

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

Prairie Scale Systems (328)

SA# **131** Billing Address: 9800 Industrial Drive Certificate number: M25043

Physical Address:

9800 Industrial Drive

Horace, ND 58047

Contact: Jordan White

Phone: 701-281-9591

Received Date: 01/21/2025

Certificate Issued: 01/22/2025

Acloft

Artifacts Submitted and Summary of Results:

Horace, ND 58047

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
2	4000 lb Weight Carts	2	1	2	0	2
2	1000 lb Basket	2	0	2	0	2
8	1000 lb Weights	8	1	8	0	8
40	50 lb Weights	40	38	39	0	40
1	20 lb Weight	1	1	1	0	1
1	Metric Kit	13	13	0	0	13
1	Avoirdupois Kit	19	19	0	0	19

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.

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Ron E Peterson, Metrologist

01/22/2025

laboratory.



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

	South Da Off Lab: 1100 Otter Rd, E Office: 118 West Capito	akota Department of Public Safety ice of Weights and Measures Metrology Lab 3ldg D Sturgis, SD 57785 Phone: 605-347-7541 I Avenue Pierre, SD 57501 Phone: 605-773-3697	WEIGHT & WEIGHT & MEASURES STATE INSPECTIONS
	CALIBRA	TION CERTIFICATE	
Calibrated for:	Prairie Scale Systems (328)		Certificate Number: M25043
Calibration Date:	01/22/2025		
Environmental condition	ns at time of test:		
	Temperature: 19.5 °C	Humidity: 45.68 % Pr	ressure: 671.2 mmhg
Test method use	d: SOP 33 Calibrations of Weig	ht Carts, May 2019	
Test equipment used	d: Recently calibrated weights	and a Mettler SLS510 Load Cell w	ith IND570 Indicator.
	Vaisala PT301		
Condition of Cart	ts: Used but in good condition		

M	lanufacturer:	PSS	SN: PSS-13-C1-4k					
Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
4000	3.95	1795	0.01	4	0.12	2.01	1.40	Adiusted

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 105-8, 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.

None D

Ver 20250114

Dwight R Johnson, Reviewer

Þ		Sour Lab: 1100 Otter Office: 118 West C	h Dakota Department Office of Weights and Metrology La Rd, Bldg D Sturgis, SD 5 apitol Avenue Pierre, Si	of Public Safety Measures ib i7785 Phone: 605-347-7541 D 57501 Phone: 605-773-3697		WEIGHTS & WEIGHTS & MEASURES STATE INSPECTIONS		
		Inspection	Checklist for	· Weight Cart				
Calibrated for	or:	Prairie Scale Systems (32)	3)	Certificat	e number:	M25043		
Calibration D	Date:	01/28/2025						
Manufacture	er:	PSS		Date of Manufacture		41456		
Model Numl	per:	PSS-4k Ca	rt	ID/SN Number	PSS-13-C1-4k	PSS-13-C1-4k		
	I			-				
\checkmark	Nominal Mas	s of Weight Cart	4000 lbs	Suitably n	narked: Yes/No	Yes		
\checkmark	Powered by:	Electric/generat	or 🗸	Diesel	Gasoline			
\checkmark	Fluid Levels:	Engine Oil						
	-	Hydraulic Flu	ıid		Sealed: Yes/No			
		Batte	ery 🗸	7	Sealed: Yes/No	Yes		
		Liquid Fue	1	Reference Line	Present: Yes/No			
\checkmark	Fluid drain tu	bes extend beyond the bo	ody of the cart:	Yes/No Yes				
\checkmark	Number of a	des:		2				
\checkmark	Number /Size	e of Tires	18x8	x12.125				
\checkmark	Sealed wheel	bearings: Yes/No	١	/es				
\checkmark	Drain holes p	resent in locations where	water may accu	umulate: Yes/No	Yes			
\checkmark	Weight restra	aint railing permanently fi	xed and solid:	Yes/No	Yes			
\checkmark	Adjusting cav	vity accessible: Yes/No	Yes	Approxima	ate capacity:(lbs)	30		
\checkmark	Adjusting cav	rity sealed: Yes/No	Yes		•			
\checkmark	Service brake	s functioning properly: Ye	s/No	Yes				
\checkmark	Parking brake	es functioning properly: Ye	es/No	Yes				
	Remote cont	rol functioning properly: Y	′es/No					
	-							
	General cond	lition at time of calibration	n (note any acci	umulated dirt/debris, dar	mage, loose parts,	or evidence of		
\checkmark	tampering or	unauthorized entry of sea	als).					
i	List and repo	rt any repair and mainten	ance performed	l, parts replaced, etc., Les	aks repaired, new	battery,		
✓	the last calib	xnaust system, wheels characteris characteris characteristics	angea, weiaing	performed, etc. include a	any comments or	changes since		
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None ME

Ron E Peterson, Metrologist

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Ver 20250114

D	South Da Offi Lab: 1100 Otter Rd, E Office: 118 West Capito	kota Department of Public Safety ce of Weights and Measures Metrology Lab Idg D Sturgis, SD 57785 Phone: 605-347-7541 I Avenue Pierre, SD 57501 Phone: 605-773-3697	
	CALIBRA	TION CERTIFICATE	
Calibrated for:	Prairie Scale Systems (328)	Ce	rtificate Number: M25043
Calibration Date:	01/22/2025		
Environmental condition	ons at time of test:		
	Temperature: 19.5 °C	Humidity: 45.68 % Press	ure: 671.2 mmhg
Test method us	ed: SOP 33 Calibrations of Weig	nt Carts, May 2019	
Test equipment use	ed: Recently calibrated weights	and a Mettler SLS510 Load Cell with	IND570 Indicator.
	Vaisala PT301		
Condition of Car	rts: Used but in good condition		

Manufacturer: PSS			SN: PSS-13-C1-4k					
Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
4000	-1.25	-567	-0.14	-64	0.12	2.01	1.40	Adjusted

Notes:

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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 105-8, 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.

None P. Ron E Peterson, Metrologist

Ver 20250114

01/22/2025

Dwight R Johnson, Reviewer

Þ		Sour Lab: 1100 Otter Office: 118 West C	h Dakota Department Office of Weights and Metrology La Rd, Bldg D Sturgis, SD 5 apitol Avenue Pierre, Si	of Public Safety Measures ib i7785 Phone: 605-347-7541 D 57501 Phone: 605-773-3697		WEIGHTS & WEIGHTS & MEASURES STATE INSPECTIONS		
		Inspection	Checklist for	· Weight Cart				
Calibrated for	or:	Prairie Scale Systems (32)	3)	Certificat	e number:	M25043		
Calibration D	Date:	01/28/2025						
Manufacture	er:	PSS		Date of Manufacture		41456		
Model Numl	per:	PSS-4k Ca	rt	ID/SN Number	PSS-13-C1-4k	PSS-13-C1-4k		
	I			-				
\checkmark	Nominal Mas	s of Weight Cart	4000 lbs	Suitably n	narked: Yes/No	Yes		
\checkmark	Powered by:	Electric/generat	or 🗸	Diesel	Gasoline			
\checkmark	Fluid Levels:	Engine Oil						
	-	Hydraulic Flu	ıid		Sealed: Yes/No			
		Batte	ery 🗸	7	Sealed: Yes/No	Yes		
		Liquid Fue	1	Reference Line	Present: Yes/No			
\checkmark	Fluid drain tu	bes extend beyond the bo	ody of the cart:	Yes/No Yes				
\checkmark	Number of a	des:		2				
\checkmark	Number /Size	e of Tires	18x8	x12.125				
\checkmark	Sealed wheel	bearings: Yes/No	١	/es				
\checkmark	Drain holes p	resent in locations where	water may accu	umulate: Yes/No	Yes			
\checkmark	Weight restra	aint railing permanently fi	xed and solid:	Yes/No	Yes			
\checkmark	Adjusting cav	vity accessible: Yes/No	Yes	Approxima	ate capacity:(lbs)	30		
\checkmark	Adjusting cav	rity sealed: Yes/No	Yes		•			
\checkmark	Service brake	s functioning properly: Ye	s/No	Yes				
\checkmark	Parking brake	es functioning properly: Ye	es/No	Yes				
	Remote cont	rol functioning properly: Y	′es/No					
	-							
	General cond	lition at time of calibration	n (note any acci	umulated dirt/debris, dar	mage, loose parts,	or evidence of		
\checkmark	tampering or	unauthorized entry of sea	als).					
i	List and repo	rt any repair and mainten	ance performed	l, parts replaced, etc., Les	aks repaired, new	battery,		
✓	the last calib	xnaust system, wheels characteris characteris characteristics	angea, weiaing	performed, etc. include a	any comments or	changes since		
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None ME

Ver 20250114

Ron E Peterson, Metrologist

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			CA	LIBRATION		ICATE				
Calibrated for:		Prairie Scale	Systems (3	328)			Certificate	number:	M25043	
Calibration Dat	ie:	01/22/2025					Purchase Orde	er Number:	0	
Environmental	conditions at tim	ne of test:					Serial#	unit 328		
		Temperature:	19.7 °C	Humidity:	4525 %	Pressure:	669.8 mmhg			
Те	st method used:	SOP 8 Medium	Accuracy Ca	librations of M	ass Standards	by Modified Subtitu	tion, May 2019			
Test e	equipment used:	Lab standards	traceable to	the SI, an XPE6	04KMC balan	ce, and a Vaisala PTl	J301			
Condi	ition of Weights:	Cleaned and pa	inted							
	Artifact(s):		10 -	1000 lb weig	hts					_
Nominal		Correction a	as Found	Correctio	n as Left	NIST Class F	Uncertainty	1.	Condition	
1000 lb		0.11	5 40.9	0.00	<u></u> б		<u> </u>	к 2.0	As Leit	
1000 lb	1K-11	-0.11	-49.0 E2 E	0.00	-0.1	45	4.7	2.0	Adjusted	
1000 lb	1k-12	-0.12	-55.5	0.00	0.0	45	4.7	2.0	Adjusted	_
1000 lb	1k-13	-0.09	-40.9	0.00	0.1	45	4.7	2.0	Adjusted	-
1000 lb	1K-14	-0.10	-75.0	0.00	0.0	45	4.7	2.0	Adjusted	
1000 lb	1k-15	-0.11	-50.8	0.00	-0.1	45	4.7	2.0	Adjusted	_
1000 lb	1K-17	-0.07	-34.0	0.00	0.1	45	4.7	2.0	Adjusted	-
1000 lb	1k-10	-0.10	-47.5	0.00	0.1	45	4.7	2.0	Adjusted	
di 0001	16-10	-0.10	-45.9	0.00	-0.1	45	4.7	2.0	Adjusted	
1000 lb	DCC 12 D1 1k	0.42	190.0	0.00	0.2	4 E	47	2.0	Adjusted	-
1000 lb	P33-13-D1-1K	-0.42	-169.0	0.00	0.2	45	4.7	2.0	Adjusted	
1000 ID	F33-13-02-1K	-0.55	-149.0	0.00	-0.2	45	4.7	2.0	Adjusted	
										_
										-
										-
										-
										-
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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

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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

