



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Weighing/Load Receiving Element
Vehicle Scale, Modular Load Cell
Model: XXXYYY-PSC
 n_{\max} : 10 000
 e_{\min} : 20 lb
Capacity: 100 tons
Platform: (see below)
CLC: 30 tons
Accuracy Class: III L

Submitted By:

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Standard Features and Options

- The “XXX” in the model designation indicates nominal capacity in tons for single platform models. For multi-platform models it designates the length of the first platform.
- The “YYY” in the model designation indicates the length of the scale in feet for single platform models. For multi-platform models it designates the length of the second platform. Platform lengths for the third and fourth platforms follow if so equipped.
- The “PSC” in the model number designates the PSC series of modular vehicle scale load-receiving element.

Installations Must Satisfy the Relationships of:

Nominal Capacity \leq CLC \times (N – 0.5), where N = number of sections in the scale and the actual platform area shall not be less than 50% of the smallest two-section (four load cell) module of the device tested. The length of the scale is unrestricted provided that $V_{\min} \leq e \div \sqrt{N}$ (Where N is the number of load cells in the scale)

- Maximum module length: 21 ft
- Maximum distance between sections: 21 ft
- Minimum platform area: 87.5 ft
- Module widths: 8 ft to 12 ft
- Deck Material: concrete

Load Cells Used:

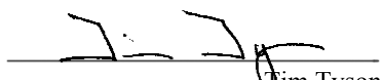
- Cardinal Scale Mfg Co. CBC Series Strain Gauge Compression Load Cells (NTEP CC 11-094) or Metrologically Equivalent and Compatible Load Cells with an Active NTEP Certificate of Conformance.

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.



Jim Tyson
Chairman, National Type Evaluation Program Committee
Issued: June 12, 2012

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Cardinal Scale Manufacturing Company
Weighing/Load Receiving Element / XXXYYY-PSC

Application: General purpose vehicle weighing applications when connected to an NTEP certified and compatible indicating element.

Identification: The identification information is stamped on a metal badge that is screwed to the side of the scale near the center of the scale platform.

Sealing: A Category 1 lead-wire security seal is installed through holes drilled in the heads of retaining screws that secure the cover of the load cell junction box.

Test Conditions: The emphasis of the evaluation was on the design, marking, and performance of the weighing element and load receiving element. A Model 100070-PSC vehicle scale was submitted for evaluation (200 000 lb x 20 lb, five sections 70 ft x 10 ft, 30 ton CLC). This Weighing / Load Receiving element was interfaced with a Cardinal Model 225 Weight Indicator (NTEP Certificate of Conformance No. 01-011). The scale was initially tested using 54 000 pounds of known test weights to perform increasing / decreasing load and shift tests. The 54 000 pound load was also used to perform mid-span tests. A strain load test was conducted using 54 000 pounds of known test weights to a maximum of 165 000 pounds. The scale was subjected to the minimum use criteria required by NTEP and retested. The increasing/decreasing load, shift, and mid-span tests were repeated using 40 000 pounds of known test weights. A strain load test was again conducted to a maximum load of 130 000 pounds.

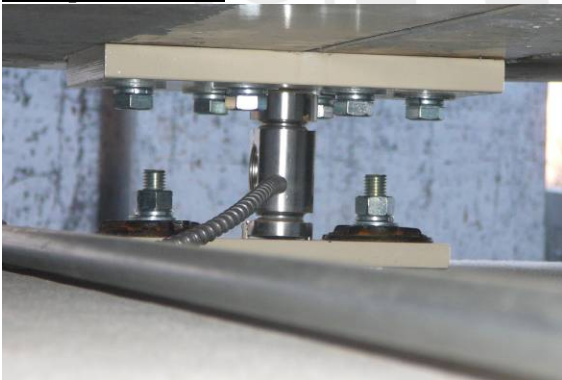
Evaluated By: J. Morrison (OH), C. Harris (OH)

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: J. Truex (NCWM)

Examples of Device:



Load Cell Mounting



PSC Series Scale