrated to NIST Handbook 105-1 (1990 or 2019), NIST Handbook 105-8 (2019), NIST Handbook 105-3 (2010), or ASTM E617 (2023), Standard Specification for Laboratory Weights and Precision Mass Standards specifications. The reported test values relate only to the observations made at the time and conditions of the test. Artifacts fully comply with all requirements (both specifications and tolerances) of the applicable documentary standard unless otherwise stated. Stated expanded uncertainties are less than one-third of the specified tolerances (maximum permissible errors, m.p.e.) for mass calibrations and less than the specified tolerances for volume calibrations. The correction value plus or minus the expanded uncertainty is within the stated tolerances. It is the decision rule of the SD State Metrology Laboratory that any cast weights determined to have a correction within 66 % of the upper tolerance or 50 % of the lower tolerance will be adjusted closer to zero mass correction, even if the mass correction originally met the applicable tolerance.. SD Metrology laboratory uses an assumed density provided by the customer or weight manufacturer which could affect measurement results.

Traceability Statement:

The Standards of the SD Metrology Laboratory used for comparison are traceable to the International System of Units (SI) through the National Institute of Standards and Technology. The laboratory certificate number identified above is the unique report number to be used in referencing measurement traceability for artifacts identified in this report only.

Ron E Peterson, Metrologist

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08/26/2025

Wade Robbins, Reviewer

08/26/2025

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CALIBRATION

NVIAP LAB CODE 600384-0

Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under lab code 600384-0. This certificate may not be used to claim product endorsement by NVLAP, NIST Office of Weights and Measures or any other government agency, and may not be reproduced, except in full without written approval from this laboratory.

Ver 20250114 1 of 9



Lab: 1100 Otter Rd, Bldg D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Wanda)

Certificate Number: M26023

Calibration Date:

08/26/2025

Environmental conditions at time of test:

Temperature: 21.5 °C

Humidity: 51.2 %

Pressure: 672.4 mmhg

Test method used: SOP 33 Calibrations of Weight Carts, May 2019

Test equipment used: Recently calibrated weights and a Sartorius Loadcell PR6246/33 C6 with X4 Process controller .

Vaisala PT301

Condition of Carts: Used but in good condition

Manufacturer: Unk

SN: 2016-1

Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
2000	0.03	11	0.03	11	0.11	2.01	0.70	In-Tolerance

Notes:

The values reported relate only to those observations made at the time and conditions of the test. This calibration certifiate, so numbered, may not be reproduced, except in full, without approval of the laboratory.

The above weight cart was allowed to come to environmental equilibrium in the laboratory prior to calibration. The weight cart was adjusted if needed and as noted above to as close as practical to zero error. All fluid levels must be maintained as close to reference levels as possible during use. Any maintenance, repairs or damage to weight cart or its components will likely result in an out-of-tolerance condition; therefore, maintenance or replacement of components such as batteries, tires, filters, etc. will require recalibration of the weight cart prior to subsequent use.

Conformity Assessment:

The weight cart identified on this calibration certificate complies with NIST Handbook 1058, 2019 specifications and tolerances. Additional details regarding the assessment are included in the associated checklist that is an integral part of this calibration certificate. The weight cart was found (or adjusted) to within the specified tolerances.

The above weight cart was compared with standards of the State of South Dakota, which are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) and have current calibration values. The assigned cetificate number provides documented evidence for measurement traceability.

