

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 Unit 328

Physical Address:

SA# 131 **Billing Address:**

Certificate number: MP4467

9860 Industrial Drive

9860 Industrial Drive

701-281-9373

Horace, ND 58047

Horace, ND 58047

Cooper Anderson

Phone:

Contact:

01/23/2024 Received Date: Certificate Issued: 01/24/2024

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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	8	0	0	8
2	1000 lb Baskets	2	0	2	0	2
40	50 lb Weights	40	11	31	0	40
1	Metric Kit	13	13	0	0	13
1	Avoirdupois Kit	19	19	0	0	19
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 prexented 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 progerly 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 (2018), 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 uncertaintiesare less than onethird of the specified tolerances (maximum permissible errors, m.p.e.) for mass calibrations and less than the specified tolgrances 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

01/24/2024

Dwight R Johnson, Reviewer 01/24/2024

	Offi Lab: 1100 Otter Rd, B	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: 605-773-369	T
	CALIBRA	TION CERTIFICATE	
Calibrated for:	Prairie Scale Systems Unit 3	28	Certificate Number: MP4467
Calibration Date:	01/24/2024		
Environmental condition	ns at time of test:		
	Temperature: 21 °C	Humidity: 46 %	Pressure: 667 mmhg
Test method use	d: SOP 33 Calibrations of Weigh	nt Carts, May 2019	
Test equipment used	: Recently calibrated weights	and a Mettler SLS510 Load Cell	with IND570 Indicator.
	Vaisala PT301		
Condition of Cart	s: 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	-1.49	-677.15	-0.07	-30.34	0.13	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.

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Dwight R Johnson, Reviewer

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D	Lab: 1100 Otter F	h Dakota Department of Pub Office of Weights and Measu Metrology Lab Rd, Bldg D Sturgis, SD 57785 I pitol Avenue Pierre, SD 5750	ures Phone: 605-347-7541		WEIGHTS & MEASURES STATE INSPECTIONS
	Inspection	Checklist for We	eight Cart		
Calibrated for:	Prairie Scale Systems Unit		Certificate r	number: M	P4467
Calibration Date:	01/24/2024				
Manufacturer:	PSS	Da	te of Manufacture		Jul-13
Model Number:	PSS 4k Car	t ID/	/SN Number	PSS-13-C1-4k	
✓ Nominal I	Mass of Weight Cart	4000 lbs	Suitably ma	rked: Yes/No	Yes
✓ Powered	by: Electric/generat	or 🗸	Diesel	Gasoline	
✓ Fluid Leve	els: Engine Oil				
	Hydraulic Flu	id	S	Sealed: Yes/No	
	Batte	ry 🗸	S	Sealed: Yes/No	Yes
	Liquid Fuel		Reference Line Pro	esent: Yes/No	
✓ Fluid drain	n tubes extend beyond the bo	dy of the cart: Yes/	'No Yes		
✓ Number o	of axles:	2		_	
✓ Number /	Size of Tires	18x8x12.1	125		
✓ Sealed where the	neel bearings: Yes/No	Yes			
✓ Drain hole	es present in locations where	water may accumu	late: Yes/No	Yes	
✓ Weight re	estraint railing permanently five	red and solid: Yes/I	No	Yes	
✓ Adjusting	cavity accessible: Yes/No	Yes	Approximate	e capacity:(lbs)	20
✓ Adjusting	cavity sealed: Yes/No	Yes		·	
✓ Service br	rakes functioning properly: Ye	s/No	Yes		
✓ Parking bit	rakes functioning properly: Ye	s/No	Yes		
Remote c	ontrol functioning properly: Y	es/No			
	ondition at time of calibration		lated dirt/debris, dama	ige, loose parts, oi	evidence of
√ tampering	g or unauthorized entry of sea	ils).			
	eport any repair and maintena			-	-
	or, exhaust system, wheels cha alibration.	inged, weiding peri	ormed, etc. include any	y comments or ch	anges since

None Mt

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Ron E Peterson, Metrologist

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Dwight R Johnson, Reviewer

	Office of Lab: 1100 Otter Rd, Bldg	a Department of Public Safety of Weights and Measures Metrology Lab D Sturgis, SD 57785 Phone: 605-347-7541 renue Pierre, SD 57501 Phone: 605-773-36	37	WEIGHTS & MEASURES STATE INSPECTIONS
	CALIBRATI	ON CERTIFICATE		
Calibrated for:	Prairie Scale Systems Unit 328		Certificate Num	ber: MP4467
Calibration Date:	01/24/2024			
Environmental conditions	at time of test:			
	Temperature: 21 °C	Humidity: 46 %	Pressure: 667 mmhg	ł
Test method used:	SOP 33 Calibrations of Weight	Carts, May 2019		
Test equipment used:	Recently calibrated weights an	d a Mettler SLS510 Load Cell	with IND570 Indica	ator.
	Vaisala PT301			
Condition of Carts:	Used but in good condition			

Manufacturer: PSS SN: PSS					PSS-13-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	-1.97	-896.29	-0.13	-60.38	0.13	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 D

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Dwight R Johnson, Reviewer

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Ron E Peterson, Metrologist Ver 20231221

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Þ				d Measures		WEIGHTS & MEASURES STATE INSPECTIONS
		Inspec	tion Checklist fo	r Weight Cart		
Calibrated for	or:	Prairie Scale System		-	e number: I	MP4467
Calibration I	Date:	01/24/2024				
Manufacture	er:	Р	SS	Date of Manufacture		Jul-13
Model Numl	ber:	PSS 4	k Cart	ID/SN Number	PSS-13-C2-4k	
\checkmark	Nominal Mas Powered by: Fluid Levels:	s of Weight Cart Electric/ge Engir Hydrau		Suitably n	narked: Yes/No Gasoline Sealed: Yes/No	Yes
		-	Battery 🗸		Sealed: Yes/No	Yes
			d Fuel	Reference Line I	Present: Yes/No	
\checkmark	Fluid drain tu	bes extend beyond t				
\checkmark	Number of a	des:		2		
\checkmark	Number /Size	e of Tires	18x8	3x12.125		
\checkmark	Sealed wheel	bearings: Yes/No		Yes		
\checkmark	Drain holes p	resent in locations w	here water may acc	cumulate: Yes/No	Yes	
\checkmark	Weight restra	aint railing permaner	ntly fixed and solid:	Yes/No	Yes	
\checkmark	Adjusting cav	ity accessible: Yes/N	o Yes	Approxima	ate capacity:(lbs)	20
✓	Adjusting cav	ity sealed: Yes/No	Yes			
✓	Service brake	s functioning proper	ly: Yes/No	Yes		
~	Parking brake	es functioning proper	ly: Yes/No	Yes		
	Remote cont	rol functioning prope	erly: Yes/No			
~		lition at time of calib unauthorized entry		cumulated dirt/debris, dan	nage, loose parts,	or evidence of
✓	•	xhaust system, whee	•	d, parts replaced, etc., Lea g performed, etc. Include a	•	•

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Ron E Peterson, Metrologist

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01/24/2024

Dwight R Johnson, Reviewer

							10	CALCULATION (F)	OND TO ONLY THE OWNER
			CA	LIBRATION	V CERTIF	ICATE			
Calibrated for:		Prairie Scale	Systems U	nit 328			Certificate	number:	MP4467
alibration Dat	e:	01/24/2024					Purchase Orde	r Number:	0
nvironmental	conditions at tin	ne of test:							
Test e		Lab standards	Accuracy Ca traceable to		ass Standard	Pressure: s by Modified Subtitu ice, and a Vaisala PTU			
	Artifact(s):		10 -	1000 lb weig	hts			Unit 328	
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-11	0.01	2.6	0.01	2.6	45	5.1	2.0	In-Tolerance
1000 lb	1k-12	0.07	29.7	0.07	29.7	45	5.1	2.0	In-Tolerance
1000 lb	1k-13	0.03	14.1	0.03	14.1	45	5.1	2.0	In-Tolerance
1000 lb	1k-14	-0.03	-14.8	-0.03	-14.8	45	5.1	2.0	In-Tolerance
1000 lb	1k-15	0.05	20.6	0.05	20.6	45	5.1	2.0	In-Tolerance
1000 lb	1k-16	0.03	13.1	0.03	13.1	45	5.1	2.0	In-Tolerance
1000 lb	1k-17	0.05	23.7	0.05	23.7	45	5.1	2.0	In-Tolerance
1000 lb	1k-18	-0.02	-9.6	-0.02	-9.6	45	5.1	2.0	In-Tolerance
1000 lb	B1-1k	0.32	147.1	0.00	0.0	45	5.1	2.0	Adjusted
1000 lb	B2-1k	0.28	126.3	0.00	0.2	45	5.1	2.0	Adjusted
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Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541

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

* 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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Dwight R Johnson, Metrologist

