

## Vermont Weights &amp; Measures Metrology Lab

## TEST REPORT

## 3000 lb Weight Cart

**Submitted by:**

Advanced Scale

13 Delta Drive Unit 6

Londonderry, NH 03053-2372

603-626-0242

**Vermont Test Number: VT23-287**

Date of Test: October 31, 2023

Date Received: October 27, 2023

Manufacturer: Kanawha Scales &amp; Systems

Model: 3K

Serial Number: 092112K

Nominal Mass: 3000 lb

The weight cart described above have been compared to the standards of the State of Vermont, by NISTIR 6969, SOP 33 (2019) with SOP 4 Modifications using the SXXS method, and have been found at time of test, or been adjusted, to meet the tolerance requirements stated in NIST Handbook 105-8 Specifications and Tolerances for Weight Carts (2019). Weights carts are considered in tolerance when the absolute value of the conventional mass correction plus the uncertainty is less than or equal to the specified tolerance, in this calculation no correction for air bouyancy is made. Carts received in an out of tolerance condition show a "Conventional Mass as Submitted" value.

Conventional Mass: 2999.89 lb

Conventional Mass Correction: -0.11 lb

Conventional Mass Correction: -49 grams

Uncertainty: 53 grams

Tolerance: 475 grams

Conventional Mass as Submitted: 3001.13 lb

**Environmental Conditions During Calibration**

Temperature: 21.0 °C to 21.6 °C

Relative Humidity: 41.3 % to 42.2 %

Barometric Pressure: 765.00 mmHg to 766.00 mmHg

Technician: Scott Dolan

Calibration Due: Not Specified

The uncertainties shown are expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic uncertainties relative to the reference standard and procedure used, and (2) Type A, random uncertainties determined by the standard deviation of the measurement process. Type A and Type B uncertainties are combined by the root sum squared method and multiplied by a coverage factor of 2.12631338003558 ( $k=2.12631338003558$ ) for a 95 %

Standards of the state of Vermont are traceable to the SI and National Institute of Standards and Technology (NIST). The Vermont laboratory is recognized by NIST, WMD under the "Metrology Laboratory Program" for mass calibrations at accuracy level Echelon III.

SI conversion - 1 lb is equal to 0.45359237 kg

Calibration Performed at:

163 Admin Drive

Randolph Center, VT 05061

Scott Dolan, Weights &amp; Measures Specialist



Vermont Weights & Measures Metrology Lab  
INSPECTION CHECKLIST  
3000 lb Weight Cart

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Serial Number: 092112K  
Nominal Mass: 3000 lb  
Nominal Mass Marked: Yes  
Powered by: Gasoline Motor

<b>Fluid Levels:</b>	<b>Sealed</b>
Engine oil: Full	No
Hydraulic Fluid: Below Site Level	Yes
Battery Acid: Good	Yes
Liquid Fuel: Full	No

<b>Controls:</b>	<b>Functioning Properly</b>
Service Break: Yes	
Parking Break: Yes	
Remote: N/A	

<b>Adjustment Cavity:</b>
Accessible: Yes
Sealed: Yes
Approximate Capacity: 150 lb

<b>Tires:</b>
Number of Axles: 2
Number of Tires: 4
Size of Tires: 21" Diameter
Sealed Wheel Bearings: No

<b>General Condition of Weight Cart:</b>
Cart is in generally good condition and has recently had paint touched up. Make sure to wipe off any excess grease when greasing fittings.
Seal Numbers VT W&M 000857, 004911, and 002325

Fluid drain tubes don't extend beyond body  
Drain holes present to prevent water accumulation  
Railings permanently fixed or solid

Any maintenance, repairs, replacement of parts, 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, or other items listed on the checklist, require calibration of the weight cart prior to subsequent use.

End of Test Report