Ron E Peterson, Metrologist

08/26/2025

Wade Robbins, Reviewer

08/26/2025



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Ver 20250114

South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab

Lab: 1100 Otter Rd, Bldg D Sturgis, SD 57785 Phone: 605-347-7541
Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



Inspection Checklist for Weight Cart

Calibrated for	r:	Capital Scale (Wanda)	Certificate number:	M26023
Calibration D	ate:	08/27/2025		1112025
Manufacture	r:	Unk	Date of Manufacture	2016
Model Numb	er:	2000	ID/SN Number 2016-1	
	,			
	Nominal Mas	s of Weight Cart 2000 lbs	Suitably marked: Yes/N	No Yes
√	Powered by:	Electric/generator ✓	Diesel Gaso	line
✓	Fluid Levels:	Engine Oil		
		Hydraulic Fluid	Sealed: Yes	/No
		Battery ✓	Sealed: Yes	/No Yes
	ï	Liquid Fuel	Reference Line Present: Yes	/No
✓	Fluid drain tu	ibes extend beyond the body of the cai		
✓	Number of a	xles:	2	
✓	Number /Siz	e of Tires	x5x11.25	
✓	Sealed whee	l bearings: Yes/No	Yes	
✓	Drain holes p	present in locations where water may a	ccumulate: Yes/No Yes	
✓	Weight restr	aint railing permanently fixed and solid	: Yes/No Yes	
✓	Adjusting car	vity accessible: Yes/No Yes	Approximate capacity:	(lbs) 20
✓	Adjusting ca	vity sealed: Yes/No Yes		
✓	Service brak	es functioning properly: Yes/No	Yes	
✓	Parking brak	es functioning properly: Yes/No	Yes	
	Remote con	trol functioning properly: Yes/No		
	ı,			
	General con-	dition at time of calibration (note any a	ccumulated dirt/debris, damage, loose p	parts, or evidence of
	tampering o	r unauthorized entry of seals).		
	1:			
	List and repo	ort any repair and maintenance perform	ned, parts replaced, etc., Leaks repaired, ng performed, etc. Include any commen	new battery,
✓	the last calib	pration.	ng performed, etc. Include any commen	ts or changes since
	1 -			
D)	lone th	()	We rolling	
Ron E Petersor	n, Metrologist	08/26/2025	Wade Robbins, Reviewer	08/26/2025

3 of 9



Lab: 1100 Otter Rd, Bldg D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



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CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Wanda)

Certificate Number: M26023

Calibration Date:

08/26/2025

Environmental conditions at time of test:

Temperature: 21.46 °C

Humidity: 51.21 %

Pressure: 672.38 mmhg

Test method used: SOP 33 Calibrations of Weight Carts, May 2019

Test equipment used: Recently calibrated weights and a Sartorius Loadcell PR6246/33 C6 with X4 Process controller.

Vaisala PT301

Condition of Carts: Used but in good condition

Manufacturer: UNK

SN: 2016-2

Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
2000	0.18	80	-0.13	-61	0.11	2.01	0.70	Adjusted

Notes:

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory.

The above weight cart was allowed to come to environmental equilibrium in the laboratory prior to calibration. The weight cart was adjusted if needed and as noted above to as close as practical to zero error. All fluid levels must be maintained as close to reference levels as possible during use. Any maintenance, repairs or damage to weight cart or its components will likely result in an out-of-tolerance condition; therefore, maintenance or replacement of components such as batteries, tires, filters, etc. will require recalibration of the weight cart prior to subsequent use.

Conformity Assessment:

The weight cart identified on this calibration certificate complies with NIST Handbook 1058, 2019 specifications and tolerances. Additional details regarding the assessment are included in the associated checklist that is an integral part of this calibration certificate. The weight cart was found (or adjusted) to within the specified tolerances.

The above weight cart was compared with standards of the State of South Dakota, which are traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) and have current calibration values. The assigned cetificate number provides documented evidence for measurement traceability.

