Plant Protection Division ♦ Weights and Measures Program
Metrology Laboratory
2747 29th Avenue Southwest ♦ Tumwater ♦ Washington ♦ 98512
Office (360) 753-5042 ◆ Fax (360) 586-4728 ◆ e-mail – dwright@agr.wa.gov

FOR SCOPE OF ACCREDITATION UNDER NVLAP LAB CODE 200446-0

Report of Calibration # L2443-1

Report Date: ***November 16, 2005*** Calibration Due Date: ***November 15, 2007***

Artifact

TEST ITEM -------:	Weight Cart	MANUFACTURE----------:	Weight Carts, Inc.
RANGE/VALUE --:	4000 lb	MATERIAL----------:	N/A
SERIAL NUMBER :	103-2-90	MFG. SPECIFICATION ------:	NIST HB 105-8
DATE RECEIVED-:	November 14, 2005		

Submitted By

BUSINESS NAME-:	Washington State Patrol	PURCHASE ORDER ---:	N/A
ADDRESS ---------:	8623 Armstrong Road SW Olympia, WA 98504-2626	POINT OF CONTACT --:	David Cromer 360-596-6000

Artifact Calibration Results

Weight Description	Correction As found (mg)	Correction As Left (mg)	*Specification Class Tolerance ± (mg)	Uncertainty k=2 (mg)
4000 lb Weight Cart	**-11.00**	-0.51	1.25	0.35

- **Bold** print indicates an out-of-tolerance reading. An artifact is considered out-of-tolerance when the correction plus the measurement uncertainty is greater than the specified tolerance.

Calibration Information

DATE(S) TESTED:	November 16, 2005	TESTED BY:	Dan Wright
PROCEDURE(S)--:	WASOP 33	CONDITION OF ARTIFACT(S):	Good

AMBIENT CONDITIONS					
	AIR TEMPERATURE:	20 °C	WATER TEMPERATURE:	N/A	°C
	BAROMETRIC PRESSURE:	768.7 MMHG	Relative Humidity:	39	%

WSDA METROLOGY LABORATORY STANDARDS USED IN THE CALIBRATION OF THE ABOVE DESCRIBED ARTIFACT

DESCRIPTION / SERIAL NUMBER	REPORT NUMBER	DATE CALIBRATED	DATE DUE
Test Weights, 4 each / SP19, SP25, SP26, & SP 29	L2443-2	11/15/2005	11/15/2007

Relevant Information

- In-accordance-with ISO/IEC FDIS 17025, *General Requirements for the Competence of Testing and Calibration Laboratories,* paragraph 5.10.4.4 'A calibration certificate (or calibration label) shall not contain any recommendation on the calibration interval except where this has been agreed with the client. This requirement may be superseded by legal regulations.'
- In-accordance-with Washington Administrative Code (WAC) Chapter 16-663, *Service Agents -- Reporting, Test Procedures, Standards And Calibration Of Weighing And Measuring Devices,* Section 16-663-130, *Adequacy of standards and submission of standards for certification,* paragraph 2, '… All standards used for servicing, repairing and/or calibrating commercial weighing and measuring devices must be submitted at least every two years for examination and certification…'
- Liquid levels, as stated on the attached Weight Cart Inspection Checklist, must be maintained as close to reference levels as possible during use.

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- The attached Weight Cart Inspection Checklist is an integral component of this Report of Calibration and a copy must be maintained with the cart and reviewed prior to use.
- Any maintenance, repairs, replacement of parts, or damage to the weight cart or its components will likely result in an out-of-tolerance condition. Maintenance or replacement of components such as batteries, tires, filters, or other items listed on the attached Weight Cart Inspection Checklist will require calibration of the weight cart prior to subsequent use.
- The artifact(s) listed above have been found and/or left within the stated tolerances for the classification stated above, except as noted. An artifact is considered in-tolerance when the correction plus the measurement uncertainty is equal to or less than the specified tolerance.
- All corrections stated in this report correlate to a "conventional mass" (also known as 'apparent mass") scale verses 8.0 g/cm^3 reference mass density and an air density of 1.2 mg/cm^3 at 20 °C.
- The results listed in this report relate only to the artifacts described and extent of calibrations performed.