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Ron E Peterson, Metrologist

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Ð	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:		Prairie Scale Systems (3	28)		Certificate	number:	M25043					
Calibration Dat	te:	01/22/2025			Purchase Orde	er Number:						
Environmental conditions at time of test: Serial# Unit 328												
		Temperature: 19.8 °C	Humidity: 46.7 %	Pressure:	669.8 mmhg							
Te Test e Condi	st method used: equipment used: ition of Weights: Artifact(s):	SOP 8 Medium Accuracy Ca Lab standards traceable to Suitable for use. No significa 24	librations of Mass Standards the SI, XPR64003LD5C, XPR50 ant wear or damage	by Modified Subtitutio 003SC, XPR226CDR, XP	n, May 2019 R36C, Vaisala F	PTU301						
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty	01110 320	Condition					
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left					
50 lb	012	-443	-443	2300	200	2.02	In-Tolerance					
50 lb	029	-6143	17	2300	200	2.02	Adjusted					
50 lb	038	-8218	42	2300	200	2.02	Adjusted					
50 lb	040	-7203	67	2300	200	2.02	Adjusted					
50 lb	041	-7148	-8	2300	200	2.02	Adjusted					
50 lb	043	-4328	47	2300	200	2.02	Adjusted					
50 lb	045	-1028	7	2300	200	2.02	Adjusted					
50 lb	046	-5858	-18	2300	200	2.02	Adjusted					
50 lb	047	-5373	-8	2300	200	2.02	Adjusted					
50 lb	048	-5688	52	2300	200	2.02	Adjusted					
50 lb	049	-6293	-13	2300	200	2.02	Adjusted					
50 lb	050	-4188	17	2300	200	2.02	Adjusted					
50 lb	051	-6958	27	2300	200	2.02	Adjusted					
50 lb	052	-9358	22	2300	200	2.02	Adjusted					
50 lb	053	-6168	57	2300	200	2.02	Adjusted					
50 lb	054	-8078	22	2300	200	2.02	Adjusted					
50 lb	055	-7523	27	2300	200	2.02	Adjusted					
50 lb	056	-4588	-18	2300	200	2.02	Adjusted					
50 lb	057	-6993	32	2300	200	2.02	Adjusted					
50 lb	059	-8148	-23	2300	200	2.02	Adjusted					
50 lb	060	-6913	42	2300	200	2.02	Adjusted					
50 lb	061	-5373	-18	2300	200	2.02	Adjusted					
50 lb	062	-9018	22	2300	200	2.02	Adjusted					
50 lb	063	-5608	-3	2300	200	2.02	Adjusted					
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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

Ð	South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab Lab: 1100 Otter Rd, Bidg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697										
CALIBRATION CERTIFICATE											
Calibrated for:		Prairie Scale Systems (3	28)		Certificate	number:	M25043				
Calibration Dat	te:	01/22/2025			Purchase Orde	r Number:					
Environmental	Environmental conditions at time of test: Serial# Unit 328										
	Temperature: 19.8 °C Humidity: 46.7 % Pressure: 669.8 mmhg										
Te Test e Cond	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										
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition				
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left				
50 lb	17375-1	-7133	27	2300	200	2.02	Adjusted				
50 lb	17873-1	-7783	72	2300	200	2.02	Adjusted				
50 lb	17874-1	-6048	-18	2300	200	2.02	Adjusted				
50 lb	17876-1	-4318	47	2300	200	2.02	Adjusted				
50 lb	17877-1	-2203	17	2300	200	2.02	Adjusted				
50 lb	17878-1	-6158	-8	2300	200	2.02	Adjusted				
50 lb	17879-1	-110068	32	2300	200	2.02	Adjusted				
50 lb	17880-1	-7743	-28	2300	200	2.02	Adjusted				
50 lb	17881-1	-5158	-8	2300	200	2.02	Adjusted				
50 lb	17-88301	-4983	47	2300	200	2.02	Adjusted				
50 lb	17885-1	-7373	17	2300	200	2.02	Adjusted				
50 lb	17887-1	-4018	-8	2300	200	2.02	Adjusted				
50 lb	17-88801	-5233	62	2300	200	2.02	Adjusted				
50 lb	17-88901	-5933	12	2300	200	2.02	Adjusted				
50 lb	17890-1	-6558	22	2300	200	2.02	Adjusted				
50 lb	17891-1	-9683	57	2300	200	2.02	Adjusted				
20 lb	65XC	545	-5	910	120	2.02	Adjusted				
											
							 				
							 				
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Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

None PI

Ron E Peterson, Metrologist

Ð	South Diadota Department of Public Safety Office of Weights and Measures Metrology Lab Lab: 1100 Otter Rd, Bidg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697											
	CALIBRATION CERTIFICATE											
Calibrated for:		Prairie Scale Systems (3	28)		Certificate	number:	M25043					
Calibration Dat	Calibration Date: 01/22/2025 Purchase Order Number:											
Environmental	Environmental conditions at time of test:											
Environmenta	i conultions at thi	Tomporatura: 20.76 °C	Humidity, E2 E %	Broccurou	671 00 mmbg	526 Metric						
Та	st method used.	SOP 8 Medium Accuracy Ca	librations of Mass Standards	Pressure: by Modified Subtitution	o May 2019							
Test e	equipment used:	Lab standards traceable to	the SI, XPR64003LD5C. XPR5	03SC, XPR226CDR. XP	R36C, Vaisala P	PTU301						
Condi	ition of Weights:	Suitable for use. No significa	ant wear or damage									
	Artifact(s):	11	piece Metric Kit		SN	328 Metr	ic					
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition					
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left					
1 kg		26.0	26.0	100	8.7	2.04	In-Tolerance					
500 g		35.5	35.5	70	6.1	2.04	In-Tolerance					
200 g		15.2	15.2	40	3.4	2.04	In-Tolerance					
200 g		13.2	13.2	40	3.4	2.04	In-Tolerance					
100 g		3.5	3.5	20	1.7	2.04	In-Tolerance					
50 g		0.99	0.99	10	0.86	2.04	In-Tolerance					
20 g		1.65	1.65	4	0.34	2.04	In-Tolerance					
20 g		0.91	0.91	4	0.34	2.04	In-Tolerance					
10 g		-0.10	-0.10	2	0.17	2.04	In-Tolerance					
2 g		0.401	0.401	1.1	0.095	2.04	In-Tolerance					
2 g		0.366	0.366	1.1	0.095	2.04	In-Tolerance					

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CALIBRATION CERTIFICATE											
Calibrated for:		Prairie Scale Systems (3	28)		Certificate	number:	M25043				
Calibration Dat	e:	01/22/2025			Purchase Orde	er Number:					
Environmental	conditions at tin	ne of test:			Serial#	5FXO					
_		Temperature: 20.76 °C	Humidity: 53.5 %	Pressure:	671.99 mmhg						
Te: Test e	st method used:	SOP 8 Medium Accuracy Ca	librations of Mass Standards I	by Modified Subtitution	n, May 2019 D266 Maisala I						
Condi	tion of Weights:	Suitable for use No signific	ine SI, APRO4003LDSC, APRSC ant wear or damage	JU35C, XPR220CDR, XP	K30C, Valsala F	10301					
condi	Artifact(s)	19	niece Avoirdunois Kit		SN	5FXO					
Nominal	/	Correction as Found	Correction as Left	NIST Class F	Uncertainty	517.0	Condition				
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left				
5 lb	Α	69.4	69.4	230	20	2.04	In-Tolerance				
5 lb	В	64.4	64.4	230	20	2.04	In-Tolerance				
5 lb	С	114.4	114.4	230	20	2.04	In-Tolerance				
5 lb	D	67.4	67.4	230	20	2.04	In-Tolerance				
5 lb	E	60.4	60.4	230	20	2.04	In-Tolerance				
1 lb	A	25.45	25.45	70	6.1	2.04	In-Tolerance				
1 lb	А	23.45	23.45	70	6.1	2.04	In-Tolerance				
1 lb	В	24.45	24.45	70	6.1	2.04	In-Tolerance				
1 lb	С	24.45	24.45	70	6.1	2.04	In-Tolerance				
1 lb	D	22.45	22.45	70	6.1	2.04	In-Tolerance				
8 oz	E	21.192	21.192	45	4.0	2.04	In-Tolerance				
4 oz		7.730	7.73	23	2.0	2.03	In-Tolerance				
2 oz		3.972	3.972	11	0.95	2.04	In-Tolerance				
1 oz		2.288	2.288	5.4	0.48	2.03	In-Tolerance				
0.5 oz		0.718	0.718	2.8	0.25	2.04	In-Tolerance				
0.2 oz		0.639	0.6392	1.6	0.15	2.04	In-Tolerance				
0.2 oz		0.429	0.4292	1.6	0.15	2.04	In-Tolerance				
0.1 oz		0.448	0.448	1.3	0.12	2.04	In-Tolerance				
0.05 oz		0.219	0.2185	1	0.092	2.04	In-Tolerance				

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

None MI

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

Prairie Scale Systems (349) Physical Address:

SA# 131 Billing Address:

9800 Industrial Drive

Horace, ND 58047

Certificate number: M25027

9800 Industrial Drive Horace, ND 58047 **Contact:** Jordan White

Phone: 701-281-9591

Received Date: 12/16/2024

Certificate Issued: 12/17/2024

Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
2	4000 lb Weight Carts	2	0	2	0	2
8	1000 lb Weights	8	7	3	0	8
2	1000 lb Baskets	2	0	2	0	2
40	50 lb Weights	40	1	39	0	40
1	Avoirdupois Kit	22	22	0	0	22
1	Metric Kit	23	23	0	0	23
1	20 lb Weight	1	1	0	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 factork 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 tobe 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 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 thelower 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.

This document does not represent or imply endorsement by NIST Office of Weights and Measures or any agency of the State and/or national governments. This report may not be reproduced, except in full without the written approval of this laboratory. The client must not use this

NonE

Ron E Peterson, Metrologist

D	South D Off Lab: 1100 Otter Rd, Office: 118 West Capito	akota Department of Public Safety ice of Weights and Measures Metrology Lab Bldg D Sturgis, SD 57785 Phone: 605-347-7541 Jl Avenue Pierre, SD 57501 Phone: 605-773-36:			
	CALIBRA	TION CERTIFICATE			
Calibrated for:	Prairie Scale Systems (349)		Certificate Number: M25027		
Calibration Date:	12/17/2024				
Environmental condition	ons at time of test:				
	Temperature: 19.49 °C	Humidity: 47.65 %	Pressure: 671.25 mmhg		
Test method us	ed: SOP 33 Calibrations of Weig	ht Carts, May 2019			
Test equipment us	ed: Recently calibrated weights	and a Mettler SLS510 Load Cell	with IND570 Indicator.		
	Vaisala PT301				
Condition of Ca	rts: Used but in good condition				

Manufacturer: PSS			SN: PSS-95-C1-4k					
Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
4000	0.78	356	0.00	0	0.12	2.01	1.40	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 105-8, 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.