Ron E Peterson, Metrologist

08/26/2025

Wade Robbins, Reviewer

08/26/2025



Lab: 1100 Otter Rd, Bldg D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



Inspection Checklist for Weight Cart

Calibrated fo	r:	Capital Scale (Wanda)			Certificate n	umber:	M26023
Calibration D	ate:	08/27/2025					
Manufacture	r:	UNK		Date of Man	ufacture		2016
Model Numb	er:	2000		ID/SN Numb	er	2016-2	
				1			
✓	Nominal Mas	ss of Weight Cart	2000 lbs		Suitably mar	ked: Yes/No	Yes
✓	Powered by:	Electric/generator	. 🗸	Diesel		Gasoline	
✓	Fluid Levels:	Engine Oil				1	
		Hydraulic Fluid		1	S	ealed: Yes/No	
		Battery	, /			ealed: Yes/No	(Control of Control of
		Liquid Fuel		Refer		esent: Yes/No	
✓	Fluid drain to	ubes extend beyond the bod	y of the cart:	_	Yes	1	
✓	Number of a			2		_	
✓	Number /Siz	e of Tires	15x5	x11.25			
✓	Sealed whee	el bearings: Yes/No	Y	'es			
√	Drain holes p	present in locations where w	ater may accu	ımulate: Yes/N	No .	Yes	1
✓	1	raint railing permanently fixe				Yes	1
✓	Adjusting ca	vity accessible: Yes/No	Yes	1	Approximate	capacity:(lbs)	20
✓	Adjusting ca	vity sealed: Yes/No	Yes	1		, , ,	
✓	Service brak	es functioning properly: Yes,	/No	Yes	1		
✓	Parking brak	ces functioning properly: Yes	/No	Yes	1		
	Remote con	trol functioning properly: Ye	s/No		1		
	_				•		
	General con	dition at time of calibration	(note any acci	umulated dirt/	debris, dama	ge, loose parts	s, or evidence of
✓	tampering o	r unauthorized entry of seals	5).				
	ļ						
	List and repo	ort any repair and maintenar	nce performed	d, parts replace	ed, etc., Leaks	repaired, nev	v battery,
✓	the last calib	exhaust system, wheels char oration.	igea, welaing	performed, et	c. Include any	y comments oi	r changes since
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Ron E Peterson, Metrologist

08/26/2025

Wade Robbins, Reviewer

08/26/2025

Ver



Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541
Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Wanda)

Certificate number:

M26023

Calibration Date:

08/26/2025

Environmental conditions at time of test:

Temperature: 22.3 °C

Humidity: 51 %

Pressure: 673.3 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Substitution, May 2019
Test equipment used: Lab standards traceable to the SI, an XPE604KMC balance, and a Vaisala PTU301

Condition of Weights: Cleaned and painted

Artifact(s):

16 1000 lb weights

	Artitact(s):	ii.	16	1000 lb weig	ghts				
Nominal	Scional High	Correction	as Found	Correctio	n as Left	NIST Class F	Uncertainty		Condition
	SN/ID	lb	g	lb	g	Tolerance (g)	g	k	As Left
1000 lb	13.1	-0.01	-6.4	-0.01	-6	45	4.7	2.0	In-Tolerance
1000 lb	13.2	0.00	-0.2	0.00	-0.2	45	4.7	2.0	In-Tolerance
1000 lb	13.3	-0.04	-17.5	-0.04	-17.5	45	4.7	2.0	In-Tolerance
1000 lb	13.4	-0.01	-3.8	-0.01	-3.8	45	4.7	2.0	In-Tolerance
1000 lb	13.5	-0.03	-13.5	-0.03	-13.5	45	4.7	2.0	In-Tolerance
1000 lb	13.6	-0.02	-9.2	-0.02	-9.2	45	4.7	2.0	In-Tolerance
1000 lb	13.7	-0.03	-11.5	-0.03	-11.5	45	4.7	2.0	In-Tolerance
1000 lb	13.8	-0.04	-19.8	-0.04	-19.8	45	4.7	2.0	In-Tolerance
1000 lb	13.9	-0.03	-12.7	-0.03	-12.7	45	4.7	2.0	In-Tolerance
1000 lb	16.1	-0.04	-16.2	-0.04	-16.2	45	4.7	2.0	In-Tolerance
1000 lb	16.2	0.01	2.5	0.01	2.5	45	4.7	2.0	In-Tolerance
1000 lb	16.3	-0.03	-14.8	-0.03	-14.8	45	4.7	2.0	In-Tolerance
1000 lb	16.4	-0.03	-14.4	-0.03	-14.4	45	4.7	2.0	In-Tolerance
1000 lb	16.5	-0.04	-16.2	-0.04	-16.2	45	4.7	2.0	In-Tolerance
1000 lb	16.6	-0.03	-12.9	-0.03	-12.9	45	4.7	2.0	In-Tolerance
1000 lb	16.7	-0.02	-7.9	-0.02	-7.9	45	4.7	2.0	In-Tolerance
								3/-	

