



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Onboard Weighing Systems
Lift Truck Scale, Load Cell Electronic
Model: CLS
 n_{\max} : 1 000
 e_{\min} : 5 lb
Capacity: 5 000 lb
Accuracy Class: III

Submitted By:

Rice Lake Weighing Systems
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Standard Features and Options**Standard Features:**

- Hardware for Mounting onto a Fork Lift (maximum fork length 42")
- Auto Level Sensing and Correction Mechanism Contained in Junction Box
- DC Power Supply
- Hard-wired or Wireless Communication

Indicator:

- Rice Lake Weighing Systems indicating element Model 920i (NTEP CC No.01-088)
- or Model 420 Plus (NTEP CC No. 04-076A2)
- or metrological equivalent NTEP certified instrument utilizing Rice Lake Weighing Systems CLS communication software

Load Cells Used:


- Two Revere Transducers Model 363-A5 (NTEP CC No. 87-063A2) or NTEP Certified Equivalent

Installations must satisfy the relationship of $v_{\min} \leq d/\sqrt{N}$ where N= number of load cells.

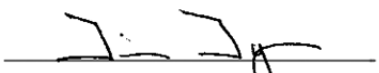
See page 2 for recommended field test procedures.

Temperature Range: -10 °C to 40 °C (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.



Kurt Floren
Chairman, NCWM, Inc.



Tim Tyson
Chairman, National Type Evaluation Program Committee
Issued: March 28, 2012

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Rice Lake Weighing Systems

Onboard Weighing System / CLS

Application: Scale is designed for mounting onto the carriage of a lift truck (fork lift). The scale is used to weigh commodities on pallets or skids for shipping when interfaced with any NTEP certified and compatible indicating element utilizing Rice Lake Weighing Systems CLS communication software.

Identification: A metal or adhesive label identification badge is attached to top of the scale.

Sealing: Set-up parameters and adjustments for the weighing element are made through the indicating element. The system incorporates an auto level sensing angle correction mechanism inside the junction box. The junction box shall be sealed by threading a wire seal through two screws that fasten the cover. The indicator shall be sealed according to manufacturer specifications.

Operation: The forklift and vehicle must be at a standstill to capture weight values. Idling the vehicle engine during weighing operation is permissible. Instrumentation must be configured to prevent capture of weight while the load is in motion. The instrument will blank out when out-of-level conditions exceed 3° (5%) side to side and 7° front to back.

Testing: For field-testing, it is recommended that a standard type skid be used as a load receiver. Test weight can then be loaded on the skid. Increasing/decreasing load and shift tests should be conducted. Out-of-level tests should be conducted to insure that the device maintains accuracy when out-of-level up to 5 percent, or the maximum possible out-of-level condition at that location, and that the leveling sensor is adjusted properly and inhibits the weighing operation when the system is out-of-level beyond 3° (5%) side to side and 7° front to back. This may be accomplished by moving the lift truck to an out-of-level area and/or tilting the forks.

Test Conditions: This certificate supersedes Certificate of Conformance 06-074 and was issued to increase the angle of tilt, front to back. Field-testing to extend the forward and back pitch from 3° to 7° was performed on a 5000 x 5 lb lift truck, passing multiple tests within acceptance tolerance. Out-of-level limiters would not allow indicator to produce readings past 7° as per specifications. No additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance 06-074: The emphasis of the evaluation was on the design, operation and performance requirements. The scale was interfaced with Rice Lake Weighing Systems indicating element Model 920i (NTEP CC No. 01-088) utilizing 2 Revere transducers, Model 9363-A5-5K (NTEP CC No. 87-051A3). Separate tests were conducted utilizing Rice Lake Weighing Systems indicating Element Model 420 Plus (NTEP CC No. 04-076A2). Each indicating element was interfaced with the weighing element in a wireless and then wired configuration for testing purposes. The lift truck used for this test was a Class II, 36" x 16" carriage, 42" forks with 29" center-to-center fork spacing. Several static increasing/decreasing load and shift tests were conducted using test weights with the lift truck level and out-of-level 5 percent in all four directions. Tests were also conducted with the vehicle engine running. A standard skid was used as the load receiver. Test loads were distributed to simulate off center weight displacement. DC power supply tests were conducted. The permanence test for this device included over 300 weighments in a 3-week period using pallets containing 1,000 lb, 3,000 lb, and 4,500 lb. Static increasing/decreasing load tests were then repeated.

Evaluated By: D. Onwiler (NE) 06-074; M. Carlin (KS) 06-074A1

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2012. NCWM, Publication 14: Weighing Devices, 2012.

Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

Information Reviewed By: S. Patoray (NCMW), L. Bernetich (NCWM) 06-074; J. Truex (NCWM) 06-074A1



Rice Lake Weighing Systems
Onboard Weighing System / CLS

Example of Device:



Model CLS