Traceability Statement

The item(s) listed above have been compared to the Standards of the State of Washington. The Standards of the State of Washington are traceable to the National Institute of Standards and Technology (NIST) and are part of a comprehensive measurement assurance program for ensuring continued accuracy and measurement traceability within the level of uncertainty reported by this laboratory. The report of calibration number identified in the title of this report is the unique report number to be used in referencing measurement traceability for the artifact(s) identified in this report only.

Uncertainty Statement

The combined standard uncertainty includes uncertainties reported for the standard, uncertainties associated with the measurement process, uncertainties for any observed deviations from reference values which are less than surveillance limits, and other uncertainties associated with the particular artifact (i.e., reading meniscus, air buoyancy corrections, etc.). The combined standard uncertainty is multiplied by *k*, a coverage factor of 2, to give the expanded uncertainty (which defines an interval with an approximate 95 percent level of confidence). The expanded uncertainty presented in this report is consistent with NIST Technical Note 1297. Stated uncertainties are less than 1/3 of the applicable tolerances.

Certification Statement

Accredited by the National Institute of Standards and Technology (NIST) through the National Voluntary Laboratory Accreditation Program (NVLAP) for the specified scope of accreditation under lab code 200446-0. This laboratory meets the requirements of ISO/IEC 17025 and ANSI/NCSL Z540-1-1994. This report may not be used to claim product endorsement by NVLAP or any other government agency, and may not be reproduced, except in full, without written approval from the laboratory.

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Executed this 16th day of November at Tumwater, Thurston County, Washington

Dan Wright

Dan Wright, State Metrologist

WSDA WASHINGTON STATE DEPARTMENT OF AGRICULTURE

Metrology Laboratory Form
WAMRF-011 4/9/03

Weight Cart Inspection Checklist

COMPANY	INSPECTION DATE	STATE TEST NO.
Washington State Patrol	**November 14, 2005**	**L2443-1**
ADDRESS **8623 Armstrong Road SW** **Olympia, WA 98504**	NOMINAL VALUE **4000 lb**	MODEL NUMBER **WC-20k**
	MANUFACTURER **Weight Carts, Inc.**	SERIAL NUMBER **103-2-90**
POINT OF CONTACT **Dave Cromer**	PHONE NUMBER **360-596-6000**	

_____ Power: Electric Battery ☒ ❖ Electric Generator ☐ ❖ Gasoline ☐ ❖ Diesel ☐

_____ Fluids:			
	☐ Engine Oil		Reference Level:
	☐ Hydraulic Oil	Sealed? Yes ☐ No ☐	Reference Level:
	☒ Battery	Sealed? Yes ☐ No ☒	Reference Level: **@ lip**
	☐ Fuel	Sight Gauge? Yes ☐ No ☐	Reference Level:

_____ Number of axles: **2**

_____ Number / Size of Tires: **2 @ 15 X 6 X 11 1/4 and 2 @ 21 X 7 X 15**

_____ Nominal mass of weight cart is suitably marked. Yes ☒ No ☐

_____ Do fluid drain tubes extend beyond the body of the cart? Yes ☐ No ☐ N/A ☒

_____ Sealed wheel bearings. Yes ☒ No ☐

_____ Drain holes present in locations where water may accumulate. Yes ☒ No ☐

_____ Weight restraint railing permanently fixed and solid. Yes ☒ No ☐

_____ Adjusting cavity is accessible. Yes ☒ No ☐ Approximate capacity: **20** lb

_____ Adjusting cavity sealed. Yes ☒ No ☐

_____ Service brakes are functioning properly. Yes ☒ No ☐

_____ Parking brakes are functioning properly. Yes ☒ No ☐

_____ Remote control is functioning properly. Yes ☐ No ☐ N/A ☒

_____ General condition at time of calibration (i.e., any accumulated dirt/debris, damage, loose parts, or evidence of tampering or unauthorized entry of seals): **Good**

_____ List and report any repair and/or maintenance performed (i.e., leaks repaired, parts replaced, wheels changed, welding performed, etc.) since the last calibration: **None**

Authorized Signature: Dan Wright