None PIL Ron E Peterson, Metrologist

Ver 20240214

101×	South Dakota Departm Office of Weights Metrolo Lab: 1100 Otter Rd, Bldg D Sturgis, Office: 118 West Capitol Avenue Pier	nent of Public Safety : and Measures gy Lab SD 57785 Phone: 605-347-7541 re, SD 57501 Phone: 605-773-3697	WEIGHTS & WEIGHTS & WEIGHT
	Inspection Checklist	for Weight Cart	
Calibrated for:	Prairie Scale Systems (349)	Certificate	number: M25027
Calibration Date:	01/28/2025		
Manufacturer:	PSS	Date of Manufacture	Jan-95
Model Number:	PSS 4k cart	ID/SN Number	PSS-95-C1-4k
✓ Nominal Mas	s of Weight Cart 4000 lb	S Suitably ma	arked: Yes/No Yes
\checkmark Powered by:	Electric/generator	Diesel	Gasoline
✓ Fluid Levels:	Engine Oil		
	Hydraulic Fluid		Sealed: Yes/No
	Battery		Sealed: Yes/No Yes
	Liquid Fuel	Reference Line P	resent: Yes/No
✓ Fluid drain tu	bes extend beyond the body of the ca	rt: Yes/No Yes	
✓ Number of a	kles:	2	
√ Number /Size	e of Tires 6.2	25x5x11.25	
✓ Sealed wheel	bearings: Yes/No	Yes	
✓ Drain holes p	resent in locations where water may a	accumulate: Yes/No	Yes
✓ Weight restra	aint railing permanently fixed and solid	d: Yes/No	Yes
✓ Adjusting cav	vity accessible: Yes/No Yes	Approximat	te capacity:(lbs) 25
✓ Adjusting cav	vity sealed: Yes/No Yes		
✓ Service brake	s functioning properly: Yes/No	Yes	
✓ Parking brake	es functioning properly: Yes/No	Yes	
Remote cont	rol functioning properly: Yes/No		
		<u></u>	
General cond	lition at time of calibration (note any a	accumulated dirt/debris, dam	age, loose parts, or evidence of
✓ tampering or	unauthorized entry of seals).		
List and repo	rt any repair and maintenance perforr	ned, parts replaced, etc., Leal	ks repaired, new battery,
carburetor, e	xhaust system, wheels changed, weldi	ing performed, etc. Include ar	ny comments or changes since
✓ the last call bit	ration.		

None ME

Ron E Peterson, Metrologist

Ver Ver 20240214

D	South Dakot Office o Lab: 1100 Otter Rd, Bldg Office: 118 West Capitol Av	a Department of Public Safety of Weights and Measures Metrology Lab D Sturgis, SD 57785 Phone: 605-347-7541 enue Pierre, SD 57501 Phone: 605-773-3697	WEIGHT & WEIGHT & MEASURES STATE INSPECTIONS			
	CALIBRATI	ON CERTIFICATE				
Calibrated for:	Prairie Scale Systems (349)		Certificate Number: M25027			
Calibration Date:	12/17/2024					
Environmental conditions a	t time of test:					
	Temperature: 19.65 °C	Humidity: 45.94 % Pr	ressure: 671.61 mmhg			
Test method used: S	SOP 33 Calibrations of Weight	Carts, May 2019				
Test equipment used:	Recently calibrated weights an	d a Mettler SLS510 Load Cell w	ith IND570 Indicator.			
N	Vaisala PT301					
Condition of Carts:	Used but in good condition					

Manufacturer: PSS			SN: PSS-95-C2-4k					
Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
4000	0.78	356	0.09	41	0.12	2.01	1.40	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 105-8, 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.

None PI Ron E Peterson, Metrologist

Ver 20240214

Þ		Sout Lab: 1100 Otter F Office: 118 West Ca	h Dakota Department Office of Weights and Metrology La Rd, Bldg D Sturgis, SD 5 pitol Avenue Pierre, SI	of Public Safety Measures ib i7785 Phone: 605-347-7541 D 57501 Phone: 605-773-3697		WEIGHTS & WEIGHTS & MEASURES STATE INSPECTIONS
		Inspection	Checklist for	· Weight Cart		
Calibrated fo	or:	Prairie Scale Systems (349	9)	Certifica	te number:	M25027
Calibration D	Date:	01/28/2025				
Manufacture	er:	PSS		Date of Manufacture		34700
Model Numb	per:	PSS 4k car	t	ID/SN Number	PSS-95-C2-4k	
			•			
\checkmark	Nominal Mas	s of Weight Cart	4000 lbs	Suitably	marked: Yes/No	Yes
\checkmark	Powered by:	Electric/generat	or 🗸	Diesel	Gasoline	105
\checkmark	Fluid Levels	Electric/generat		Dieser	Gusonne	
	i luiu Levels.	Eligine Oli Hydraulic Elu	id	-	Saalad: Vas/Na	
		Ratto		-	Scaled: Yes/No	Ves
		Liquid Eucl	iy y	Boforonco Linc	Brocont: Voc/No	163
	Trivial aluation due	Liquiu ruei			Present. res/No	
· ·	Number of a	ibes extend beyond the bu	buy of the cart.	res/ino res		
•	Number of a	kies:	6.25.	2		
• •	Number / Size	e of Tires	6.25X	5x11.25		
v	Sealed wheel	bearings: Yes/No	, Y	res	Maa	
V	Drain holes p	resent in locations where	water may accu	umulate: Yes/No	Yes	
v	Weight restra	aint railing permanently fix	(ed and solid:)	res/No	Yes	25
V	Adjusting cav	vity accessible: Yes/No	Yes	Approxin	hate capacity:(lbs)	25
∕	Adjusting cav	rity sealed: Yes/No	Yes	Maria		
∕	Service brake	s functioning properly: Ye	s/No	Yes		
V	Parking brake	es functioning properly: Ye	es/No	Yes		
	Remote cont	rol functioning properly: Y	es/No			
.(tampering or	unauthorized entry of sea	i (note any acci ils).	umulated dirt/debris, da	image, loose parts,	or evidence of
v		,,				
	List and rono	rt any ronair and mainton	anco porformor	h parts replaced etc. L	asks repaired new	hattony
	carburetor. e	xhaust system, wheels cha	anged, welding	performed. etc. Include	any comments or	changes since
\checkmark	the last calib	ration.	J.,	, ,	,	0
μ						

None ME

Ron E Peterson, Metrologist

Ver Ver 20240214

Ð	2	c	Lab: 1100 Ott Office: 118 Wes	Metro er Rd, Bldg. D Sturg t Capitol Avenue Pie	logy Lab is, SD 57785 Ph erre, SD 57501	one: 605-347-7541 Phone: 605-773-3697			EIGHTS & EASURES STATE PECTIONS	
			CA	LIBRATION	I CERTIF	ICATE				
Calibrated for:		Prairie Scale	Systems (3	349)			Certificate	number:	M25027	
Calibration Dat	te:	12/17/2024					Purchase Orde	er Number:	0	
Environmental	conditions at tim	ne of test					Serial#	349		
		Tomporaturo:	10.2 %	Humidity	10 %	Prossuro	670 mmbg	545		
Та	ct mothod used.	SOD & Modium		librations of M	49 /0	Flessule.	tion May 2010			
Test e	auipment used:	Lab standards	traceable to	the SI. an XPE6	04KMC bala	nce, and a Vaisala PTU	301			
Condi	ition of Weights:	Cleaned and pa	inted				001			
	Artifact(s):		10 -	1000 lb weig	hts					
Nominal		Correction a	as Found	Correction	n as Left	ASTM E 617 Class 6	Uncertainty		Condition	
	SN/ID	lb	g	lb	g	Tolerance (g)	g	k	As Left	
1000 lb	1k-03	-0.09	-40.8	0.00	0.1	45	4.7	2.0	Adjusted	
1000 lb	1k-04	-0.02	-10.6	-0.02	-10.6	45	4.7	2.0	In-Tolerance	
1000 lb	1k-05	-0.05	-21.2	-0.05	-21.2	45	4.7	2.0	In-Tolerance	
1000 lb	1k-06	-0.08	-37.5	0.00	0.1	45	4.7	2.0	Adjusted	
1000 lb	1k-07	-0.03	-12.7	-0.03	-12.7	45	4.7	2.0	In-Tolerance	
1000 lb	1k-08	0.01	3.5	0.01	3.5	45	4.7	2.0	In-Tolerance	
1000 lb	1k-09	-0.06	-27.1	0.00	0.0	45	4.7	2.0	Adjusted	
1000 lb	1k-10	0.00	-2.1	0.00	-2.1	45	4.7	2.0	In-Tolerance	
1000 lb	PSS-11-1995	-0.12	-55.8	0.00	-0.1	45	4.7	2.0	Adjusted	
1000 lb	PSS-22-1995	-0.11	-47.9	0.00	-0.1	45	4.7	2.0	Adjusted	

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

* 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

NonE

Ron E Peterson, Metrologist

Ð	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:		Prairie Scale Systems (3	49)		Certificate	number:	M25027			
Calibration Date: 12/17/2024 Purchase Order Number:										
Environmental	Environmental conditions at time of test: Serial# Unit 349									
		Temperature: 19.4 °C	Humidity: 47.9 %	Pressure:	66706 mmhg					
Te Test e Condi	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									
Nominal	/	Correction as Found	Correction as Left	NIST Class F	Uncertainty	01111 0 45	Condition			
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left			
50 lb	004	-56803	7	2300	200	2.02	Adjusted			
50 lb	010	-8123	57	2300	200	2.02	Adjusted			
50 lb	030	-6958	27	2300	200	2.02	Adjusted			
50 lb	064	-3148	57	2300	200	2.02	Adjusted			
50 lb	17833	-4813	22	2300	200	2.02	Adjusted			
50 lb	17846	-3108	17	2300	200	2.02	Adjusted			
50 lb	17863	-3368	12	2300	200	2.02	Adjusted			
50 lb	17886	-3223	32	2300	200	2.02	Adjusted			
50 lb	17832-1	-4708	177	2300	200	2.02	Adjusted			
50 lb	17833-1	-1908	12	2300	200	2.02	Adjusted			
50 lb	17834-1	-2798	32	2300	200	2.02	Adjusted			
50 lb	17835-1	7487	12	2300	200	2.02	Adjusted			
50 lb	17835-1	-4403	27	2300	200	2.02	Adjusted			
50 lb	17837-1	-2958	42	2300	200	2.02	Adjusted			
50 lb	17838-1	-5338	12	2300	200	2.02	Adjusted			
50 lb	17840-1	-4308	2	2300	200	2.02	Adjusted			
50 lb	17842-1	-3908	142	2300	200	2.02	Adjusted			
50 lb	17842-1	-3928	42	2300	200	2.02	Adjusted			
50 lb	17843-1	-5493	137	2300	200	2.02	Adjusted			
50 lb	17844-1	-5353	7	2300	200	2.02	Adjusted			
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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

None AL

Ron E Peterson, Metrologist

Ð	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:		Prairie Scale Systems (3	49)		Certificate	number:	M25027				
Calibration Dat	te:	12/17/2024			Purchase Orde	r Number:					
Environmental conditions at time of test:											
		Temperature: 19.4 °C	Humidity: 47.9%	Pressure:	66706 mmhg						
Te Test e Cond	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										
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition				
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left				
50 lb	17845-1	-5313	82	2300	200	2.02	Adjusted				
50 lb	17847-1	-3108	67	2300	200	2.02	Adjusted				
50 lb	17848-1	-2908	12	2300	200	2.02	Adjusted				
50 lb	17849-1	-5418	107	2300	200	2.02	Adjusted				
50 lb	17850-1	-3033	-8	2300	200	2.02	Adjusted				
50 lb	17852-1	-3268	142	2300	200	2.02	Adjusted				
50 lb	17854-1	-115148	32	2300	200	2.02	Adjusted				
50 lb	17855-1	-5748	37	2300	200	2.02	Adjusted				
50 lb	17856-1	-5108	17	2300	200	2.02	Adjusted				
50 lb	17858-1	-4683	97	2300	200	2.02	Adjusted				
50 lb	17859-1	-4268	-13	2300	200	2.02	Adjusted				
50 lb	17860-1	-4848	37	2300	200	2.02	Adjusted				
50 lb	17862-1	-4708	122	2300	200	2.02	Adjusted				
50 lb	17864-1	-6273	-18	2300	200	2.02	Adjusted				
50 lb	17865-1	-5523	122	2300	200	2.02	Adjusted				
50 lb	17866-1	-5008	57	2300	200	2.02	Adjusted				
50 lb	17870-1	-4238	17	2300	200	2.02	Adjusted				
50 lb	17871-1	-2393	17	2300	200	2.02	Adjusted				
50 lb	17884-1	-4208	42	2300	200	2.02	Adjusted				
50 lb	17886-1	-4083	22	2300	200	2.02	Adjusted				
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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