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01/24/2024

Ron E Peterson, Reviewer

01/24/2024

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Test equ	onditions at tim	Prairie Scale Systems U 01/24/2024	LIBRATION CERTI		Certificate	number:	MP4467
libration Date: vironmental co Test ı Test equ	onditions at tim	01/24/2024			certificate	indimocr.	1011 4407
vironmental co Test ı Test equ	onditions at tim			-			
Test ı Test equ		ne of test:			Purchase Orde	er Number:	
Test equ	method used:						
Test equ	method used:	Temperature: 22 °C	Humidity: 45 %		667 mmhg		
-		SOP 8 Medium Accuracy Ca					
conuntio	-	Lab standards traceable to Suitable for use. No significa		5C, XPR5003SC, Mettler	^r AX206, Valsala	a PIU301	
	Artifact(s):		50 lb weights		SN	328	
Nominal	Artifact(3).	Correction as Found	Correction as Left	NIST Class F	Uncertainty	520	Canalitia
	SN/ID	mg	mg	Tolerance (mg)	mg	k	Conditio As Left
50 lb	012	697	697	2300	200	2.03	In-Toleranc
50 lb	012	4272	-3	2300	200	2.03	Adjusted
50 lb	038	-6678	7	2300	200	2.03	Adjusted
50 lb	040	4487	-3	2300	200	2.03	Adjusted
50 lb	040	4502	2	2300	200	2.03	Adjusted
50 lb	043	2277	2	2300	200	2.03	Adjusted
50 lb	045	4742	-8	2300	200	2.03	Adjusted
50 lb	046	2402	-8	2300	200	2.03	Adjusted
50 lb	040	3797	12	2300	200	2.03	Adjusted
50 lb	048	712	712	2300	200	2.03	In-Toleranc
50 lb	049	2032	-3	2300	200	2.03	Adjusted
50 lb	050	1442	1442	2300	200	2.03	In-Tolerance
50 lb	051	4647	-3	2300	200	2.03	Adjusted
50 lb	052	6507	-3	2300	200	2.03	Adjusted
50 lb	053	1852	52	2300	200	2.03	Adjusted
50 lb	054	4577	-3	2300	200	2.03	Adjusted
50 lb	055	5877	12	2300	200	2.03	Adjusted
50 lb	056	1447	1447	2300	200	2.03	In-Tolerance
50 lb	057	5012	-3	2300	200	2.03	Adjusted
50 lb	059	6312	-3	2300	200	2.03	Adjusted
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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.

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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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Dwight R Johnson, Metrologist

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01/24/2024

Ron E Peterson, Reviewer

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althurst ad fam.					Contificato		MP4467	
Calibrated for:		Prairie Scale Systems U	nit 328					
Calibration Date	2:	01/24/2024			Purchase Orde	er Number:		
invironmental o	conditions at tin	ne of test:						
		Temperature: 22 °C	Humidity: 45 %	Pressure:	667 mmhg			
Tes	t method used:	SOP 8 Medium Accuracy Cal	librations of Mass Standards	by Modified Subtitutio	n, May 2019			
		Lab standards traceable to		5C, XPR5003SC, Mettler	AX206, Vaisala	a PTU301		
Condit	•	Suitable for use. No significa	•		C N	220		
Nominal	Artifact(s):	20 Correction as Found	50 lb weights Correction as Left	NIST Class F	SIN Uncertainty	328		
NUTITIA	SN/ID	mg	mg	Tolerance (mg)	mg	k	Conditio As Left	
50 lb	060	3722	-3	2300	200	2.03	Adjusted	
50 lb	061	3102	-5	2300	200	2.03	Adjusted	
50 lb	062	5742	-3	2300	200	2.03	Adjusted	
50 lb	063	227	227	2300	200	2.03	In-Toleranc	
50 lb	17278-1	5152	-8	2300	200	2.03	Adjusted	
50 lb	17377-1	2982	-8	2300	200	2.03	Adjusted	
50 lb	17835-1	5932	12	2300	200	2.03	Adjusted	
50 lb	17866-1	5817	12	2300	200	2.03	Adjusted	
50 lb	17873-1	2722	2	2300	200	2.03	Adjusted	
50 lb	17875-1	3362	2	2300	200	2.03	Adjusted	
50 lb	17876-1	-208	-208	2300	200	2.03	In-Tolerance	
50 lb	17877-1	-938	-938	2300	200	2.03	In-Toleranc	
50 lb	17879-1	4442	17	2300	200	2.03	Adjusted	
50 lb	17880-1	6622	-3	2300	200	2.03	Adjusted	
50 lb	17882-1	557	557	2300	200	2.03	In-Tolerance	
50 lb	17884-1	2707	2	2300	200	2.03	Adjusted	
50 lb	17887-0	6882	12	2300	200	2.03	Adjusted	
50 lb	17887-1	-1093	-1093	2300	200	2.03	In-Tolerance	
50 lb	17888-1	3787	2	2300	200	2.03	Adjusted	
50 lb	17889-1	4277	7	2300	200	2.03	Adjusted	
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Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697

* 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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Dwight R Johnson, Metrologist

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01/24/2024

Ron E Peterson, Reviewer

Ð	2		South Dakota Department of Public S Office of Weights and Measure Metrology Lab Dtter Rd, Bldg. D Sturgis, SD 57785 Pho est Capitol Avenue Pierre, SD 57501 I	s one: 605-347-7541			WEIGHTS & MEASURES STATE SPECTIONS			
		C/	LIBRATION CERTIF	ICATE						
Calibrated for:		Prairie Scale Systems U	nit 328		Certificate	number:	MP4467			
Calibration Dat	te:	01/24/2024			Purchase Orde	er Number:				
Environmenta	l conditions at tin	ne of test:								
Test e	Temperature: 22 °C Humidity: 45 % Pressure: 667 mmhg Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019 Test equipment used: Lab standards traceable to the SI, Mettler XPR64003LD5C, XPR5003SC, Mettler AX206, Vaisala PTU301 Condition of Weights: Suitable for use. No significant wear or damage Artifact(s): 1 Avoirdupois Weight(s) SN 328									
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition			
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left			
20 lb	65XC	565.12	565.12	910	120	2.02	In-Tolerance			

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None Al

Dwight R Johnson, Metrologist

01/24/2024

Ron E Peterson, Reviewer

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		CA	LIBRATION CERTIF	ICATE			
alibrated for:		Prairie Scale Systems U	nit 328		Certificate	number:	MP4467
alibration Date	e:	01/24/2024			Purchase Orde	er Number:	
nvironmental	conditions at tir	ne of test:					
		Temperature: 21 °C	Humidity: 47 %	Pressure:	666 mmhg		
Tes	st method used:	SOP 8 Medium Accuracy Ca	librations of Mass Standards	by Modified Subtitutio	n, May 2019		
			the SI, Mettler XPR64003LD5	C, XPR5003SC, Mettler	AX206, Vaisala	a PTU301	
Condit	•	Suitable for use. No signification	•				
No. of the l	Artifact(s):		piece Metric Kit			201652	
Nominal	SN/ID	Correction as Found mg	Correction as Left mg	NIST Class F Tolerance (mg)	Uncertainty mg	k	Condition
1 kg	314/10	30.0	30.0	100	8.7	2.05	As Left In-Tolerance
1 kg 500 g		32.5	30.0	70	6.1	2.05	In-Tolerance
200 g		14.5	14.5	40	3.4	2.05	In-Tolerance
200 g		12.6	12.6	40	3.4	2.05	In-Tolerance
100 g	·	3.1	3.1	20	1.7	2.05	In-Tolerance
50 g		0.79	0.79	10	0.86	2.05	In-Tolerance
20 g		1.54	1.54	4	0.35	2.05	In-Tolerance
20 g		0.76	0.76	4	0.35	2.05	In-Tolerance
10 g		-0.24	-0.24	2	0.17	2.05	In-Tolerance
5 g		0.38	0.38	1.5	0.13	2.05	In-Tolerance
2 g		0.406	0.406	1.1	0.095	2.05	In-Tolerance
2 g		0.341	0.341	1.1	0.095	2.05	In-Tolerance
1 g		0.367	0.367	0.9	0.078	2.05	In-Tolerance
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Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697

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

Dugle R. Jonson

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Dwight R Johnson, Metrologist

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01/24/2024

Ron E Peterson, Reviewer

nber: MP4467 Imber: J301 CO Condition k As Left CO5 In-Tolerance CO5 In-Tolerance CO5 In-Tolerance
J301 CO Condition As Left .05 In-Tolerance .05 In-Tolerance .05 In-Tolerance .05 In-Tolerance
J301 Condition K Condition 0.05 In-Tolerance 0.05 In-Tolerance 0.05 In-Tolerance 0.05 In-Tolerance 0.05 In-Tolerance
Condition k Condition As Left COS In-Tolerance COS In-Tolerance COS In-Tolerance COS In-Tolerance
Condition k Condition As Left COS In-Tolerance COS In-Tolerance COS In-Tolerance COS In-Tolerance
Condition k Condition As Left COS In-Tolerance COS In-Tolerance COS In-Tolerance COS In-Tolerance
Condition k Condition As Left COS In-Tolerance COS In-Tolerance COS In-Tolerance COS In-Tolerance
Condition k Condition As Left COS In-Tolerance COS In-Tolerance COS In-Tolerance COS In-Tolerance
Condition k As Left .05 In-Tolerance .05 In-Tolerance .05 In-Tolerance .05 In-Tolerance .05 In-Tolerance .05 In-Tolerance
k As Left 05 In-Tolerance 05 In-Tolerance 05 In-Tolerance 05 In-Tolerance 05 In-Tolerance 05 In-Tolerance
In-Tolerance.05In-Tolerance.05In-Tolerance.05In-Tolerance.05In-Tolerance
1.05In-Tolerance1.05In-Tolerance1.05In-Tolerance1.05In-Tolerance
.05In-Tolerance.05In-Tolerance.05In-Tolerance
.05 In-Tolerance
.05 In-Tolerance
.05 In-Tolerance
.04 In-Tolerance
.04 In-Tolerance
.05 In-Tolerance
.03 In-Tolerance
.05 In-Tolerance
<u> </u>
<u> </u>

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

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

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

Non E M.