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

done At

Ron E Peterson, Metrologist 08/26/2025

Wade Robbins, Reviewer



Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Wanda)

Certificate number:

M26023

Calibration Date:

08/26/2025

Purchase Order Number:

Environmental conditions at time of test:

Temperature: 22.93 °C

Humidity: 48.05 %

Pressure: 673.49 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Substitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

20 50 lb weights

Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
50 lb	0	-723	-723	2300	200	2.02	In-Tolerance
50 lb	3	117	117	2300	200	2.02	In-Tolerance
50 lb	11	-503	-503	2300	200	2.02	In-Tolerance
50 lb	12	62	62	2300	200	2.02	In-Tolerance
50 lb	14	-1028	-1028	2300	200	2.02	In-Tolerance
50 lb	17	-978	-978	2300	200	2.02	In-Tolerance
50 lb	28	767	767	2300	200	2.02	In-Tolerance
50 lb	38	1527	1527	2300	200	2.02	In-Tolerance
50 lb	56	1382	1382	2300	200	2.02	In-Tolerance
50 lb	59	-458	-458	2300	200	2.02	In-Tolerance
50 lb	65	-1928	-3	2300	200	2.02	Adjusted
50 lb	67	-123	-123	2300	200	2.02	In-Tolerance
50 lb	68	-3008	2	2300	200	2.02	Adjusted
50 lb	78	962	962	2300	200	2.02	In-Tolerance
50 lb	79	-583	-583	2300	200	2.02	In-Tolerance
50 lb	U	-698	-698	2300	200	2.02	In-Tolerance
50 lb	W	562	562	2300	200	2.02	In-Tolerance
50 lb	X	-683	-683	2300	200	2.02	In-Tolerance
50 lb	Υ	-693	-693	2300	200	2.02	In-Tolerance
50 lb	Z	-823	-823	2300	200	2.02	In-Tolerance
							†
		,					

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist

08/26/2025

Wade Robbins, Reviewer



Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Wanda)

Certificate number:

M26023

Calibration Date:

08/26/2025

Purchase Order Number:

Environmental conditions at time of test:

Temperature: 21.28 °C

Humidity: 45.22 %

Pressure: 763.49 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Substitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

20 piece Avoirdupois Kit

SN 119050

					119050		
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
5 lb	1	33	33	230	20	2.04	In-Tolerance
5 lb	2	99	99	230	20	2.04	In-Tolerance
5 lb	3	126	126	230	20	2.04	In-Tolerance
5 lb	4	11	11	230	20	2.04	In-Tolerance
5 lb	5	126	126	230	20	2.04	In-Tolerance
1 lb	1	28.5	28.5	70	6.1	2.04	In-Tolerance
1 lb	2	9.5	9.5	70	6.1	2.04	In-Tolerance
1 lb	3	13.5	13.5	70	6.1	2.04	In-Tolerance
1 lb	4	27.5	27.5	70	6.1	2.04	In-Tolerance
1 lb	5	32.5	32.5	70	6.1	2.04	In-Tolerance
8 oz		5.2	5.2	45	4.0	2.04	In-Tolerance
4 oz		3.7	3.7	23	2.0	2.03	In-Tolerance
2 oz		2.11	2.11	11	0.95	2.04	In-Tolerance
1 oz		2.14	2.14	5.4	0.48	2.03	In-Tolerance
0.5 oz		1.48	1.48	2.8	0.25	2.04	In-Tolerance
0.25 oz		1.18	1.18	1.7	0.15	2.03	In-Tolerance
0.125 oz		0.29	0.29	1.3	0.12	2.03	In-Tolerance
0.0625 oz		0.568	0.568	1.1	0.095	2.03	In-Tolerance
0.03125 oz		0.308	0.308	0.87	0.077	2.03	In-Tolerance
0.03125 oz		0.343	0.343	0.87	0.077	2.03	In-Tolerance