None Al

Ron E Peterson, Metrologist

Ð	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:			Certificate	number:	M25028						
Calibration Dat	te:	12/17/2024			Purchase Orde	r Number:					
Environmental	l conditions at tin	ne of test:			Serial#	Unit 397					
Te Test e Cond	Temperature: 19.7 °C Humidity: 46.8 % Pressure: 671.8 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										
Nominal	(- /	Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition				
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left				
20 lb	17905-1	-40	-40	910	120	2.02	In-Tolerance				
	I										

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 Potoren Matrologist

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								
		CA	LIBRATION CERTIF	ICATE				
Calibrated for:		Prairie Scale Systems (34	49)		Certificate	number:	M25027	
Calibration Dat	ie:	12/17/2024			Purchase Orde	r Number:		
Environmental	conditions at tin	ne of test:			Serial#	150105B		
_		Temperature: 20.86 °C	Humidity: 45.06 %	Pressure:	672.03 mmhg			
Te Test e Condi	st method used: equipment used: ition of Weights:	SOP 8 Medium Accuracy Ca Lab standards traceable to Suitable for use. No significa	librations of Mass Standards the SI, XPR64003LD5C, XPR5(ant wear or damage	by Modified Subtitution 003SC, XPR226CDR, XP	n, May 2019 R36C, Vaisala F	2TU301		
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty	1301030	Condition	
Normina	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left	
5 lb	1	48	48	230	20	2.04	In-Tolerance	
5 lb	2	26	26	230	20	2.04	In-Tolerance	
5 lb	3	36	36	230	20	2.04	In-Tolerance	
5 lb	4	37	37	230	20	2.04	In-Tolerance	
5 lb	5	47	47	230	20	2.04	In-Tolerance	
1 lb	1	18.5	18.5	70	6.1	2.04	In-Tolerance	
1 lb	2	19.5	19.5	70	6.1	2.04	In-Tolerance	
1 lb	3	13.5	13.5	70	6.1	2.04	In-Tolerance	
1 lb	4	12.5	12.5	70	6.1	2.04	In-Tolerance	
1 lb	5	5.5	5.5	70	6.1	2.04	In-Tolerance	
0.5 lb		8.2	8.2	45	4.0	2.04	In-Tolerance	
0.2 lb	12	1.7	1.7	18	1.6	2.04	In-Tolerance	
0.2 lb	13	-2.1	-2.1	18	1.6	2.04	In-Tolerance	
0.1 lb	14	4.65	4.65	9.1	0.78	2.04	In-Tolerance	
0.05 lb		3.57	3.57	4.5	0.39	2.04	In-Tolerance	
0.02 lb		1.25	1.25	1.8	0.16	2.04	In-Tolerance	
0.02 lb		0.62	0.62	1.8	0.16	2.04	In-Tolerance	
0.01 lb		0.76	0.76	1.5	0.13	2.04	In-Tolerance	
0.005 lb		0.60	0.60	1.2	0.10	2.05	In-Tolerance	
0.002 lb		0.410	0.410	0.87	0.076	2.05	In-Tolerance	
0.002 lb		0.595	0.595	0.87	0.076	2.05	In-Tolerance	
0.001 lb		0.489	0.489	0.7	0.061	2.05	In-Tolerance	

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

None Al

Ron E Peterson, Metrologist

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											
		CA	LIBRATION CERTIF	ICATE							
Calibrated for:		Prairie Scale Systems (3	49)		Certificate	number:	M25027				
Calibration Dat	te:	12/17/2024			Purchase Orde	er Number:					
Fusing and output	a anditions at tim	an oftent.			Coriol#	1501050					
Temperature: 20.86 °C Humidity: 45.06 % Pressure: 672.03 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 SL XPR64003 DEC XPR5002SC XPR26C Voice PTU201											
Test e	equipment used:	Lab standards traceable to	the SI, XPR64003LD5C, XPR5	003SC, XPR226CDR, XP	R36C, Vaisala I	10301					
cond	Artifact(s)	301. abie 101 use. No significa			SN	1501050					
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty	1001000	Condition				
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left				
1 kg	1	9.0	9.0	100	8.7	2.04	In-Tolerance				
1 kg	2	12.0	12.0	100	8.7	2.04	In-Tolerance				
500 g		12.5	12.5	70	6.1	2.04	In-Tolerance				
200 g	1	5.6	5.6	40	3.4	2.04	In-Tolerance				
200 g	2	10.1	10.1	40	3.4	2.04	In-Tolerance				
100 g		6.9	6.9	20	1.7	2.04	In-Tolerance				
50 g		4.50	4.50	10	0.86	2.04	In-Tolerance				
20 g		1.32	1.32	4	0.34	2.04	In-Tolerance				
20 g		1.27	1.27	4	0.34	2.04	In-Tolerance				
10 g		1.19	1.19	2	0.17	2.04	In-Tolerance				
5 g		0.29	0.29	1.5	0.13	2.04	In-Tolerance				
2 g		0.681	0.681	1.1	0.095	2.04	In-Tolerance				
2 g		0.376	0.376	1.1	0.095	2.04	In-Tolerance				
1 g		0.732	0.732	0.9	0.078	2.04	In-Tolerance				
500 mg		0.347	0.347	0.72	0.064	2.06	In-Tolerance				
200 mg		0.231	0.231	0.54	0.047	2.06	In-Tolerance				
200 mg		0.056	0.056	0.54	0.047	2.06	In-Tolerance				
100 mg		0.234	0.234	0.43	0.038	2.06	In-Tolerance				
50 mg		0.007	0.007	0.35	0.033	2.04	In-Tolerance				
50 mg		0.143	0.143	0.35	0.033	2.04	In-Tolerance				
20 mg		0.048	0.048	0.26	0.023	2.06	In-Tolerance				
20 mg		0.062	0.062	0.26	0.023	2.06	In-Tolerance				
10 mg		0.002	0.002	0.21	0.019	2.05	In-Tolerance				

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

None II

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

Prairie Scale Sys INC (369) Physical Address:

SA# 131 Billing Address:

9800 Industrial Drive

Horace, ND 58047

Certificate number: M25036

9800 Industrial Drive Horace, ND 58047 **Contact:** Jordan White

Phone: 701-281-9591

Received Date: 01/06/2025

Certificate Issued: 01/07/2025

∆s Left

Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
2	4000 lb Weight Carts	2	2	2	0	2
8	1000 lb Weights	8	7	1	0	8
2	1000 lb Baskets	2	0	2	0	2
40	50 lb Weights	40	36	11	0	40
1	20 lb Weight	1	1	0	0	1
1	Avoirdupois Weight Kit	22	22	0	0	22
1	Metric Weight 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 factork 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 tobe 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 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 thelower 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.

This document does not represent or imply endorsement by NIST Office of Weights and Measures or any agency of the State and/or national governments. This report may not be reproduced, except in full without the written approval of this laboratory. The client must not use this

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Ron E Peterson, Metrologist

	South Dako Office Lab: 1100 Otter Rd, Bldg Office: 118 West Capitol Av	ta Department of Public Safety of Weights and Measures Metrology Lab J Sturgis, SD 57785 Phone: 605-347-7541 venue Pierre, SD 57501 Phone: 605-773-369	7
	CALIBRAT	ION CERTIFICATE	
Calibrated for:	librated for: Prairie Scale Sys INC (369) Certificate		Certificate Number: M25036
Calibration Date:	01/07/2025		
Environmental conditions	at time of test:		
	Temperature: 19.4 °C	Humidity: 45.82 %	Pressure: 679.12 mmhg
Test method used:	SOP 33 Calibrations of Weight	Carts, May 2019	
Test equipment used:	Recently calibrated weights an	nd a Mettler SLS510 Load Cell v	with IND570 Indicator.
	Vaisala PT301		
Condition of Carts:	Used but in good condition		
Manufacturor	DCC	SNI DSS 16 C1 AL	

			514. F 55-10-C1-4K					
Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
4000	-0.36	-162	-0.03	-11	0.12	2.01	1.40	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 105-8, 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.

None PI Ron E Peterson, Metrologist

Ver 20240214

Þ		Lab: 1100 Office: 118	South Dakota Departmen Office of Weights an Metrology J Otter Rd, Bldg D Sturgis, SD West Capitol Avenue Pierre,	t of Public Safety d Measures .ab 57785 Phone: 605-347-7541 SD 57501 Phone: 605-773-3697		WEIGHTS & MEASURES STATE INSPECTIONS
		Inspec	tion Checklist fo	r Weight Cart		
Calibrated for	or:	Prairie Scale Sys INC	(369)	Certificat	e number:	M25036
Calibration D	Date:	01/28/2025				
Manufacture	er:	Р	SS	Date of Manufacture	Jan 2016	
Model Num	per:	PSS 4k Cart		ID/SN Number	PSS-16-C1-4k	
					<u></u>	
\checkmark	Nominal Mas	s of Weight Cart	4000 lbs	Suitably r	marked: Yes/No	Yes
\checkmark	Powered by:	Flectric/ge	nerator 🗸	Diesel	Gasoline	
\checkmark	Fluid Levels:	Fngin	e Oil			
		ə Hydraul	lic Fluid	-	Sealed: Yes/No	
		Tyuruu	Battery √	-	Sealed: Yes/No	Yes
		Liquid			Present: Ves/No	105
\checkmark	Fluid drain tu	bos oxtand boyond t	he hedy of the cart			
 ✓	Number of a			2		
· · ·	Number /Size	of Tires	16.25	2 Sv5v11 25		
· ·	Socied wheel	boarings: Vos/No	10.22	Voc		
· ·	Drain bolos n	resent in locations w	horo water may ac	Tes	Vos	
· ·	Woight rostr	vint railing normanon	there water may act		Ves	
· ·	A diusting sou				ites	15
· ·	Adjusting cav	ity accessible: Yes/N	o fes	Approxim		13
• •	Adjusting cav	ity sealed: Yes/NO	tes	Vac		
•	Service brake	s functioning proper		Yes		
V	Parking brake	es functioning proper	iy: Yes/No	res		
	Remote cont	rol functioning prope	eriy: Yes/No			
	Conoral cond	lition at time of calib	ration (noto any ac	sumulated dirt/debrie da	maga laasa parts	or ovidence of
\checkmark	tampering or	unauthorized entry	of seals).	unulated unt/debits, da	inage, ioose parts,	or evidence of
			•			
	List and reno	rt any renair and mai	ntenance performe	d parts replaced etc. Le	aks renaired new	battery
	carburetor, e	xhaust system, whee	Is changed, welding	performed, etc. Include	any comments or	changes since
\checkmark	the last calib	ration.			-	-
	<u></u>					

None MI

Ron E Peterson, Metrologist

Ver Ver 20240214

	South Dako Office Lab: 1100 Otter Rd, Bldg Office: 118 West Capitol Av	ta Department of Public Safety of Weights and Measures Metrology Lab ; D Sturgis, SD 57785 Phone: 605-347-7541 venue Pierre, SD 57501 Phone: 605-773-369	
	CALIBRAT	ION CERTIFICATE	
Calibrated for:	Prairie Scale Sys INC (369)		Certificate Number: M25036
Calibration Date:	01/07/2025		
Environmental conditions	at time of test: Temperature: 19.4 °C	Humidity: 45.82 %	Pressure: 679.12 mmhg
Test method used:	SOP 33 Calibrations of Weight	Carts, May 2019	
Test equipment used:	Recently calibrated weights ar	d a Mettler SLS510 Load Cell	with IND570 Indicator.
	Vaisala PT301		
Condition of Carts:	Used but in good condition		
Manufacturer:	DCC	SNI DSS 16 C2 1k	

IV	ianulacturer.	P33	3N. P33-10-C2-4K					
Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
4000	0.46	208	0.10	45	0.12	2.01	1.40	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 105-8, 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.