Dufter. Joneon

Ron E Peterson, Metrologist

01/24/2024

Dwight R Johnson, Reviewer



prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory

Office: 118 West Capitol Avenue, Pierre, SD 57501

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

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

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

CALIBRATION CERTIFICATE

Prairie Scale System INC (Unit 349) **Physical Address:**

SA# 131 **Billing Address:**

Certificate number: MP4338

9860 Industrial Drive

Horace, ND 58047

9860 Industrial Drive

Horace, ND 58047

Cooper Anderson Contact:

Phone: 701-281-9373 01/09/2023

Asleft

Certificate Issued: 01/10/2023

Received Date:

Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
2	4000 lb weight carts	2	2	1	0	2
8	1000 lb weights	8	8	0	0	8
2	1000 lb baskets	2	1	1	0	2
40	50 lb weights	40	39	3	0	40
1	20 lb weight	1	1	0	0	1
1	metric kit	22	22	0	0	22
1	avourdupois kit	21	21	0	0	21

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 (2018), 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.

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 document to claim product endorsement by this laboratory.

01/10/2023

Ron E Peterson, Metrologist

Defter Honeon

01/10/2023

Dwight R Johnson, Reviewer

	Office Lab: 1100 Otter Rd, Bld	ta Department of Public Safety of Weights and Measures Metrology Lab g D Sturgis, SD 57785 Phone: 605-347-7541 venue Pierre, SD 57501 Phone: 605-773-369	WEIGHTS A MEASURES INSPECTIONS
	CALIBRAT	ION CERTIFICATE	
Calibrated for:	Prairie Scale System INC (Unit	349)	Certificate Number: MP4338
Calibration Date:	01/10/2023		
Environmental conditions	at time of test:		
	Temperature: 22.3 °C	Humidity: 45.3 %	Pressure: 661.1 mmhg
Test method used	: SOP 33 Calibrations of Weight C	Carts, May 2019	
Test equipment used	Recently calibrated weights and Vaisala PT301	a Mettler SLS510 Load Cell wi	th IND570 Indicator.

Condition of Carts: Used but in good condition

Manufacturer: PSS

Nominal (lb)	AS Found (lb)	As Found (g)	As Left (lb)	As Left (g)	Uncertainty (lb)	k	Tolerance (lb)	Condition as Left
4000	0.93	423.69	-0.07	-34.05	0.13	2.01	1.40	Adjusted

SN: PSS-95-C1-4k

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 re-calibration 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 certificate number provides documented evidence for measurement traceability.

01/10/2023 NonE

Ron E Peterson, Metrologist

Þ		-	Office of N N Lab: 1500 N Garfield – E Office: 118 West Cap		ures one: 605-773-317	0	ER CHARLES	WEIGHTS & MEASURES STATE INSPECTIONS
		Ins	pection Check	dist for W	eight Car	t		
Calibrated fo Calibration D		Prairie Scale Syst 01/10/2023	em INC (Unit 349))		Certificate	number:	MP4338
Manufacture	er:		PSS	D	ate of Manu	Ifacture		1995
Model Numb	er:		4k	IC	/SN Numbe	er	PSS-95-C1-4k	
✓ ✓ ✓	Nominal Mass Powered by: Fluid Levels:		400 ic/generator	00 lbs ✓	Diesel	Suitably m	arked: Yes/No Gasoline	Yes
		Ну	draulic Fluid				Sealed: Yes/No	
		L	Battery iquid Fuel	\checkmark	Refe	erence Line	Sealed: Yes/No Present: Yes/No	
\checkmark	Fluid drain tul	bes extend beyor	d the body of the	e cart: Yes/N	0	Yes		
\checkmark	Number of ax	des:		2				
\checkmark	Number /Size	of Tires		16.25x5x	L1.25			
~	Sealed wheel	bearings: Yes/No		Yes				
\checkmark	Drain holes pr	resent in location	s where water ma	ay accumula	te: Yes/No		Yes	
\checkmark	Weight restra	iint railing perma	nently fixed and s)		Yes	
\checkmark	Adjusting cavi	ity accessible: Yes	s/No	Yes		Approxim	ate capacity:(lbs)	20
 ✓ 	Adjusting cavi	ity sealed: Yes/No)	Yes		1		
✓	-	s functioning pro	-		Yes			
\checkmark	-	es functioning pro			Yes			
	Remote contr	rol functioning pr	operly: Yes/No					
\checkmark		ition at time of ca unauthorized ent	libration (note ar ry of seals).	ny accumula	ted dirt/deb	ris, damag	e, loose parts, or	evidence of
√			maintenance perfo					tery, carburetor, ne last calibration.

None the 5 01/10/2023

Ron Peterson, Metrologist

D	Lab: 1100 Otter Ru	Dakota Department of Public Safety Jffice of Weights and Measures Metrology Lab d, Bldg D Sturgis, SD 57785 Phone: 605-347-75 itol Avenue Pierre, SD 57501 Phone: 605-773	STATE
	CALIBR	ATION CERTIFICATE	
Calibrated for:	Prairie Scale System INC (U	nit 349)	Certificate Number: MP4338
Calibration Date:	01/10/2023		
Environmental conditi	ons at time of test:		
	Temperature: 22.3 °C	Humidity: 45.3 %	Pressure: 661.1 mmhg
Test method u	used: SOP 33 Calibrations of Weig	ht Carts, May 2019	
Test equipment u	sed: Recently calibrated weights	and a Mettler SLS510 Load Cell	with IND570 Indicator.
	Vaisala PT301		

Condition of Carts: Used but in good condition

Manufacturer: PSS

Ν	/lanufacturer:	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	0.11	49.03	0.11	49.03	0.13	2.01	1.40	In-Tolerance

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 re-calibration 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 certificate number provides documented evidence for measurement traceability.

01/10/2023 MONE /

Ron E Peterson, Metrologist

12		Lab: 1500 N	uth Dakota Department Office of Weights and Metrology La Garfield – E. Truck Bypa L8 West Capitol Avenue Pierre SD 575	l Measures ab ass Phone: 605-773-3170 Phone: 605-773-3697		WERAFITS & MERASURES STATE STATE SPACE
		Inspection	Checklist for	r Weight Cart		
Calibrated f	or:	Prairie Scale System INC (Unit 349)	Certi	ificate number:	MP4338
Calibration	Date:	01/10/2023				
Manufactur	er:	PSS		Date of Manufactu	ıre	1995
Model Num	ber:	4k		ID/SN Number	PSS-95-C2-4k	
\checkmark	Nominal Mas	ss of Weight Cart	4000 lbs	Suita	bly marked: Yes/No	Yes
\checkmark	Powered by:	Electric/genera	tor 🗸	Diesel	Gasoline	
\checkmark	Fluid Levels:	Engine Oil				· · · · · · · · ·
ļ	_1	Hydraulic Fl	uid	-	Sealed: Yes/No	
		, Batt		_	Sealed: Yes/No	Yes
		Liquid Fue	·		e Line Present: Yes/No	
\checkmark	Fluid drain tu	bes extend beyond the bo			Yes	
\checkmark	Number of a			2		
\checkmark	Number /Size		16.25	x5x11.25		
\checkmark	-	bearings: Yes/No		Yes		
\checkmark		resent in locations where v			Yes	
\checkmark	-	aint railing permanently fixe			Yes	
\checkmark	-	vity accessible: Yes/No	Yes	-	roximate capacity:(lbs)	20
\checkmark		vity sealed: Yes/No	Yes			
\checkmark		es functioning properly: Yes		Yes		
\checkmark		es functioning properly: Yes		Yes		
	-	rol functioning properly: Ye		103		
		for functioning property. To				
	General cond	lition at time of calibration	(note any accun	nulated dirt/debris. d	amage. loose parts, or e	vidence of
\checkmark		unauthorized entry of seal				
	List and repo	rt any repair and maintena	nce performed,	parts replaced, etc., I	eaks repaired, new batt	ery, carburetor,
	exhaust syste	em, wheels changed, weldir	ng performed, et	tc. Include any comm	ents or changes since th	e last calibration.
\checkmark						
Non E 1	17-					
Non E /	".L)	01/10/2023				