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

Ron E Peterson, Metrologist

08/26/2025

Wade Robbins, Reviewer



Lab: 1100 Otter Rd, Bldg. D Sturgls, SD 57785 Phone: 605-347-7541
Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Wanda)

Certificate number:

M26023

Calibration Date:

08/26/2025

Purchase Order Number:

Environmental conditions at time of test:

Temperature: 21.28 °C

Humidity: 45.22 %

Pressure: 673.49 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Substitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

14 piece Metric Kit

SN F308

	Artifact(3).		14 piece Metric Kit				
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
2 kg		33	33	200	17	2.04	In-Tolerance
1 kg		27.0	27.0	100	8.7	2.04	In-Tolerance
500 g		7.5	7.5	70	6.1	2.04	In-Tolerance
200 g		12.8	12.8	40	3.4	2.04	In-Tolerance
200 g		10.1	10.1	40	3.4	2.04	In-Tolerance
100 g		6.8	6.8	20	1.7	2.04	In-Tolerance
50 g		2.07	2.07	10	0.86	2.04	In-Tolerance
20 g	1.●0	0.69	0.69	4	0.34	2.04	In-Tolerance
20 g		1.39	1.39	4	0.34	2.04	In-Tolerance
10 g		0.82	0.82	2	0.17	2.04	In-Tolerance
5 g		0.18	0.18	1.5	0.13	2.04	In-Tolerance
2 g	•	0.731	0.731	1.1	0.095	2.04	In-Tolerance
2 g		0.941	0.941	1.1	0.095	2.04	In-Tolerance
1 g		0.267	0.267	0.9	0.078	2.04	In-Tolerance
							in role direc
							<u> </u>
							+
							+
							+
							+
							+
							
							-
				 			
							+
							
							-
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^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

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Ron E Peterson, Metrologist

08/26/2025

Wade Robbins, Reviewer



prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory

Office: 118 West Capitol Avenue, Pierre, SD 57501 Lab: 1100 Otter Rd, Bldg D, Sturgis, SD 57785 Lab: 605-347-7541, Office: 605-773-3697, Cell: 605-280-4572

Lab. 605-347-7541, Office: 605-7/3-3697, Cell: 605-280-4572

Email: ron.peterson@state.sd.us

https://dps.sd.gov/inspections/weights-measures

CALIBRATION CERTIFICATE

Capital Scale (Shop)

Certificate number: M26024

Physical Address:

Billing Address:

3021 Valley Forge St

3021 Valley Forge St

Bismarck, ND 58503

Bismarck, ND 58503

Contact: Travis Will
Phone: 701-255-1556

Received Date: 08/25/2025

Certificate Issued: 08/26/2025

71101101 701 20		ubmitted and Sur	nman, of Do	certin	18/26/2025	
Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	As Left In Tolerance
1	50 lb weight	1	0	1	0	1

Uncertainty Statement: The combined standard uncertainty includes the standard uncertainty reported for the standard and the standard uncertainty for the measurement process. The combined standard uncertainty is multiplied by a coverage factor k to provide an expanded uncertainty which defines an interval having a level of confidence of approximately 95 percent. The expanded uncertainty presented in this report is consistent with the 2008 ISO/IEC Guide to the Expression of Uncertainty in Measurement. The expanded uncertainty is not to be confused with a tolerance limit for the user during application. For weight carts, factors included on the inspection checklist have not been included in the calibration uncertainty. However, factors on the checklist may contribute measurement errors that are significant if not properly maintained during use.