None PI Ron E Peterson, Metrologist

Ver 20240214

Ð		Lab: 11 Office: 11	South Dakota Departme Office of Weights a Metrology 100 Otter Rd, Bldg D Sturgis, Sl 18 West Capitol Avenue Pierre	nt of Public Safety nd Measures Lab D 57785 Phone: 605-347-7541 SD 57501 Phone: 605-773-369	,	WEIGHTS & MEASURES STATE INSPECTIONS
		Inspe	ction Checklist fo	or Weight Cart		
Calibrated for:	:	Prairie Scale Sys IN	C (369)	Cert	ificate number:	M25036
Calibration Da	te:	01/28/2025				
Manufacturer	:		PSS	Date of Manufact	ure Jan 2016	
Model Numbe	r:	PSS 4k Cart		ID/SN Number	PSS-16-C2-	4k
√ N	Nominal Mas	s of Weight Cart	4000 lbs	Suita	ably marked: Yes/No	Yes
✓ P	owered by:	Flectric/g	renerator 🗸	Diesel	Gasolir	1e
↓ F	luid Levels:	Fng	ine Oil			
I.		Hvdra	ulic Fluid	-	Sealed: Yes/N	lo
		ingula	Battery V	-	Sealed: Yes/N	lo Yes
		Liqu	uid Euel	Beference	Line Present: Ves/N	
	iluid drain tu	bos oxtand boyond	the body of the car			
	lumber of a		The body of the car	2	105	
	lumber /Size	of Tires	16.2	2 5v5v11 25		
	Cooled wheel	boorings: Vos/No	10.2	νος		
		recent in locations		TES	Vos	7
	Noight roctro	int railing parman	where water may at		Ves	-
	diusting and			Tes/NO	Tes	a) 15
	Adjusting cav	ity accessible: Yes/	No Tes	Appr	oximate capacity.(ib	5) 15
	aujusting tav	ity sealed. Tes/NO		Voc		
	ervice brake	s functioning prope	erly. Tes/NO	Yes		
	anning Diake	rol functioning prope		163		
			Jerry. res/100			
	Seneral cond	lition at time of cali	bration (note any ac	cumulated dirt/debri	s damage loose nar	ts or evidence of
√ t	ampering or	unauthorized entry	y of seals).		s, duninge, loose pui	is, or evidence of
L						
L. L.	ist and repo	rt any repair and m	aintenance perform	ed, parts replaced, et	c Leaks repaired. ne	ew batterv.
	arburetor, e	xhaust system, whe	els changed, weldin	g performed, etc. Inc	lude any comments	or changes since
√ t	he last calib	ration.				
<u>-</u>						

None Al

Ron E Peterson, Metrologist

Ver Ver 20240214

Calibration Dat	te:	01/07/2025					Purchase Orde	er Number:	0
Environmental	conditions at tin	ne of test:							
		Temperature:	678.7 °C	Humidity:	19.4 %	Pressure:	47.1 mmhg		
Те	st method used:	SOP 8 Medium	Accuracy Ca	alibrations of M	ass Standard	s by Modified Subtitu	tion, May 2019		
Test e	equipment used:	Lab standards	traceable to	the SI, an XPE6	04KMC balar	nce, and a Vaisala PTU	J301		
Condi	ition of Weights:	Cleaned and pa	inted						
	Artifact(s):		10 -	1000 lb weig	ghts				
Nominal		Correction a	as Found	Correctio	n as Left	ASTM E 617 Class 6	Uncertainty		Condition
	SN/ID	lb	g	lb	g	Tolerance (g)	g	k	As Left
1000 lb	1k-19	-0.08	-35.8	0.00	-0.1	45	4.7	2.0	Adjusted
1000 lb	1k-20	-0.06	-28.8	0.00	0.0	45	4.7	2.0	Adjusted
1000 lb	1k-21	-0.08	-36.6	0.00	0.0	45	4.7	2.0	Adjusted
1000 lb	1k-22	-0.08	-35.4	0.00	0.2	45	4.7	2.0	Adjusted
1000 lb	1k-23	-0.09	-41.4	0.00	-0.1	45	4.7	2.0	Adjusted
1000 lb	1k-24	-0.06	-29.1	0.00	0.2	45	4.7	2.0	Adjusted
1000 lb	1k-25	-0.07	-31.7	0.00	0.0	45	4.7	2.0	Adjusted
1000 lb	1k-26	-0.07	-32.2	0.00	-0.1	45	4.7	2.0	Adjusted
1000 lb	B1	0.21	95.4	0.00	0.3	45	4.7	2.0	Adjusted
1000 lb	B2	0.24	109.8	0.00	-0.1	45	4.7	2.0	Adjusted

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

Min F-

Ron E Peterson, Metrologist

01/07/2025



Calibrated for:

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

Prairie Scale Sys INC (369)

Certificate number: M25036

Ð	2	Lab: 1100 C Office: 118 Wo	South Dakota Department of Public. Office of Weights and Measure Metrology Lab Hter Rd, Bldg. D Sturgis, SD 57785 Ph est Capitol Avenue Pierre, SD 57501 1	varety 5 vne: 605-347-7541 vhone: 605-773-3697			WEIGHTS & MEASURES STATE SPECTIONS					
		CA	LIBRATION CERTIF	ICATE								
Calibrated for:		Prairie Scale Sys INC (36	9)		Certificate	number:	M25036					
Calibration Dat	ie:	01/07/2025			Purchase Orde	r Number:						
Environmental conditions at time of test:												
Environmental	conditions at the	Tomporaturo: 10.4 °C	Humidity, 47%	Broccurou	670 mmha							
То	Temperature: 19.4 °C Humidity: 47 % Pressure: 679 mmhg											
Test e	auipment used:	Lab standards traceable to	the SI. XPR64003LD5C. XPR50	03SC. XPR226CDR. XP	R36C. Vaisala F	PTU301						
Condi	ition of Weights:	Suitable for use. No significa	ant 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	66A2	952	952	2300	200	2.02	In-Tolerance					
50 LB	66A6	1127	1127	2300	200	2.02	In-Tolerance					
50 LB	66A6	897	897	2300	200	2.02	In-Tolerance					
50 LB	66A7	-1033	-1033	2300	200	2.02	In-Tolerance					
50 LB	66A8	-1428	2	2300	200	2.02	Adjusted					
50 LB	66A9	372	372	2300	200	2.02	In-Tolerance					
50 LB	66AA	132	132	2300	200	2.02	In-Tolerance					
50 LB	66AB	602	602	2300	200	2.02	In-Tolerance					
50 LB	66AD	1402	1402	2300	200	2.02	In-Tolerance					
50 LB	66AF	-763	-763	2300	200	2.02	In-Tolerance					
50 LB	66AH	857	857	2300	200	2.02	In-Tolerance					
50 LB	66AK	-1608	32	2300	200	2.02	Adjusted					
50 LB	66AL	32	32	2300	200	2.02	In-Tolerance					
50 LB	66AM	-313	-313	2300	200	2.02	In-Tolerance					
50 LB	66AN	1027	1027	2300	200	2.02	In-Tolerance					
50 LB	66AO	2387	2	2300	200	2.02	Adjusted					
50 LB	66AO	-153	-153	2300	200	2.02	In-Tolerance					
50 LB	66AO	-568	-568	2300	200	2.02	In-Tolerance					
50 LB	66AP	-148	-148	2300	200	2.02	In-Tolerance					
50 LB	66AR	-1578	2	2300	200	2.02	Adjusted					

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

None II

Ron E Peterson, Metrologist

Ð	South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab Lab: 1100 Otter Rd, Bidg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697										
CALIBRATION CERTIFICATE											
Calibrated for:		Prairie Scale Sys INC (36	59)		Certificate	number:	M25036				
Calibration Dat	te:	01/07/2025			Purchase Orde	r Number:					
Environmental	conditions at tin	ne of test:									
Temperature:19.4 °CHumidity:47 %Pressure:679 mmhg											
Te Test e	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										
Cond	Artifact(s):	20	50 lh 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	66AS	382	382	2300	200	2.02	In-Tolerance				
50 LB	66AU	-1393	-8	2300	200	2.02	Adjusted				
50 LB	66AV	-723	-723	2300	200	2.02	In-Tolerance				
50 LB	66AW	402	402	2300	200	2.02	In-Tolerance				
50 LB	66AX	632	632	2300	200	2.02	In-Tolerance				
50 LB	66AY	-433	-433	2300	200	2.02	In-Tolerance				
50 LB	66AZ	-1418	37	2300	200	2.02	Adjusted				
50 LB	66B0	1362	1362	2300	200	2.02	In-Tolerance				
50 LB	66B1	-8	-8	2300	200	2.02	In-Tolerance				
50 LB	66B2	-2453	102	2300	200	2.02	Adjusted				
50 LB	66B3	129	129	2300	200	2.02	In-Tolerance				
50 LB	66B4	-1583	-8	2300	200	2.02	Adjusted				
50 LB	66B6	1597	17	2300	200	2.02	Adjusted				
50 LB	66B7	-993	-993	2300	200	2.02	In-Tolerance				
50 LB	66B8	-393	-393	2300	200	2.02	In-Tolerance				
50 LB	66B9	1102	1102	2300	200	2.02	In-Tolerance				
50 LB	66BA	-2203	-23	2300	200	2.02	Adjusted				
50 LB	66BB	-2453	27	2300	200	2.02	Adjusted				
50 LB	66BC	-723	-723	2300	200	2.02	In-Tolerance				
SU LB	0063	-208	-208	2300	200	2.02	In-Tolerance				
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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

None MI

Ron E Peterson, Metrologist

Ð	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:		Prairie Scale Sys INC (36	59)		Certificate	number:	M25036				
Calibration Da	te:	01/07/2025			Purchase Orde	r Number:					
Environmenta	Environmental conditions at time of test:										
Temperature:19.4 °CHumidity:47 %Pressure:679 mmhgTest method used:SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019Test equipment used:Lab standards traceable to the SI, XPR64003LD5C, XPR5003SC, XPR226CDR, XPR36C, Vaisala PTU301Condition of Weights:Suitable for use. No significant wear or damageArtifact(s):2 Avoirdupois Weight(s)											
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty	1.	Condition				
20.lb		60			120	x 2 02	As Left				
							<u> </u>				