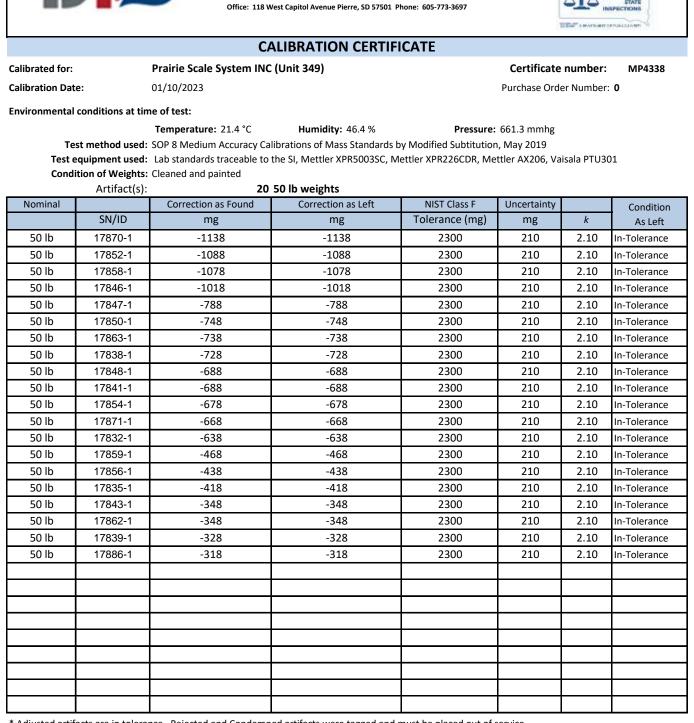
Ron Peterson, Metrologist

13		7	Lab: 1100 O	Metro tter Rd, Bldg. D Stur	hts and Measures blogy Lab gis, SD 57785 Pho				NERGHTS & MEASURES STATE DESCTIONS
			CA	LIBRATIO	N CERTIFI	CATE			
Calibrated for:		Prairie Scale	System INC	C (Unit 349)			Certificate	number:	MP4338
Calibration Dat	e:	01/10/2023					Purchase Orde	er Number:	0
Environmental	conditions at tim	e of test: Temperature:	21.2 °C	Humidity:	45.3 %	Pressure	: 661.1 mmhg		
Test e		Lab standards	traceable to iinted		04KMC balan	by Modified Subtitu ce, and a Vaisala PTU			
Nominal		Correction a		Correctio		NIST Class F	Uncertainty		Condition
	SN/ID	lb	g	lb	g	Tolerance (g)	g	k	As Left
1000 lb	1k-03	-0.04	-17.1	-0.04	-17.1	45	4.8	2.02	In-Tolerance
1000 lb	1k-04	0.01	5.7	0.01	5.7	45	4.8	2.02	In-Tolerance
1000 lb	1k-05	0.01	5.0	0.01	5.0	45	4.8	2.02	In-Tolerance
1000 lb	1k-06	0.01	2.5	0.01	2.5	45	4.8	2.02	In-Tolerance
1000 lb	1k-07	-0.02	-8.5	-0.02	-8.5	45	4.8	2.02	In-Tolerance
1000 lb	1k-08	0.03	12.2	0.03	12.2	45	4.8	2.02	In-Tolerance
1000 lb	1k-09	-0.04	-19.2	-0.04	-19.2	45	4.8	2.02	In-Tolerance
1000 lb	1k-10	0.01	4.4	0.01	4.4	45	4.8	2.02	In-Tolerance
1000 lb	PSS-11-1995	0.17	77.3	0.00	0.1	45	4.8	2.02	Adjusted
1000 lb	PSS-22-1995	0.06	27.7	0.06	27.7	45	4.8	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.

Non E M)1/10/2023

Ron E Peterson, Metrologist Ver 20220919



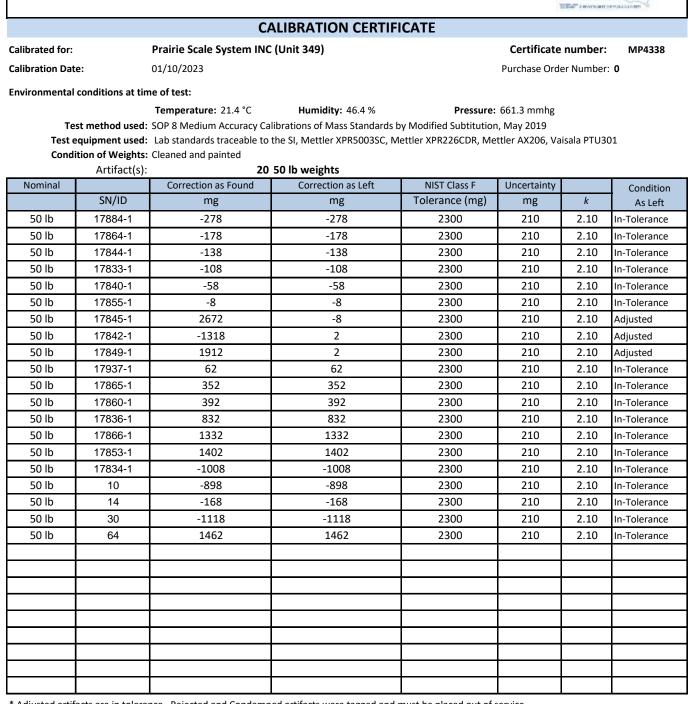
South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab Lab: 1100 Otter Rd, Bldg. D Sturgis, SD 57785 Phone: 605-347-7541

* 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.

1/10/2023

Ron E Peterson, Metrologist Ver 20220919



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

* 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.

1/10/2023

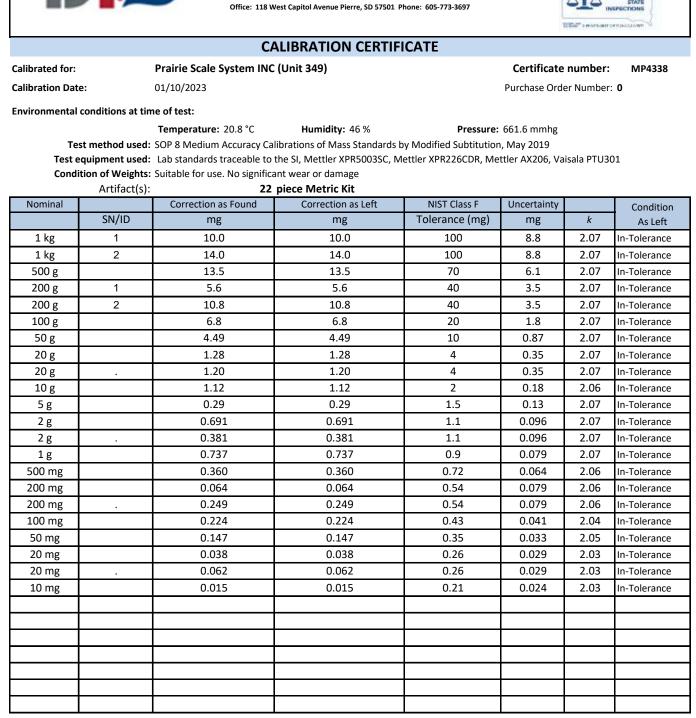
Ron E Peterson, Metrologist Ver 20220919

Calibrated for: Calibration Dat Environmental Te	South Dakota Department of Public Safety Office of Weights and Measures Metrology Lab Lab: 1100 Otter Rd, Bidg. D Sturgts, SD 57785 Phone: 605-347-7541 Office: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-3697 Calibrated for: Prairie Scale System INC (Unit 349) Calibration Date: 01/10/2023 Calibration Date: 01/10/2023 Environmental conditions at time of test: Temperature: 21.4 °C Humidity: 46.4 % Pressure: 661.3 mmhg Test method used: SOP 8 Medium Accuracy Calibrations of Mass Standards by Modified Subtitution, May 2019 Test equipment used: Lab standards traceable to the SI, Mettler XPR5003SC, Mettler XPR226CDR, Mettler AX206, Vaisala PTU301									
		Cleaned and painted	20 lb weight			isala r 1030.	T			
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition			
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left			
20 lb	17904-1	374	374	910	110	2.20	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.

1/10/2023

Ron E Peterson, Metrologist Ver 20220919



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.

1/10/2023

Ron E Peterson, Metrologist Ver 20220919

		CA	LIBRATION CERTIF	CATE			
alibrated for:		Prairie Scale System INC		Certificate	number:	MP4338	
alibration Date	:	01/10/2023	Purchase Orde	er Number:	0		
nvironmental c	onditions at tin	ne of test:					
Test ec	uipment used:	Lab standards traceable to Suitable for use. No signification	Humidity: 46 % librations of Mass Standards b the SI, Mettler XPR5003SC, M ant wear or damage piece Avoirdupois Kit	y Modified Subtitution		isala PTU3(01
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	49	49	230	20	2.07	In-Tolerance
5 lb	2	27	27	230	20	2.07	In-Tolerance
5 lb	3	37	37	230	20	2.07	In-Tolerance
5 lb	4	38	38	230	20	2.07	In-Tolerance
5 lb	5	49	49	230	20	2.07	In-Tolerance
1 lb	1	18.5	18.5	70	6.2	2.07	In-Tolerance
1 lb	2	21.5	21.5	70	6.2	2.07	In-Tolerance
1 lb	3	13.5	13.5	70	6.2	2.07	In-Tolerance
1 lb	4	13.5	13.5	70	6.2	2.07	In-Tolerance
1 lb	5	7.5	7.5	70	6.2	2.07	In-Tolerance
0.5 lb		8.2	8.2	45.0	4.1	2.06	In-Tolerance
0.2 lb		2.1	2.1	18.0	1.6	2.07	In-Tolerance
0.2 lb		8.0	8.0	18.0	1.6	2.07	In-Tolerance
0.1 lb		1.41	1.41	9.1	0.79	2.07	In-Tolerance
0.05 lb		1.58	1.58	4.50	0.39	2.07	In-Tolerance
0.02 lb		-0.92	-0.92	1.80	0.16	2.06	In-Tolerance
0.02 lb		-0.51	-0.51	1.80	0.16	2.06	In-Tolerance
0.01 lb		0.43	0.43	1.50	0.13	2.06	In-Tolerance
0.005 lb		0.48	0.48	1.20	0.23	2.05	In-Tolerance
0.002 lb		0.24	0.24	0.87	0.14	2.06	In-Tolerance
0.001 lb		0.349	0.349	0.70	0.065	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

1/10/2023

Ron E Peterson, Metrologist Ver 20220919

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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 fice: 118 West Capitol Avenue Pierre, SD 57501 Phone: 605-773-365





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 Unit 369

SA# **131** Billing Address:

9860 Industrial Drive

Certificate number: N

MP4461

Acloft

Physical Address:

9860 Industrial Drive

Horace, ND 58047

Horace, ND 58047

Contact: Cooper Anderson

Phone: **701-281-9373**

 Received Date:
 01/16/2024

 Certificate Issued:
 01/16/2024

Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
2	4000 lb Weight Carts	2	2	1	0	2
8	1000 lb Weights	8	2	8	0	8
2	1000 lb Baskets	2	0	2	0	2
40	50 lb Weights	40	24	20	0	40
1	Avoirdupois Weight Kit	22	22	0	0	22
1	Metric Weight Kit	14	14	0	0	14
1	20 lb Weight	1	0	1	0	1

Uncertainty Statement: The combined standard uncertainty includes the standard uncertainty reported for the standard and the standard uncertainty for the measurement process. The combined standard uncertainty is multiplied by a coverage 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 (2018), 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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Daught R. Joneon