Conformity Statement:

The artifacts submitted for this calibration are calibrated to NIST Handbook 105-1 (1990 or 2019), NIST Handbook 105-8 (2019), NIST Handbook 105-3 (2010), or ASTM E617 (2023), Standard Specification for Laboratory Weights and Precision Mass Standards specifications. The reported test values relate only to the observations made at the time and conditions of the test. Artifacts fully comply with all requirements (both specifications and tolerances) of the applicable documentary standard unless otherwise stated. Stated expanded uncertainties are less than one-third of the specified tolerances (maximum permissible errors, m.p.e.) for mass calibrations and less than the specified tolerances for volume calibrations. The correction value plus or minus the expanded uncertainty is within the stated tolerances. It is the decision rule of the SD State Metrology Laboratory that any cast weights determined to have a correction within 66 % of the upper tolerance or 50 % of the lower tolerance will be adjusted closer to zero mass correction, even if the mass correction originally met the applicable tolerance.. SD Metrology laboratory uses an assumed density provided by the customer or weight manufacturer which could affect measurement results.

Traceability Statement:

The Standards of the SD Metrology Laboratory used for comparison are traceable to the International System of Units (SI) through the National Institute of Standards and Technology. The laboratory certificate number identified above is the unique report number to be used in referencing measurement traceability for artifacts identified in this report only.

Ron E Peterson, Metrologist

done Al

08/26/2025

Wade Robbins, Reviewer

08/26/2025

CALIBRATION ON THE COLOR FOR 1884-0

Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under lab code 600384-0. This certificate may not be used to claim product endorsement by NVLAP, NIST Office of Weights and Measures or any other government agency, and may not be reproduced, except in full without written approval from this laboratory.

Ver 20250114 1 of 2



Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697



CALIBRATION CERTIFICATE

Calibrated for:

Capital Scale (Shop)

Certificate number:

M26024

Calibration Date:

08/26/2025

Purchase Order Number:

Environmental conditions at time of test:

Temperature: 22.93 °C

Humidity: 48.05 %

Pressure: 673.49 mmhg

Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Substitution, May 2019

Test equipment used: Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301

Condition of Weights: Suitable for use. No significant wear or damage

Artifact(s):

1 50 lb weights

Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
50 lb	30	-20063	7	2300	200	2.02	Adjusted
	-						
			7.2				
							-

^{*} Adjusted artifacts are in tolerance. Rejected and Condemned artifacts were tagged and must be placed out of service.

The values reported relate only to those observations made at the time and conditions of the test. This calibration certificate, so numbered, may not be reproduced, except in full, without approval of the laboratory. These weights were not screened for magnetism or checked for density, and effects of magnetism or density are not included in the uncertainties.

Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

08/26/2025

Wade Robbins, Reviewer



prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory

Office: 118 West Capitol Avenue, Pierre, SD 57501 Lab: 1100 Otter Rd, Bldg D, Sturgis, SD 57785

Lab: 605-347-7541, Office: 605-773-3697, Cell: 605-280-4572

Email: ron.peterson@state.sd.us https://dps.sd.gov/inspections/weights-measures

INVOICE

Certificate number: M26023 -M26024 Purchase Order Number: Date: 08/26/2025

Company Name: Capital Scale (Wanda)

Physical Address: 3021 Valley Forge St

Billing Address: 3021 Valley Forge St

Bismarck, ND 58503

Bismarck, ND 58503

Contact: Travis Will

Phone: 701-255-1556

Notes:

7 Hours at \$96.00/hr \$ 672.00

Shipping Fee: \$

Total Amount Due: \$ 672.00

Payment is due when you receive this bill.

Payments should be sent to: Department of Public Safety

Office of Weights and Measures

118 West Capitol Avenue

Pierre, SD 57501

If you have any questions; please contact this office at (605) 773-3697.

Ron E Peterson, Metrologist

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