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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

Non E M

Ron E Peterson, Metrologist

Ð	2	Lab: 1100 C Office: 118 Wo	South Dakota Department of Public: Office of Weights and Measure Metrology Lab Her Rd, Bldg. D Sturgis, SD 57785 Ph est Capitol Avenue Pierre, SD 57501	Safety S one: 605-347-7541 Phone: 605-773-3697			WEIGHTS & MEASURES STATE SPECTIONS		
		CA	LIBRATION CERTIF	ICATE					
Calibrated for:		Prairie Scale Sys INC (36	9)		Certificate	number:	M25036		
Calibration Dat	e:	01/07/2025			Purchase Orde	r Number:			
Environmental	conditions at tin	ne of test.			Corio!#	2010 720	B		
Environmenta	conditions at the	Tomporaturo, 21 °C	Humidity, AEE %	Broccurou	579 6 mmhg	2019-759-	Б		
Temperature: 21 °C Humidity: 45.5 % Pressure: 678.6 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): 22 piece Avoirdupois Kit SN 2019-739-B									
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition		
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left		
5 lb		71	71	230	20	2.04	In-Tolerance		
5 lb		71	71	230	20	2.04	In-Tolerance		
5 lb		71	71	230	20	2.04	In-Tolerance		
5 lb		72	72	230	20	2.04	In-Tolerance		
5 lb		72	72	230	20	2.04	In-Tolerance		
1 lb		11.5	11.5	70	6.1	2.04	In-Tolerance		
1 lb		26.5	26.5	70	6.1	2.04	In-Tolerance		
1 lb		16.5	16.5	70	6.1	2.04	In-Tolerance		
1 lb		24.5	24.5	70	6.1	2.04	In-Tolerance		
1 lb		21.5	21.5	70	6.1	2.04	In-Tolerance		
0.5 lb		16.2	16.2	45	4.0	2.04	In-Tolerance		
0.2 lb		-15.1	-15.1	18	1.6	2.04	In-Tolerance		
0.2 lb		-4.0	-4.0	18	1.6	2.04	In-Tolerance		
0.1 lb		2.60	2.60	9.1	0.78	2.04	In-Tolerance		
0.05 lb		1.43	1.43	4.5	0.39	2.04	In-Tolerance		
0.02 lb		0.56	0.56	1.8	0.16	2.04	In-Tolerance		
0.02 lb		0.11	0.11	1.8	0.16	2.04	In-Tolerance		
0.01 lb		0.55	0.55	1.5	0.13	2.04	In-Tolerance		
0.005 lb		0.86	0.86	1.2	0.10	2.05	In-Tolerance		
0.002 lb		0.295	0.295	0.87	0.076	2.05	In-Tolerance		
0.002 lb		0.480	0.480	0.87	0.076	2.05	In-Tolerance		
0.001 lb		0.539	0.539	0.7	0.061	2.05	In-Tolerance		

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

None ML

Ron E Peterson, Metrologist

Ð	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:		Prairie Scale Sys INC (36	9)		Certificate	number:	M25036			
Calibration Date: 01/07/2025 Purchase Order Number:										
Environmental conditions at time of test: Serial# 2019-737-G										
Temperature: 21.03 °C Humidity: 45 % Pressure: 678.5 mmhg										
Te Test e Condi	st method used: equipment used: ition of Weights:	SOP 8 Medium Accuracy Ca Lab standards traceable to Suitable for use. No significa 14	librations of Mass Standards the SI, XPR64003LD5C, XPR5C ant wear or damage	by Modified Subtitution 003SC, XPR226CDR, XP	n, May 2019 R36C, Vaisala P SN	2019-737	-6			
Nominal	Artifact(3).	Correction as Found	Correction as Left	NIST Class F	Uncertainty	2013-737	Condition			
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left			
1 kg		13.0	13.0	100	8.7	2.04	In-Tolerance			
1 kg		34.0	34.0	100	8.7	2.04	In-Tolerance			
500 g	С	24.5	24.5	70	6.1	2.04	In-Tolerance			
200 g		12.9	12.9	40	3.4	2.04	In-Tolerance			
200 g	В	10.2	10.2	40	3.4	2.04	In-Tolerance			
100 g		4.5	4.5	20	1.7	2.04	In-Tolerance			
50 g		2.14	2.14	10	0.86	2.04	In-Tolerance			
20 g		0.86	0.86	4	0.34	2.04	In-Tolerance			
20 g		1.05	1.05	4	0.34	2.04	In-Tolerance			
10 g		0.48	0.48	2	0.17	2.04	In-Tolerance			
5 g		0.09	0.09	1.5	0.13	2.04	In-Tolerance			
2 g		0.351	0.351	1.1	0.095	2.04	In-Tolerance			
2 g		0.421	0.421	1.1	0.095	2.04	In-Tolerance			
1 g		0.157	0.157	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.

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

None P.C.

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

Prairie Scale Systems (397) Physical Address:

SA# 131 Billing Address:

9800 Industrial Drive

Horace, ND 58047

Certificate number: M25028

9800 Industrial Drive Horace, ND 58047 Contact: Jordan White Phone: 701-281-9591

Received Date: 12/16/2024

Certificate Issued: 12/17/2024

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Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
2	1000 lb Weights	2	1	1	0	2
4	500 lb Weights	4	2	4	0	4
24	50 lb Weights	24	1	23	0	24

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 factork 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 tobe 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 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 thelower 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.

This document does not represent or imply endorsement by NIST Office of Weights and Measures or any agency of the State and/or national governments. This report may not be reproduced, except in full without the written approval of this laboratory. The client must not use this

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Ron E Peterson, Metrologist

Ð	2	t.	Lab: 1100 Ott Office: 118 Wes	Metro ter Rd, Bldg. D Sturg t Capitol Avenue Pio	logy Lab ;is, SD 57785 Ph erre, SD 57501	one: 605-347-7541 Phone: 605-773-3697	-		VENDHTS & REALINESS STATE PECTRONS	
			CA	LIBRATION	N CERTIF	ICATE				
Calibrated for:		Prairie Scale	Systems (3	397)			Certificate	number:	M25028	
Calibration Dat	ie:	12/17/2024					Purchase Orde	er Number:	0	
nvironmental	conditions at tir	ne of test [.]					Serial#	349		
		Temperature:	19 3 °C	Humidity	19 %	Prossure	670 mmbg	515		
Te	st method used:	SOP 8 Medium	Accuracy Ca	librations of Ma	ass Standard	s by Modified Subtitu	tion. May 2019			
Test e	equipment used:	Lab standards	traceable to	the SI, an XPE6	04KMC balaı	nce, and a Vaisala PTL	1301			
Condi	ition of Weights:	Cleaned and pa	ainted							
	Artifact(s):		2 -	1000 lb weig	hts					
Nominal	GN //ID	Correction a	as Found	Correction	n as Left	ASTM E 617 Class 6	Uncertainty		Condition	
4000 //	SN/ID	dl	g	lb	g 12.2	Tolerance (g)	g	k	As Left	
1000 lb	AVV VV 3	-0.03	-13.2	-0.03	-13.2	45	4.7	2.0	In-Tolerance	
di 0001	AA	-0.14	-61.5	0.00	0.0	45	4.7	2.0	Adjusted	
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South Dakota Department of Public Safety Office of Weights and Measures

* 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

NonE

Ron E Peterson, Metrologist

D	2	c.	Lab: 1100 Ott Office: 118 Wes	Office of Weigh Metro ter Rd, Bldg. D Sturg t Capitol Avenue Pio	ne: 605-347-7541 hone: 605-773-3697	2		EIGHTS & FEALURES STATE PECTRONAS	
			CA	LIBRATION	N CERTIFI	ICATE			
Calibrated for:		Prairie Scale	Systems (3	897)			Certificate	number:	M25028
Calibration Dat	e:	12/17/2024					Purchase Orde	er Number:	0
Environmental	conditions at tin	ne of test:					Serial#		
		Temperature:	19.81 °C	Humidity:	46.03 %	Pressure:	671.83 mmhg		
Te: Test e Condi	st method used: quipment used: tion of Weights: Artifact(s):	SOP 8 Medium Lab standards Cleaned and pa	Accuracy Ca traceable to inted 4 -	librations of Ma the SI, an XPE6 500 lb weigh	ass Standards 04KMC balan its	s by Modified Subtitu ce, and a Vaisala PTL	:ion, May 2019 301		
Nominal		Correction a	as Found	Correction	n as Left	NIST Class F	Uncertainty		Condition
	SN/ID	lb	g	lb	g	Tolerance (g)	g	k	As Left
500 lb	7IV6	-0.04	-19.7	0.00	0.2	23	2.3	2.0	Adjusted
500 lb	71V7	-0.04	-19.3	0.00	0.2	23	2.3	2.0	Adjusted
500 lb	7108	-0.06	-27.1	0.00	0.1	23	2.5	2.0	Adjusted
50010		0.00	27.1	0.00	0.0		2.0	2.0	Jajusteu
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South Dakota Department of Public Safety

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

NonE

Ron E Peterson, Metrologist

Ð	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									
		CA	LIBRATION CERTIF	ICATE						
Calibrated for:		Prairie Scale Systems (3	97)		Certificate	number:	M25028			
Calibration Dat	te:	12/17/2024			Purchase Orde	er Number:				
Environmental	conditions at tin	na aftacti			Sorial#	Unit 207				
Environmenta	i conultions at th	Tomporaturo: 19.7 °C	Humidity: 16.8 %	Prossuro	671 9 mmhg	01111 397				
Те	st method used:	SOP 8 Medium Accuracy Ca	librations of Mass Standards	by Modified Subtitutio	n. May 2019					
Test e	equipment used:	Lab standards traceable to	the SI, XPR64003LD5C, XPR5	003SC, XPR226CDR, XP	R36C, Vaisala F	PTU301				
Condi	ition of Weights:	Suitable for use. No signification	ant wear or damage							
	Artifact(s):	24	50 lb weights		SN	Unit 397				
Nominal	CN1/15	Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition			
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left			
50 lb	001	-6328	-23	2300	200	2.02	Adjusted			
50 lb	004	-4818	132	2300	200	2.02	Adjusted			
50 lb	006	-7748	87	2300	200	2.02	Adjusted			
50 lb	007	-6993	32	2300	200	2.02	Adjusted			
50 lb	013	-5920	32	2300	200	2.02	Adjusted			
50 lb	013	-5975	-5	2300	200	2.02	Adjusted			
50 lb	014	-0008	27	2300	200	2.02	Adjusted			
50 lb	010	-4405	27	2300	200	2.02	Adjusted			
50 lb	017	-5338	32	2300	200	2.02	Adjusted			
50 lb	024	-5978	7	2300	200	2.02	Adjusted			
50 lb	027	-3418	7	2300	200	2.02	Adjusted			
50 lb	028	-2958	42	2300	200	2.02	Adjusted			
50 lb	036	-5988	12	2300	200	2.02	Adjusted			
50 lb	042	-4353	2	2300	200	2.02	Adjusted			
50 lb	065	-4863	7	2300	200	2.02	Adjusted			
50 lb	067	-4238	37	2300	200	2.02	Adjusted			
50 lb	070	-4523	17	2300	200	2.02	Adjusted			
50 lb	071	-2448	-13	2300	200	2.02	Adjusted			
50 lb	085	-5328	27	2300	200	2.02	Adjusted			
50 lb	17872-1	-6513	22	2300	200	2.02	Adjusted			
50 lb	66A1	-6453	42	2300	200	2.02	Adjusted			
50 lb	66AJ	-6138	12	2300	200	2.02	Adjusted			
50 lb	71V2	-1188	-1188	2300	200	2.02	In-Tolerance			

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

None Al

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

Prairie Scales Sys INC (754) Physical Address:

SA# 131 Billing Address:

9800 Industrial Drive

Horace, ND 58047

Certificate number: M25037

9800 Industrial Drive Horace, ND 58047 **Contact:** Jordan White

Phone: 701-281-9591

Received Date: 01/06/2025

Certificate Issued: 01/07/2025

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Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
2	1000 lb Weights	2	2	2	0	2
4	500 lb Weights	4	3	1	0	4
20	50 lb Weights	20	9	15	0	20
1	Avoirdupois Kit	21	21	0	0	21
1	Metric Kit	21	21	0	0	21
1	20 lb Weight	1	1	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 factork to provide an expanded uncertainty which defines an interval having a level of confidence of approximately 95 percent. The expanded uncertainty preented in this report is consistent with the 2008 ISO/IEC Guide to the Expression of Uncertainty in Measurement. The expanded uncertainty is not tobe 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 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 thelower 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.