Ron E Peterson, Metrologist

01/16/2024

Dwight R Johnson, Reviewer 01/16/2024

	Co Lab: 1100 Otter Rd,	Dakota Department of Public Safety ffice of Weights and Measures Metrology Lab , Bldg D Sturgis, SD 57785 Phone: 605-347-7541 tol Avenue Pierre, SD 57501 Phone: 605-773-3	Z STATE
	CALIBR	ATION CERTIFICATE	
Calibrated for:	Prairie Scale Unit 369		Certificate Number: MP4461
Calibration Date:	01/17/2024		
Environmental condition	s at time of test: Temperature: 20.34 °C	Humidity: 55.07 %	Pressure: 666.38 mmhg
Test method used	: SOP 33 Calibrations of Wei	ght Carts, May 2019	
Test equipment used	Recently calibrated weight	s and a Mettler SLS510 Load Cel	l with IND570 Indicator.
	Vaisala PT301		
Condition of Carts	: Used but in good condition	1	
Manufacturer	: PSS	SN: PSS_16-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	-0.20	-90.57	0.07	33.78	0.13	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 II Ron E Peterson, Metrologist

Ver 20231221

01/17/2024

Dwight R Johnson, Reviewer

Dugak. Joneon

D		South Dakota Department of I Office of Weights and Mu Metrology Lab Otter Rd, Bldg D Sturgis, SD 577 Vest Capitol Avenue Pierre, SD 5	easures 85 Phone: 605-347-7541		WEIGHTS & MEASURES STATE INSPECTIONS
	Inspect	ion Checklist for V	Veight Cart		
Calibrated for:	Prairie Scale Unit 369)	Certificate	number: MF	94461
Calibration Date:	01/17/2024				
Manufacturer:	PS	SS I	Date of Manufacture		42370
Model Number:	PSS	-4k I	D/SN Number	PSS_16-C1-4k	
✓ Nominal	Mass of Weight Cart	4000 lbs	Suitably ma	arked: Yes/No	Yes
 ✓ Powered 	by: Electric/ger	nerator 🗸	Diesel	Gasoline	
✓ Fluid Lev	els: Engine	e Oil			
	Hydraul	c Fluid	:	Sealed: Yes/No	
	E	Battery 🗸	:	Sealed: Yes/No	Yes
	Liquid	Fuel	Reference Line Pr	resent: Yes/No	
✓ Fluid dra	in tubes extend beyond th	ne body of the cart: Ye	es/No Yes		
✓ Number	of axles:	2			
✓ Number	/Size of Tires	16 1/8x5	x11 1/4		
✓ Sealed w	heel bearings: Yes/No	Ye	S		
	les present in locations w	nere water may accun	nulate: Yes/No	Yes	
_	estraint railing permanen	tly fixed and solid: Ye	s/No	Yes	
	g cavity accessible: Yes/No	o Yes	Approximat	e capacity:(lbs)	25
	g cavity sealed: Yes/No	Yes			
	prakes functioning properl	-	Yes		
	prakes functioning proper	-	Yes		
Remote	control functioning prope	rly: Yes/No			
	condition at time of calibr ng or unauthorized entry c		nulated dirt/debris, dama	age, loose parts, or	evidence of
, tamperi					
List and	report any repair and main	ntenance performed.	parts replaced, etc., Leak	s repaired, new ba	tterv.
	or, exhaust system, wheel			-	-
\checkmark the last of	calibration.				

None ME

Ver 20231221

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Ron E Peterson, Metrologist

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01/17/2024

Dwight R Johnson, Reviewer

	Contraction Contra	Dakota Department of Public Safety iffice of Weights and Measures Metrology Lab , Bldg D Sturgis, SD 57785 Phone: 605-347-7541 tol Avenue Pierre, SD 57501 Phone: 605-773-36	Z STATE
	CALIBR	ATION CERTIFICATE	
Calibrated for:	Prairie Scale Unit 369		Certificate Number: MP4461
Calibration Date:	01/17/2024		
Environmental condition	s at time of test: Temperature: 19.94 °C	Humidity: 47.32 %	Pressure: 666.47 mmhg
Test method used	: SOP 33 Calibrations of Wei	ght Carts, May 2019	
Test equipment used	Recently calibrated weight	s and a Mettler SLS510 Load Cell	with IND570 Indicator.
	Vaisala PT301		
Condition of Carts	: Used but in good condition	1	
Manufacturer	: PSS	SN: PSS-16-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	0.37	169.60	0.37	169.60	0.13	2.01	1.40	In-Tolerance

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 II Ron E Peterson, Metrologist

Dugak. Joneon

01/17/2024

Dwight R Johnson, Reviewer

Þ		Lab: 1100 Otter F		Measures		
		Inspection	Checklist for	Weight Cart		
Calibrated for	or:	Prairie Scale Unit 369			te number:	MP4461
Calibration	Date:	01/17/2024				
Manufacture	er:	PSS		Date of Manufacture		42370
Model Numl	ber:	PSS-4k		ID/SN Number	PSS-16-C2-4k	
	Powered by: Fluid Levels:	s of Weight Cart Electric/generat Engine Oil Hydraulic Flu Batte Liquid Fuel bes extend beyond the bo	iid ery ✓ ody of the cart:	Diesel	marked: Yes/No Gasoline Sealed: Yes/No Sealed: Yes/No Present: Yes/No	Yes
	Number /Size Sealed wheel Drain holes p Weight restra Adjusting cav Adjusting cav Service brake Parking brake Remote cont		16 1/8× Y water may accu ked and solid: Y Yes Yes s/No es/No es/No	(5x11 1/4 (es umulate: Yes/No (es/No Approxin Yes Yes	Yes Yes nate capacity:(Ibs)	25 . or evidence of
✓ ✓	List and repo	rt any repair and maintena xhaust system, wheels cha	ance performed		-	-

None ME

Darfter, Joneon

Ron E Peterson, Metrologist

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Ver 20231221

01/17/2024

Dwight R Johnson, Reviewer

			CA	LIBRATION	V CERTIF	ICATE			
Calibrated for:		Prairie Scale	Unit 369				Certificate	number:	MP4461
Calibration Dat	te:	01/17/2024					Purchase Orde	er Number:	0
Favironmontol	conditions at tin								
Environmenta	i conditions at tin					_			
_		Temperature:		Humidity:			660.3 mmhg		
						s by Modified Subtitu nce, and a Vaisala PTU			
	ition of Weights:			the Si, an Ar Eo			501		
	Artifact(s):			1000 lb weig	hts				
Nominal		Correction a		Correction		ASTM E 617 Class 6	Uncertainty		Condition
	SN/ID	lb	g	lb	g	Tolerance (g)	g	k	As Left
1000 lb	1k-19	-0.09	-39.1	0.00	0.0	45	5.1	2.0	Adjusted
1000 lb	1k-20	-0.10	-43.5	0.00	0.0	45	5.1	2.0	Adjusted
1000 lb	1k-21	-0.12	-53.1	0.00	0.2	45	5.1	2.0	Adjusted
1000 lb	1k-22	-0.12	-55.2	0.00	0.0	45	5.1	2.0	Adjusted
1000 lb	1k-23	-0.08	-38.2	0.00	0.0	45	5.1	2.0	Adjusted
1000 lb	1k-24	-0.12	-54.6	0.00	-0.1	45	5.1	2.0	Adjusted
1000 lb	1k-25	-0.13	-59.2	0.00	0.0	45	5.1	2.0	Adjusted
1000 lb	1k-26	-0.09	-42.2	0.00	0.1	45	5.1	2.0	Adjusted
1000 lb	PSS-16-B1-1k	-0.50	-228.5	0.00	0.2	45	5.1	2.0	Adjusted
1000 lb	PSS-16-B2-1k	-0.58	-261.4	0.00	-0.1	45	5.1	2.0	Adjusted

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

* 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

Dufter, Joneon

Dwight R Johnson, Metrologist

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01/17/2024

Ron E Peterson, Reviewer

01/17/2024

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D	2	Lab: 1100 O	South Dakota Department of Public Office of Weights and Measure Metrology Lab tter Rd, Bldg. D Sturgis, SD 57785 Ph st Capitol Avenue Pierre, SD 57501	es one: 605-347-7541			ALIGHTS & MEASURES STATE SPECTIONS	
		CA	LIBRATION CERTIF	ICATE				
Calibrated for:		Prairie Scale Unit 369			Certificate	number:	MP4461	
Calibration Dat	e:	01/17/2024			Purchase Orde	er Number:		
Environmental	conditions at tin	ne of test:						
Test e	quipment used: ition of Weights:	Temperature: 19.8 °C SOP 8 Medium Accuracy Cal Lab standards traceable to Suitable for use. No significa	the SI, Mettler XPR64003LD5 ant wear or damage	by Modified Subtitutio	AX206, Vaisala			
Nominal	Artifact(s):		50 lb weights		-	369		
Nominal	SN/ID	Correction as Found mg	Correction as Left mg	NIST Class F Tolerance (mg)	Uncertainty mg	k	Condition As Left	
50 lb	66A6	-3028	-3	2300	200	2.03	As Left Adjusted	
50 lb	66A7	-2138	-3	2300	200	2.03	Adjusted	
50 lb	66A8	-2183	-13	2300	200	2.03	Adjusted	
50 lb	66A9	-2228	2	2300	200	2.03	Adjusted	
50 lb	66AA	-383	-383	2300	200	2.03	In-Tolerance	
50 lb	66AB	4797	2	2300	200	2.03	Adjusted	
50 lb	66AC	-2168	-3	2300	200	2.03	Adjusted	
50 lb	66AD	-3728	17	2300	200	2.03	Adjusted	
50 lb	66AE	-728	-728	2300	200	2.03	In-Tolerance	
50 lb	66AF	67	67	2300	200	2.03	In-Tolerance	
50 lb	66AG	-668	-668	2300	200	2.03	In-Tolerance	
50 lb	66AH	-3873	22	2300	200	2.03	Adjusted	
50 lb	66AK	-4803	17	2300	200	2.03	Adjusted	
50 lb	66AL	547	547	2300	200	2.03	In-Tolerance	
50 lb	66AM	1217	1217	2300	200	2.03	In-Tolerance	
50 lb	66AN	837	837	2300	200	2.03	In-Tolerance	
50 lb	66AO	677	677	2300	200	2.03	In-Tolerance	
50 lb	66AP	4237	12	2300	200	2.03	Adjusted	
50 lb	66AR	-4333	2	2300	200	2.03	Adjusted	
50 lb	66AS	162	162	2300	200	2.03	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

Dufter. Joneon

Ron E Peterson, Metrologist

01/17/2024

Dwight R Johnson, Reviewer

	WEIGHTS & MEASURES STATE STATE SPECTIONS
e number:	MP4461
der Number:	:
ala PTU301	
N 369	
/ k	Condition
k	As Left
2.03	Adjusted
2.03	Adjusted
2.03	Adjusted In-Tolerance
2.03	Adjusted
2.03	In-Tolerance
2.03	Adjusted
2.03	In-Tolerance
2.03	In-Tolerance
2.03	In-Tolerance
-	

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None Al

Dufter. Joneon

Ron E Peterson, Metrologist

01/17/2024

Dwight R Johnson, Reviewer

Ð	2		South Dakota Department of Public S Office of Weights and Measure: Metrology Lab Otter Rd, Bldg. D Sturgis, SD 57785 Ph est Capitol Avenue Pierre, SD 57501 F	s one: 605-347-7541			VEIGHTS & MEASURES STATE PRECTIONS
		CA	LIBRATION CERTIF	ICATE			
Calibrated for:		Prairie Scale Unit 369			Certificate	number:	MP4461
Calibration Dat	te:	01/17/2024			Purchase Orde	er Number:	
Environmental	conditions at tin	ne of test:					
Test e	equipment used:	Lab standards traceable to Suitable for use. No signific	Humidity: 46.7 % librations of Mass Standards I the SI, Mettler XPR64003LD5 ant wear or damage Avoirdupois Weight(s)	by Modified Subtitutio	AX206, Vaisala	a PTU301 369	
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
20 lb	А	3434	-6	910	120	2.02	Adjusted
	ļ.				ļ ļ		

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

Non E ML

Dufter. Joneon

Ron E Peterson, Metrologist

01/17/2024

Dwight R Johnson, Reviewer

Ð	2		South Dakota Department of Public Office of Weights and Measure Metrology Lab tter Rd, Bldg. D Sturgis, SD 57785 Ph est Capitol Avenue Pierre, SD 57501	one: 605-347-7541			WEIGHTS & MEASURES STATE SPECTIONS
		CA	LIBRATION CERTIF	ICATE			
Calibrated for:		Prairie Scale Unit 369			Certificate	number:	MP4461
Calibration Dat	e:	01/17/2024			Purchase Orde	er Number:	
Environmental	conditions at tin	ne of test:					
		Temperature: 20.7 °C	Humidity: 47.8 %	Pressure:	660.6 mmhg		
Tes	st method used:	SOP 8 Medium Accuracy Cal	librations of Mass Standards	by Modified Subtitutio	n, May 2019		
Test e	quipment used:	Lab standards traceable to	the SI, Mettler XPR64003LD5	C, XPR5003SC, Mettler	AX206, Vaisala	a PTU301	
Condi	tion of Weights:	Suitable for use. No significa	ant wear or damage				
	Artifact(s):	22	piece Avoirdupois Kit		SN	2019-739)-В
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	2.05	In-Tolerance
5 lb		69	69	230	20	2.05	In-Tolerance
5 lb		71	71	230	20	2.05	In-Tolerance
5 lb		71	71	230	20	2.05	In-Tolerance
5 lb		72	72	230	20	2.05	In-Tolerance
1 lb		20.5	20.5	70	6.1	2.05	In-Tolerance
1 lb		26.5	26.5	70	6.1	2.05	In-Tolerance
1 lb		24.5	24.5	70	6.1	2.05	In-Tolerance
1 lb		16.5	16.5	70	6.1	2.05	In-Tolerance
1 lb		10.5	10.5	70	6.1	2.05	In-Tolerance
0.5 lb		14.2	14.2	45	4.0	2.04	In-Tolerance
0.2 lb		-3.8	-3.8	18	1.6	2.05	In-Tolerance
0.2 lb		-14.8	-14.8	18	1.6	2.05	In-Tolerance
0.1 lb		2.46	2.46	9.1	0.79	2.05	In-Tolerance
0.05 lb		1.42	1.42	4.5	0.39	2.05	In-Tolerance
0.02 lb		0.57	0.57	1.8	0.16	2.05	In-Tolerance
0.02 lb		0.12	0.12	1.8	0.16	2.05	In-Tolerance
0.01 lb		0.53	0.53	1.5	0.13	2.04	In-Tolerance
0.005 lb		0.85	0.85	1.2	0.10	2.06	In-Tolerance
0.002 lb		0.485	0.485	0.87	0.076		In-Tolerance
0.002 lb		0.305	0.305	0.87	0.076	2.06	In-Tolerance
0.001 lb		0.539	0.539	0.7	0.062	2.06	In-Tolerance
							1

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

Non E P

Dugle R. Jonson

Ron E Peterson, Metrologist

01/17/2024

Dwight R Johnson, Reviewer

01/17/2024

D	2		South Dakota Department of Public Office of Weights and Measure Metrology Lab tter Rd, Bldg. D Sturgis, SD 57785 Ph est Capitol Avenue Pierre, SD 57501	one: 605-347-7541			VEIGHTS & MEASURES STATE PECTIONS
		CA	LIBRATION CERTIF	ICATE			
Calibrated for:	brated for: Prairie Scale Unit 369					number:	MP4461
Calibration Dat	e:	01/17/2024			Purchase Orde	er Number:	
Environmental	conditions at tin	ne of test:					
		Temperature: 20.7 °C	Humidity: 47.8 %	Pressure:	660.6 mmhg		
Tes	st method used:	SOP 8 Medium Accuracy Cal	librations of Mass Standards		0		
Test e	quipment used:	Lab standards traceable to	the SI, Mettler XPR64003LD5	C, XPR5003SC, Mettler	AX206, Vaisala	a PTU301	
Condi	-	Suitable for use. No significa	ant wear or damage				
	Artifact(s):		piece Avoirdupois Kit		SN	2019-739	-B
Nominal	on (:=	Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
1 kg		35.0	35.0	100	8.7	2.05	In-Tolerance
1 kg		15.0	15.0	100	8.7	2.05	In-Tolerance
500 g		24.5	24.5	70	6.1	2.05	In-Tolerance
200 g		12.6	12.6	40	3.4	2.05	In-Tolerance
200 g		9.7	9.7	40	3.4	2.05	In-Tolerance
100 g		4.1	4.1	20	1.7	2.05	In-Tolerance
50 g		2.21	2.21	10	0.86	2.05	In-Tolerance
20 g		0.81	0.81	4	0.35	2.05	In-Tolerance
20 g		1.03	1.03	4	0.35	2.05	In-Tolerance
10 g		0.47	0.47	2	0.17	2.05	In-Tolerance
5 g		0.10	0.10	1.5	0.13	2.05	In-Tolerance
2 g		0.336	0.336	1.1	0.095	2.05	In-Tolerance
2 g		0.406	0.406	1.1	0.095	2.05	In-Tolerance
1 g		0.172	0.172	0.9	0.078	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 MI

Dugle R. Jonson

Ron E Peterson, Metrologist

01/17/2024

Dwight R Johnson, Reviewer



prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory

Office: 118 West Capitol Avenue, Pierre, SD 57501

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

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

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

CALIBRATION CERTIFICATE

Prairie Scale Systems (Unit 754)

Physical Address:

SA# 131 **Billing Address:**

9860 Industrial Drive

Horace, ND 58047

Certificate number:

9860 Industrial Drive Horace, ND 58047

Cooper Anderson Contact:

701-281-9373 Phone:

Received Date:

Certificate Issued: 01/24/2024

As Left

01/23/2024

MP4468

Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
1	1000 lb Weight	1	0	1	0	1
4	500 lb Weights	4	0	4	0	4
34	50 lb Weights	34	32	6	0	34

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 prexented 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 progerly 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 (2018), 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 uncertaintiesare less than onethird of the specified tolerances (maximum permissible errors, m.p.e.) for mass calibrations and less than the specified tolgrances 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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Dufter. Joneon

Ron E Peterson, Metrologist

01/24/2024

Dwight R Johnson, Reviewer 01/24/2024

Ð	2		Lab: 1100 Ot	Metro ter Rd, Bldg. D Sturg	nts and Measure logy Lab ;is, SD 57785 Ph	25	10		PERINT & REGINTS & FEALURES STATE PECTIONS
			CA	LIBRATION	V CERTIF	ICATE			
Calibrated for:		Prairie Scale	Systems (l	Jnit 754)			Certificate	number:	MP4468
Calibration Da	te:	01/24/2024					Purchase Ord	er Number:	0
Environmenta	l conditions at tin	ne of test:							
		Temperature:	22 °C	Humidity:	47 %	Pressure:	666 mmhg		
Test e		SOP 8 Medium Lab standards Cleaned and pa	Accuracy Ca traceable to ainted	librations of Ma	ass Standard 04KMC bala	ls by Modified Subtitu nce, and a Vaisala PTU	tion, May 2019	Unit 754	
Nominal		Correction		Correction		ASTM E 617 Class 6			Condition
1000	SN/ID	lb	g	lb	g	Tolerance (g)	g	k	As Left
1000 lb	AA	0.40	182.3	0.00	0.0	45	5.1	2.0	Adjusted
	1					1			
	1		1			1	1		