This document does not represent or imply endorsement by NIST Office of Weights and Measures or any agency of the State and/or national governments. This report may not be reproduced, except in full without the written approval of this laboratory. The client must not use this

None

Ron E Peterson, Metrologist

01/07/2025

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			CA	LIBRATION	V CERTIF	ICATE			
Calibrated for:		Prairie Scales	s Sys INC (7	754)			Certificate	number:	M25037
Calibration Dat	e:	01/07/2025					Purchase Orde	er Number:	0
Environmental	conditions at tin	ne of test:					Serial#		
		Temperature:	19 3 °C	Humidity	463%	Pressure	768 3 mmhg		
Te	st method used:	SOP 8 Medium	Accuracy Ca	librations of M	ass Standard	s by Modified Subtitut	tion. May 2019)	
Test e	quipment used:	Lab standards	traceable to	the SI, an XPE6	04KMC balar	nce, and a Vaisala PTU	301		
Condi	tion of Weights:	Cleaned and pa	inted						
	Artifact(s):		6 -	Cast Weight	s				
Nominal	<u> </u>	Correction	as Found	Correction	n as Left	ASTM E 617 Class 6	Uncertainty		Condition
	SN/ID	lb	g	lb	g	Tolerance (g)	g	k	As Left
1000 lb	1k-01	-0.07	-31.4	0.00	0.1	45	4.7	2.0	Adjusted
1000 lb	1k-02	-0.08	-36.3	0.00	0.0	45	4.7	2.0	Adjusted
500 lb	500 - 01	-0.02	-7.5	0.00	1.6	23	2.3	2.0	Adjusted
500 lb	501 - 02	0.00	1.0	0.00	1.6	23	2.3	2.0	Adjusted
500 lb	502 - 03	0.07	31.3	0.00	0.0	23	2.3	2.0	Adjusted
500 lb	503 - 04	-0.01	-5.6	0.00	1.6	23	2.3	2.0	Adjusted

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

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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

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Ð	2	Lab: 1100 C Office: 118 Wo	South Dakota Department of Public Office of Weights and Measur Metrology Lab Her Rd, Bldg. D Sturgis, SD 57785 Ph est Capitol Avenue Pierre, SD 57501	Safety es 10ne: 605-347-7541 Phone: 605-773-3697			WENHTS & MEASURES STATE SPECTRONS		
		CA	LIBRATION CERTIF	ICATE					
Calibrated for:		Prairie Scales Sys INC (7	54)		Certificate	number:	M25037		
Calibration Dat	te:	01/07/2024			Purchase Orde	r Number:			
Environmental	conditions at tin	ne of test:			Serial#				
Te Test e Condi	Temperature: 19.2 °C Humidity: 46.3 % Pressure: 768.5 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		Condition		
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left		
50 lb	002	-3783	-8	2300	200	2.02	Adjusted		
50 lb	003	902	902	2300	200	2.02	In-Tolerance		
50 lb	5	-2893	-3	2300	200	2.02	Adjusted		
50 lb	005	-3118	17	2300	200	2.02	Adjusted		
50 lb	011	1292	17	2300	200	2.02	Adjusted		
50 lb	019	-10983	-3	2300	200	2.02	Adjusted		
50 lb	022	637	637	2300	200	2.02	In-Tolerance		
50 lb	023	-1763	32	2300	200	2.02	Adjusted		
50 lb	025	432	432	2300	200	2.02	In-Tolerance		
50 lb	026	1387	1387	2300	200	2.02	In-Tolerance		
50 lb	031	1987	17	2300	200	2.02	Adjusted		
50 lb	032	-9558	52	2300	200	2.02	Adjusted		
50 lb	034	1827	62	2300	200	2.02	Adjusted		
50 lb	037	5052	7	2300	200	2.02	Adjusted		
50 lb	039	-13693	-3	2300	200	2.02	Adjusted		
50 lb	058	-9968	17	2300	200	2.02	Adjusted		
50 lb	088	-5378	17	2300	200	2.02	Adjusted		
50 lb	71V4	-3158	-3	2300	200	2.02	Adjusted		
50 lb	7IV3	807	807	2300	200	2.02	In-Tolerance		
50 lb	7IV5	-3893	-18	2300	200	2.02	Adjusted		

South Dakota Department of Public Safety

* 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

Non E Al

Ron E Peterson, Metrologist

Ð	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								
		CA	LIBRATION CERTIF	ICATE					
Calibrated for:		Prairie Scales Sys INC (7	/54)		Certificate	number:	M25037		
Calibration Dat	te:	01/07/2024			Purchase Orde	er Number:			
Environmenta	l conditions at tin	ne of test:			Serial#				
Te Test c Cond	Temperature: 19.2 °C Humidity: 46.3 % Pressure: 768.5 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): 1 Avoirdupois Weight(s)								
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition		
20.lb	5N/ID 17004_1	1145		olo alo	120	к 2.02	As Left		
2010	17904-1	1145	25	910	120	2.02	Aujusteu		
						ļ			
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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

Non E MI

Ron E Peterson, Metrologist

Ð	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									
Caliburate d fam.		Drairie Ceales Sus INC (7	Γ 4)	-	Contificato		1425027			
Calibrated for:		Prairie Scales Sys INC (7	54)		Certificate	number:	IVI25037			
Calibration Dat	alibration Date: 01/07/2025 Purchase Order Number:									
Environmental	conditions at tin	ne of test:			Serial#					
		Temperature: 21 °C	Humidity: 45.5 %	Pressure:	678.6 mmhg					
Tes Test e Condi	st method used: quipment used: tion of Weights: Artifact(s):	SOP 8 Medium Accuracy Ca Lab standards traceable to Suitable for use. No significa 21	librations of Mass Standards I the SI, XPR64003LD5C, XPR5C ant wear or damage niece Avoirdunois Kit	by Modified Subtitution 003SC, XPR226CDR, XP	n, May 2019 R36C, Vaisala F	PTU301				
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	-4	-4	230	20	2.04	In-Tolerance			
5 lb	2	-63	-63	230	20	2.04	In-Tolerance			
5 lb	3	24	24	230	20	2.04	In-Tolerance			
5 lb	4	-8	-8	230	20	2.04	In-Tolerance			
5 lb	5	-32	-32	230	20	2.04	In-Tolerance			
1 lb	6	-8.6	-8.6	70	6.1	2.04	In-Tolerance			
1 lb	7	-2.6	-2.6	70	6.1	2.04	In-Tolerance			
1 lb	8	24.5	24.5	70	6.1	2.04	In-Tolerance			
1 lb	9	5.5	5.5	70	6.1	2.04	In-Tolerance			
1 lb	10	-3.6	-3.6	70	6.1	2.04	In-Tolerance			
0.5 lb	10	-14.8	-14.8	45	4.0	2.04	In-Tolerance			
0.2 lb		2.2	2.2	18	1.6	2.04	In-Tolerance			
0.2 lb		8.1	8.1	18	1.6	2.04	In-Tolerance			
0.1 lb		1.36	1.36	9.1	0.78	2.04	In-Tolerance			
0.05 lb		1.60	1.60	4.5	0.39	2.04	In-Tolerance			
0.02 lb		-0.99	-0.99	1.8	0.16	2.04	In-Tolerance			
0.02 lb		-0.59	-0.59	1.8	0.16	2.04	In-Tolerance			
0.01 lb		0.44	0.44	1.5	0.13	2.04	In-Tolerance			
0.005 lb		0.52	0.52	1.2	0.10	2.05	In-Tolerance			
0.002 lb		0.300	0.300	0.87	0.076	2.05	In-Tolerance			
0.001 lb		0.409	0.409	0.7	0.061	2.05	In-Tolerance			

South Dakota Department of Public Safety

* 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

None Al

Ron E Peterson, Metrologist

Ð	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									
		CA	LIBRATION CERTIF	ICATE						
Calibrated for:		Prairie Scales Sys INC (7	54)		Certificate	number:	M25037			
Calibration Dat	te:	01/07/2024			Purchase Orde	er Number:				
Environment-	conditions at the	no of tosti			Coriol#					
Linvironmental	conditions at th	Tomporature: 21 °C	Humidite: 45 0/	Duccourse	Seridi#	JEANT				
Te Test e Condi	Temperature: 21 °C Humidity: 45 % Pressure: 678.5 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):	21	piece Metric Kit	·	SN	5FWZ				
Nominal	ou /:=	Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition			
	SN/ID	mg	mg	folerance (mg)	mg	k	As Left			
5 kg	A	163	163	500	43	2.04	In-Tolerance			
5 kg		133	133	500	43	2.04	In-Tolerance			
2 kg		77	77	200	17	2.04	In-Tolerance			
2 kg	A	/0	/0	200	17	2.04	In-Tolerance			
1 Kg		12.0	12.0	100	8./	2.04	In-Tolerance			
500 g		18.5	18.5	/0	0.1	2.04	In-Tolerance			
500 g	A	12.5	12.5	70	0.1 6.1	2.04	In-Tolerance			
500 g	B	15.5	15.5	70	0.1	2.04				
500 g	D F	21.3 14 E	21.3 1 <i>1</i> E	70	6.1	2.04				
200 g		14.5 16.2	16.8	/0	3.1	2.04				
200 g	Α	8 0	2 O	40	3.4	2.04				
200 g 100 σ	~	7 9	7 9	20	1 7	2.04				
<u>100 g</u> 50 σ		3 29	3 29	10	0.86	2.04	In-Tolerance			
20 g		1,49	1.49	4	0.34	2.04	In-Tolerance			
20 g		1.13	1.13	4	0.34	2.04	In-Tolerance			
10 g		0.37	0.37	2	0.17	2.04	In-Tolerance			
a		0.14	0.14	1.5	0.13	2.04	In-Tolerance			
2 g		0.476	0.476	1.1	0.095	2.04	In-Tolerance			
2 g		0.496	0.496	1.1	0.095	2.04	In-Tolerance			
1 g		0.377	0.377	0.9	0.078	2.04	In-Tolerance			
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Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

None ML

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

SA# 131

9800 Industrial Drive

Horace, ND 58047

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

Billing Address:

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

CALIBRATION CERTIFICATE

Prairie Scale Systems (Shop)

Physical Address:

9800 Industrial Drive

Horace, ND 58047

Contact: Jordan White

Phone: 701-281-9591

Certificate number: M25044

Received Date: 01/21/2025 **Certificate Issued:** 01/22/2025

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Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
2	ATSM Class 2 Metric Kits	29	29	0	0	29
18	50 lb Weights	18	16	5	0	18
1	Class F Metric Kit	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:

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 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.