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

Dugle R. Joneon

Dwight R Johnson, Metrologist

01/24/2024

NONE

Ron E Peterson, Reviewer

Ð	2	c		ter Rd, Bldg. D Sturg		one: 605-347-7541 Phone: 605-773-3697	1		VENDHTS & GEALLIERS STATE PECTIONIS
			CA	LIBRATION	N CERTIF	ICATE			
Calibrated for:		Prairie Scale	Systems (l	Unit 754)			Certificate	number:	MP4468
Calibration Dat	e:	01/24/2024					Purchase Orde	er Number:	0
Environmental	conditions at tin	ne of test:							
		Temperature:	22 °C	Humidity:	46 %	Pressure:	666 mmhg		
Te	st method used:	-		-		s by Modified Subtitu	-		
			-			nce, and a Vaisala PTL			
Condi	tion of Weights:	Cleaned and pa	inted						
	Artifact(s):		4 -	500 lb weigh	its			Unit 754	
Nominal		Correction a		Correction		ASTM E 617 Class 6	,		Condition
500 //-	SN/ID	lb	g	lb	g	Tolerance (g)	g	<i>k</i>	As Left
500 lb	7IV6	0.07	30.2	0.00	0.1	23	2.3	2.0	Adjusted
500 lb	7IV7	0.07	30.0	0.00	0.0	23	2.3	2.0	Adjusted
500 lb 500 lb	7IV8 7IV9	0.06	28.1 27.3	0.00	0.1 -0.1	23	2.3 2.3	2.0	Adjusted Adjusted
300 10	7109	0.00	27.5	0.00	-0.1	25	2.5	2.0	Adjusted
						I			

* 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 M.

Ron E Peterson, Metrologist

01/24/2024

Dufter, Joneon

Dwight R Johnson, Reviewer

01/24/2024

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		Опісе: 118 We	st Capitol Avenue Pierre, SD 57501	. FIIUTIE: 003-1/3-309/	8	SECT DEVELOPMENTS	SPECTIONS	
		CA	LIBRATION CERTI	FICATE				
alibrated for:		Prairie Scale Systems (U	nit 754)	Certificate number: MP4				
alibration Date	:	01/24/2024			Purchase Orde	er Number:		
vironmental	conditions at tin	ne of test:						
		Temperature: 21 °C	Humidity: 46 %	Pressure:	667 mmhg			
Tes	t method used:	SOP 8 Medium Accuracy Cal	ibrations of Mass Standard	s by Modified Subtitutio	n, May 2019			
Test ec	quipment used:	Lab standards traceable to	the SI, Mettler XPR64003LD	5C, XPR5003SC, Mettler	AX206, Vaisala	a PTU301		
Condit	-	Suitable for use. No significa	-					
	Artifact(s):		50 lb weights	-		Unit 754		
Nominal	CN //D	Correction as Found	Correction as Left	NIST Class F	Uncertainty	,	Conditio	
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left	
50 lb	002	717	717	2300	200	2.03	In-Tolerand	
50 lb	003	782	782	2300	200	2.03	In-Tolerand	
50 lb	005	1432	1432	2300	200	2.03	In-Tolerand	
50 lb	008	497	497	2300	200	2.03	In-Tolerand	
50 lb	009	1007	1007	2300	200	2.03	In-Tolerand	
50 lb	011	1217	1217	2300	200	2.03	In-Tolerand	
50 lb	015	1697	2	2300	200	2.03	Adjusted	
50 lb	019	878	878	2300	200	2.03	In-Tolerand	
50 lb	022	-338	-338	2300	200	2.03	In-Tolerand	
50 lb	022	537	537	2300	200	2.03	In-Tolerand	
50 lb	026	657	657	2300	200	2.03	In-Tolerand	
50 lb	026	1377	1377	2300	200	2.03	In-Tolerand	
50 lb	028	2137	-13	2300	200	2.03	Adjusted	
50 lb	031	1277	1277	2300	200	2.03	In-Tolerand	
50 lb	034	797	797	2300	200	2.03	In-Tolerand	
50 lb	037	632	632	2300	200	2.03	In-Tolerand	
50 lb	039	172	172	2300	200	2.03	In-Tolerand	
50 lb	052	1202	1202	2300	200	2.03	In-Tolerand	
50 lb	058	1787	7	2300	200	2.03	Adjusted	
50 lb	066	737	737	2300	200	2.03	In-Toleranc	

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

Dugle R. Jonson

Non E Ma

Dwight R Johnson, Metrologist

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01/24/2024

Ron E Peterson, Reviewer

			tter Rd, Bldg. D Sturgis, SD 57785 Ph est Capitol Avenue Pierre, SD 57501				STATE SPECTIONS
		CA	LIBRATION CERTIF	ICATE		-2010-2010-001	A
Calibrated for:		Prairie Scale Systems (L	Jnit 754)		Certificate	number:	MP4468
Calibration Dat	e:	01/24/2024	Purchase Orde	er Number:			
Environmental	conditions at tin	ne of test:					
Liivii oliilleliitai	conditions at thi	Temperature: 21 °C	Humidity: 46 %	Drossuro:	667 mmhg		
Tes	t method used:	SOP 8 Medium Accuracy Ca	,		-		
		Lab standards traceable to				a PTU301	
Condi	tion of Weights:	Suitable for use. No significa	ant wear or damage				
	Artifact(s):						
Nominal		Correction as Found Correction as Left NIST Class F Uncer					Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
50 lb	068	1032	1032	2300	200	2.03	In-Tolerance
50 lb	069	2197	17	2300	200	2.03	Adjusted
50 lb	072	1137	1137	2300	200	2.03	In-Tolerance
50 lb	073	1812	2	2300	200	2.03	Adjusted
50 lb	074	442	442	2300	200	2.03	In-Tolerance
50 lb	075	577	577	2300	200	2.03	In-Tolerance
50 lb	076	-563	-563	2300	200	2.03	In-Tolerance
50 lb	077	857	857	2300	200	2.03	In-Tolerance
50 lb	078	452	452	2300	200	2.03	In-Tolerance
50 lb	079	1792	-8	2300	200	2.03	Adjusted
50 lb	080	527	527	2300	200	2.03	In-Tolerance
50 lb	7IV3	377	377	2300	200	2.03	In-Tolerance
50 lb	7IV4	607	607	2300	200	2.03	In-Tolerance
50 lb	7IV5	82	82	2300	200	2.03	In-Tolerance
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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.

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

Dugle R. Jonson

Non E M.

Dwight R Johnson, Metrologist

01/24/2024

Ron E Peterson, Reviewer



prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory

Office: 118 West Capitol Avenue, Pierre, SD 57501

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

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

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

CALIBRATION CERTIFICATE

Prairie Scale Systems (Shop Weights)

701-281-9373

Physical Address:

SA# 131 **Billing Address:**

Certificate number:

Horace, ND 58047

9860 Industrial Drive

Horace, ND 58047

9860 Industrial Drive

Cooper Anderson Contact:

Phone:

Received Date: Certificate Issued:

01/24/2024

As Left

01/23/2024

MP4469

Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
1	Metric Weight Kit	29	29	0	0	29

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 prexented 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 progerly 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 (2018), 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 uncertaintiesare less than onethird of the specified tolerances (maximum permissible errors, m.p.e.) for mass calibrations and less than the specified tolgrances 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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None AL

Dwight R Johnson, Metrologist

01/24/2024

Ron E Peterson, Reviewer

Ð	2	Office: 118 W	Metrology Lab Ytter Rd, Bldg. D Sturgis, SD 57785 Ph est Capitol Avenue Pierre, SD 57501	Phone: 605-773-3697		5 1 3.	WEIGHTS & MEASURES STATE SPECTIONS
			LIBRATION CERTIF	ICATE			
Calibrated for:		Prairie Scale Systems (S	shop Weights)		Certificate	number:	MP4469
Calibration Dat	e:	01/24/2024			Purchase Orde	er Number:	:
Environmental	conditions at tin	ne of test:					
		Temperature: 21 °C	Humidity: 47 %	Pressure:	666 mmhg		
Te	st method used:	•	librations of Mass Standards		0		
Test e	quipment used:	Lab standards traceable to	the SI, Mettler XPR64003LD	5C, XPR5003SC, Mettler	r AX206, Vaisala	a PTU301	
Condi	tion of Weights:	Suitable for use. No significa	ant wear or damage				
	Artifact(s):		piece Metric Kit	-		7IVI	
Nominal	CN /ID	Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
5 kg	В	115	115	500	43	2.05	In-Tolerance
5 kg	В.	139	139	500	43	2.05	In-Tolerance
2 kg		47	47	200	17	2.05	In-Tolerance
2 kg	В	91	91	200	17	2.05	In-Tolerance
1 kg		23.0	23.0	100	8.7	2.05	In-Tolerance
500 g	A	20.5	20.5	70	6.1	2.05	In-Tolerance
500 g	В	18.5	18.5	70	6.1	2.05	In-Tolerance
500 g	С	18.5	18.5	70	6.1	2.05	In-Tolerance
500 g	D	22.5	22.5	70	6.1	2.05	In-Tolerance
500 g	E	18.5	18.5	70	6.1	2.05	In-Tolerance
200 g		6.4	6.4	40	3.4	2.05	In-Tolerance
200 g		3.8	3.8	40	3.4	2.05	In-Tolerance
100 g		6.8	6.8	20	1.7	2.05	In-Tolerance
50 g		4.22	4.22	10	0.86	2.05	In-Tolerance
20 g		1.54	1.54	4	0.35	2.05	In-Tolerance
20 g		1.59	1.59	4	0.35	2.05	In-Tolerance
10 g		0.55	0.55	2	0.17	2.05	In-Tolerance
5 g		0.11	0.11	1.5	0.13	2.05	In-Tolerance
2 g		0.406	0.406	1.1	0.095	2.05	In-Tolerance
2 g		0.001	0.001	1.1	0.095	2.05	In-Tolerance
1 g		0.408	0.408	0.9	0.078	2.05	In-Tolerance

Metrology Lab

* 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

Dufter, Jonson

Non E M

Dwight R Johnson, Metrologist

01/24/2024

Ron E Peterson, Reviewer

01/24/2024

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D	2		Metrology Lab Otter Rd, Bldg. D Sturgis, SD 57785 Pho est Capitol Avenue Pierre, SD 57501 F				MEASURES STATE ISPECTIONS
		CA	LIBRATION CERTIF	ICATE			
Calibrated for:		Prairie Scale Systems (S	ihop Weights)		Certificate	number:	MP4469
Calibration Date	:	01/24/2024			Purchase Orde	er Number	:
nvironmental (conditions at tin	ne of test:					
invironmentar		Temperature: 21 °C	Humidity: 47 %	Pressure	666 mmhg		
Tes	t method used:		librations of Mass Standards		-		
			the SI, Mettler XPR64003LD5	-	-	a PTU301	
		Suitable for use. No signific			,		
	Artifact(s):	8	piece Metric Kit		SN	7IVI cont	inued
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
500 mg		0.400	0.400	0.72	0.064	2.04	In-Tolerance
200 mg		0.124	0.124	0.54	0.048	2.04	In-Tolerance
200 mg		0.186	0.186	0.54	0.048	2.04	In-Tolerance
100 mg		0.092	0.092	0.43	0.040	2.03	In-Tolerance
50 mg		0.157	0.157	0.35	0.033	2.03	In-Tolerance
20 mg		0.126	0.126	0.26	0.029	2.03	In-Tolerance
10 mg		0.073	0.073	0.21	0.023	2.02	In-Tolerance
2 mg		0.028	0.028	0.12	0.020	2.02	In-Tolerance

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

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

Dugle R. Jonson

Non E /

Dwight R Johnson, Metrologist

01/24/2024

Ron E Peterson, Reviewer



prevention - protection - enforcement

Office of Weights and Measures

Metrology Laboratory

Office: 118 West Capitol Avenue, Pierre, SD 57501

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

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

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

CALIBRATION CERTIFICATE

Prairie Scale System INC (Shop) Physical Address: 9860 Industrial Drive Horace, ND 58047

Contact:

Phone:

Cooper Anderson

701-281-9373

SA# **131** Billing Address:

9860 Industrial Drive

Horace, ND 58047

Certificate number: MP4339

01/09/2023

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Certificate Issued: 0

Received Date:

01/10/2023

Artifacts Submitted and Summary of Results:

Quantity	Artifact	Total Pieces	Recvd in Tol	Adjusted	Rejected	In Tolerance
20	50 lb cast weights	20	20	0	0	20
1	Metric kit	30	30	0	0	30
-	WELLE NL	50	50	0	0	50
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├ ──── ↓						

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 (2018), 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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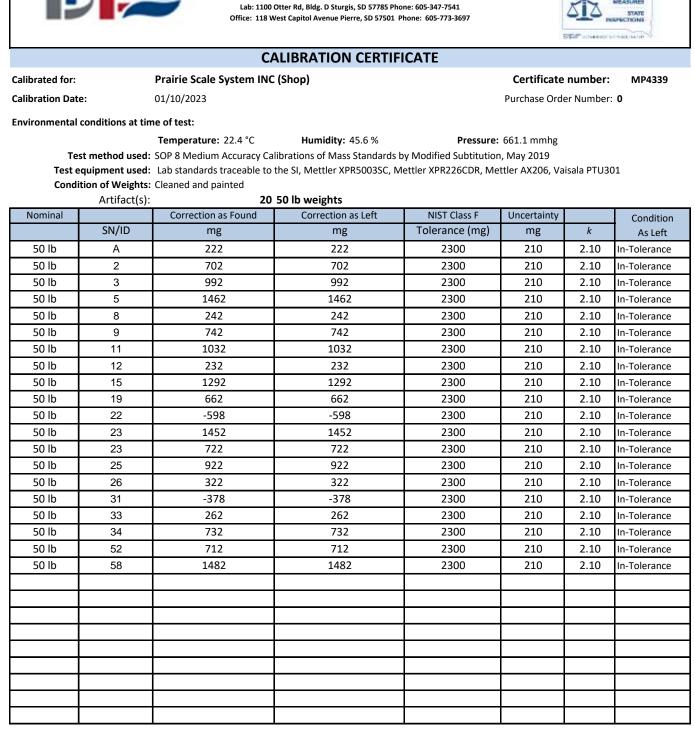
01/10/2023

Ron E Peterson, Metrologist

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01/10/2023

Dwight R Johnson, Reviewer



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

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1/10/2023

Ron E Peterson, Metrologist Ver 20220919

Þ		Lab: 1100 Office: 118 W	South Dakota Department of Public S Office of Weights and Measures Metrology Lab Otter Rd, Bldg. D Sturgis, SD 57785 Pho /est Capitol Avenue Pierre, SD 57501 P	ne: 605-347-7541			WEIGHTS & NEASHTS & STATE STATE STATE
		CA	LIBRATION CERTIF	CATE			
Calibrated for:		Prairie Scale System INC	(Shop)		Certificate	number:	MP4339
alibration Date	2:	01/10/2023			Purchase Orde	er Number	: 0
nvironmental o	conditions at tim	ne of test:					
		Temperature: 20.8 °C	Humidity: 46 %	Pressure:	661.6 mmhg		
			librations of Mass Standards b	•			
			the SI, Mettler XPR5003SC, M	ettler XPR226CDR, Me	ttler AX206, Va	isala PTU3	01
Condit	-	Suitable for use. No significa	-		CN	71\/I	
Nominal	Artifact(s):	30 Correction as Found	piece Metric Kit Correction as Left	NIST Class F	Uncertainty	7IVI	Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	Condition As Left
5 kg	B	119	119	500	44	2.07	In-Tolerance
5 kg	B-	142	142	500	44	2.07	In-Tolerance
2 kg	В	91	91	200	17	2.07	In-Tolerance
2 kg		50	50	200	17	2.07	In-Tolerance
1 kg		25.0	25.0	100	8.8	2.07	In-Tolerance
500 g	А	20.5	20.5	70	6.1	2.07	In-Tolerance
500 g	В	19.5	19.5	70	6.1	2.07	In-Tolerance
500 g	С	19.5	19.5	70	6.1	2.07	In-Tolerance
500 g	D	24.5	24.5	70	6.1	2.07	In-Tolerance
500 g	E	19.5	19.5	70	6.1	2.07	In-Tolerance
200 g		6.3	6.3	40	3.5	2.07	In-Tolerance
200 g	•	3.9	3.9	40	3.5	2.07	In-Tolerance
100 g		6.5	6.5	20	1.8	2.07	In-Tolerance
50 g		3.79	3.79	10	0.87	2.07	In-Tolerance
20 g		1.34	1.34	4	0.35	2.07	In-Tolerance
20 g		1.33	1.33	4	0.35	2.07	In-Tolerance
10 g		0.46	0.46	2	0.18	2.06	In-Tolerance
5 g		0.52	0.52	1.5	0.13	2.07	In-Tolerance
2 g		0.041	0.041	1.1	0.096	2.07	In-Tolerance
2 g	•	0.361	0.361	1.1 0.9	0.096 0.079	2.07	In-Tolerance
1 g		-0.024	-0.024	0.9	0.079	2.07	In-Tolerance
							<u> </u>
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							<u> </u>

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

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1/10/2023

Ron E Peterson, Metrologist Ver 20220919

		Lab: 1100 (Office: 118 W	Metrology Lab Otter Rd, Bldg. D Sturgis, SD 57785 Ph lest Capitol Avenue Pierre, SD 57501			5 <u>1</u> 2	STATE STATE SPECTIONS
		CA	LIBRATION CERTIF	ICATE			
Calibrated for:		Prairie Scale System INC	(Shop)		Certificate	number:	MP4339
Calibration Date:		01/10/2023			Purchase Orde	er Number:	0
nvironmental con	ditions at tim	e of test					
		Temperature: 20.8 °C	Humidity: 46 %	Pressure	661.6 mmhg		
Test m	ethod used:	•	librations of Mass Standards		-		
			the SI, Mettler XPR5003SC, N			isala PTU30	1
Condition	of Weights:	Suitable for use. No significa	int wear or damage				
	Artifact(s):		SN	7IVI conti	nued		
Nominal		Correction as Found	Correction as Left	NIST Class F	Uncertainty		Condition
	SN/ID	mg	mg	Tolerance (mg)	mg	k	As Left
500 mg		0.371	0.371	0.72	0.064	2.06	In-Tolerance
200 mg		0.186	0.186	0.54	0.079	2.06	In-Tolerance
200 mg		0.120	0.120	0.54	0.079	2.06	In-Tolerance
100 mg		0.080	0.080	0.43	0.041	2.04	In-Tolerance
50 mg		0.139	0.139	0.35	0.033	2.05	In-Tolerance
20 mg		0.097	0.097	0.26	0.029	2.03	In-Tolerance
10 mg		0.085	0.085	0.21	0.024	2.03	In-Tolerance
5 mg		0.076	0.076	0.17	0.023	2.04	In-Tolerance
2 mg		0.040	0.040	0.12	0.021	2.04	In-Tolerance
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South Dakota Department of Public Safety

Office of Weights and Measures

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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

1/10/2023

Ron E Peterson, Metrologist Ver 20220919