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None A

Ron E Peterson, Metrologist

01/22/2025

Ron E Peterson, Reviewer

01/22/2025



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.



M25044

Certificate number:

1012

Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697
CALIBRATION CERTIFICATE

Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785Phone: 605-347-7541

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

Calibrated for:

Calibration Date:

Environmental conditions at time of test:

Temperature: 20.4 C Humidity: 49.34 %

Pressure: 672.03 mmhg

Test method used: SOP 4, Weighing by Double Substitution , May 2019

Prairie Scale Systems (Shop)

01/22/2024

Test equipment used: Lab standards traceable to SI through NIST and Mettler XPR5004SC, XPE505C, XPR36C, Vaisala PTU301 Condition of Weights: Suitable for use. No significant wear or damage

	Artifact(s):	5 piece Metric Kit			SN H563-H566, F197			
Nominal		True Mass Correction	Conventional Mass Correction	ASTM E 617 Class 2	Uncertainty		Assumed	
	SN/ID	mg	mg	Tolerance (mg)	mg	k	Density (g/cm ³)	
5 kg	F197	18.0	2.7	25	1.3	2.00	7.84	
2 kg	H563	9.23	3.11	10	0.58	2.01	7.84	
2 kg	H564	7.88	1.76	10	0.58	2.01	7.84	
2 kg	H565	8.53	2.41	10	0.58	2.01	7.84	
2 kg	H566	9.18	3.06	10	0.58	2.01	7.84	

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

Non E 1

Ron E Peterson, Metrologist

01/22/2024

South Dakota Department of Public Safety Office of Weights and Measures

Metrology Lab

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



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CALIBRATION CERTIFICATE Prairie Scale Systems (Shop)

Certificate number:

M25044

Calibrated for:

Calibration Date: 01/22/2024

Environmental conditions at time of test:

Temperature: 20.4 C Humidity: 49.34 %

Pressure: 672.03 mmhg

Test method used: SOP 4, Weighing by Double Substitution , May 2019

Test equipment used: Lab standards traceable to SI through NIST and Mettler XPR5004SC, XPE505C, XPR36C, Vaisala PTU301 Condition of Weights: Suitable for use. No significant wear or damage

	Artifact(s):	24	piece Metric Kit		SN	F196	
Nominal		True Mass Correction	Conventional Mass Correction	ASTM E 617 Class 2	Uncertainty		Assumed
	SN/ID	mg	mg	Tolerance (mg)	mg	k	Density (g/cm ³)
5 kg		18.6	3.3	25	1.3	2.00	7.84
2 kg		8.18	2.06	10	0.58	2.01	7.84
1 kg		3.20	0.14	5	0.58	2.04	7.84
500 g		2.03	0.50	2.5	0.11	2.01	7.84
200 g		1.053	0.441	1	0.061	2.01	7.84
200 g		1.038	0.426	1	0.061	2.01	7.84
100 g		-0.021	-0.115	0.5	0.042	2.01	7.95
50 g		0.056	0.009	0.25	0.040	2.02	7.95
20 g		0.017	-0.002	0.1	0.015	2.02	7.95
20 g		0.043	0.024	0.1	0.015	2.02	7.95
10 g		0.022	0.013	0.074	0.011	2.02	7.95
5 g		0.0182	0.0135	0.054	0.0088	2.02	7.95
2 g		0.0149	0.0130	0.054	0.0061	2.01	7.95
2 g		0.0094	0.0075	0.054	0.0061	2.01	7.95
1 g		0.0131	0.0121	0.054	0.0051	2.02	7.95
500 mg		0.0001	-0.0004	0.025	0.0039	2.02	7.95
200 mg		-0.0016	-0.0018	0.025	0.0034	2.03	7.95
200 mg		-0.0006	-0.0008	0.025	0.0034	2.03	7.95
100 mg		-0.0024	-0.0025	0.025	0.0024	2.03	7.95
50 mg		0.0049	0.0049	0.014	0.0024	2.03	7.95
20 mg		0.0027	0.0027	0.014	0.0024	2.04	7.95
20 mg		-0.0053	-0.0053	0.014	0.0024	2.04	7.95
10 mg		0.0022	0.0022	0.014	0.0027	2.04	7.95
5 mg		0.0019	0.0018	0.014	0.0024	2.04	7.95

* 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

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Ron E Peterson, Metrologist

01/22/2024

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							NERSHITS & MEASURES STATE SPECTIONS
		CA	LIBRATION CERTIFI	CATE			
Calibrated for:		Prairie Scale Systems (S	hop)		Certificate	number:	M25044
Calibration Dat	e:	01/22/2025			Purchase Orde	r Number:	
Environmental	conditions at tin	ne of test:			Serial#		
		Temperature: 14.93 °C	Humidity: 46 %	Pressure:	671.4 mmhg		
Te	st method used:	SOP 8 Medium Accuracy Ca	librations of Mass Standards b	y Modified Subtitution	n, May 2019		
Test e	quipment used:	Lab standards traceable to	the SI, XPR64003LD5C, XPR50	03SC, XPR226CDR, XP	R36C, Vaisala P	TU301	
Condi	tion of Weights:	Suitable for use. No signification	ant wear or damage				
	Artifact(s):	18	50 lb weights				
Nominal	CN1/12	Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
50 lb	009	1422	1422	2300	200	2.02	In-Tolerance
50 lb	023	-283	-283	2300	200	2.02	In-Tolerance
50 lb	063	1822	2	2300	200	2.02	Adjusted
50 lb	069	117	117	2300	200	2.02	In-Tolerance
50 lb	072	1582	17	2300	200	2.02	Adjusted
50 lb	073	517	517	2300	200	2.02	In-Tolerance
50 lb	074	752	752	2300	200	2.02	In-Tolerance
50 lb	075	1207	1207	2300	200	2.02	In-Tolerance
50 lb	076	-8	-8	2300	200	2.02	In-Tolerance
50 lb	077	1127	1127	2300	200	2.02	In-Tolerance
50 lb	078	922	922	2300	200	2.02	In-Tolerance
50 lb	079	917	917	2300	200	2.02	In-Tolerance
50 lb	080	1117	1117	2300	200	2.02	In-Tolerance
50 lb	086	1037	1037	2300	200	2.02	In-Tolerance
50 lb	17851-1	1247	1247	2300	200	2.02	In-Tolerance
50 lb	17861-1	-1458	2	2300	200	2.02	Adjusted
50 10	17861-1	4232	-3	2300	200	2.02	Adjusted
50 ID	17869-1	-3498	52	2300	200	2.02	Adjusted

South Dakota Department of Public Safety

Office of Weights and Measures

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

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Duglek. Johnson

Ron E Peterson, Metrologist

01/22/2025

Dwight R Johnson, Reviewer

01/22/2025

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South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab Lab: 1100 Otter Rd, Bildg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697							
		CA	LIBRATION CERTIF	ICATE			
Calibrated for:	Calibrated for: Prairie Scale Systems (Shop) Ce					number:	M25044
Calibration Dat	te:	01/22/2025			Purchase Orde	r Number:	
Environmental conditions at time of test: Serial# 7IVI							
		Temperature: 20.7 °C	Humidity: 45.9 %	Pressure:	671.8 mmhg		
Те	st method used:	SOP 8 Medium Accuracy Ca	librations of Mass Standards	by Modified Subtitutio	n, May 2019		
Test e	equipment used:	Lab standards traceable to	the SI, XPR64003LD5C, XPR5	003SC, XPR226CDR, XP	R36C, Vaisala F	PTU301	
Cond	ition of Weights:	Suitable for use. No signification	ant wear or damage				
	Artifact(s):	21	piece Metric Kit		SN	7IVJ	
Nominal	CN /ID	Correction as Found	Correction as Left	NIST Class F	Uncertainty	,	Condition
	SIN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
5 kg	A	143	143	500	43	2.04	In-Tolerance
5 kg	В	119	119	500	43	2.04	In-Tolerance
2 kg		51	51	200	17	2.04	In-Tolerance
2 kg	В	94	94	200	1/	2.04	In-Tolerance
1 Kg	^	24.0	24.0	100	ð./	2.04	In-Tolerance
500 g	A	22.5	22.5	/0	6.1	2.04	In-Tolerance
500 g	В	20.5	20.5	/0	6.1	2.04	In-Tolerance
500 g		19.5	19.5	70	0.1	2.04	In-Tolerance
500 g		25.5	25.5	70	0.1	2.04	In-Tolerance
500 g	E	21.5	21.5	/0	0.1	2.04	In-Tolerance
200 g		0.0	U.D A 1	40	5.4 2.4	2.04	
200 g	·	4.1 6 °	4.1	40	5.4 1.7	2.04	
50 g		0.8 // 11	٥.٥ ٨ 11	10	1.7	2.04	
20 g		4.11	4.11	10	0.80	2.04	
20 g		1.45	1.45	4	0.34	2.04	
20 g 10 σ	•	0.54	0.54	2	0.34	2.04	In-Tolerance
5g		0.54	0.54	15	0.13	2.04	In-Tolerance
2 g		0.081	0.081	1.1	0.095	2.04	In-Tolerance
2 g		0.371	0.371	1.1	0.095	2.04	In-Tolerance
 1g		0.012	0.012	0.9	0.078	2.04	In-Tolerance
- 0				5.0			
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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

01/22/2025

Dwight R Johnson, Reviewer

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							
		C/	ALIBRATION CERTIF	ICATE			
Calibrated for:		Prairie Scale Systems (S	hop)		Certificate	number:	M25044
Calibration Dat	te:	01/22/2025			Purchase Orde	r Number:	
Environmental conditions at time of test: Serial# 71VI							
		Temperature: 20.7 °C	Humidity: 45.9 %	Pressure:	671.8 mmhg		
Te Test e Cond	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						
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty	,	Condition
	SN/ID	mg	mg	Tolerance (mg)	, mg	k	As Left
500 mg		0.149	0.149	0.72	0.064	2.06	In-Tolerance
200 mg		0.081	0.081	0.54	0.047	2.06	In-Tolerance
200 mg		0.004	0.004	0.54	0.047	2.06	In-Tolerance
100 mg		-0.100	-0.100	0.43	0.038	2.06	In-Tolerance
50 mg		0.080	0.080	0.35	0.033	2.04	In-Tolerance
20 mg		0.015	0.015	0.26	0.023	2.06	In-Tolerance
10 mg		-0.001	-0.001	0.21	0.019	2.05	In-Tolerance
5 mg		0.019	0.019	0.17	0.016	2.05	In-Tolerance
1 mg		-0.003	-0.003	0.1	0.010	2.06	In-Tolerance
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Treatment of artifacts prior to testing: Thermal equilibrium was obtained by placing the artifacts in the lab overnight

None AL

Ron E Peterson, Metrologist