NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Weighing/Load Receiving Element
Vehicle / Livestock Scale, Modular, Load Cell
Model: Tufner Series OPT-XXYYY-ZZZ
n_{max}: 10 000
e_{min}: 5 lb
Capacity: 270 000 lb
CLC: 80 000 lb
Accuracy Class: III L

Submitted By:
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Standard Features and Options

Installations must satisfy the relationship of $v_{min} \leq d/\sqrt{N}$ where N= number of load cells
Nominal Capacity ≤ CLC x (N- 0.5), where N = number of sections in the scale.

- XX in the model number designates scale width
- YYY in the model number designates scale length
- ZZZ in the model number designates scale capacity in k (thousand) pounds
- Scale deck type: Steel
- Range of module lengths: 8 ft to 20 ft
- Range of module widths: 5.5 ft to 13.9 ft
- Scale type: Above ground or pit installation
- Gates, Racks, Wheels: Livestock Scale
- Load Cells used: Optima Scale Load Cell Model: OP-343(CC 15-022) & OP-350 (CC14-028) or NTEP Certified compatible and equivalent
- Optional Side Rails, Optional Portability Frame, Optional Ramps

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.

Brett Gurney
Chairman, NCWM, Inc.

James Cassidy
Committee Chair, National Type Evaluation Program Committee
Issued: October 4, 2018

Tufner Weighing Systems

Weighing/Load Receiving Element / Tufner Series OPT-XXYYY-ZZZ

Application: For use in general purpose vehicle / livestock weighing with an NTEP certified and compatible indicating element.

Identification: The identification tag is located with the junction box or on the side of the weighing element.

Sealing: The junction box can be sealed with a lead and wire security seal through two drilled screws.

Test Conditions: This Certificate supersedes Certificate of Conformance Number 17-034 and is issued to indicate transfer of the certificate from Optima Scale Manufacturing, Inc. to Tufner Weighing Systems. The certificate also adds vehicle / livestock scale application. The emphasis of the evaluation was on the design, operation, performance and permanence requirements on the device. A model OPT series Vehicle/Livestock scale was submitted for evaluation. For the evaluation a Model: OPT-1134-50K weighing/load receiving element 11 x 34 foot, 50 000 lb x 5 lb, 35k CLC was interfaced with a Tufner Weighing System model:8400 Versa (NTEP CC:18-036). The scale was tested using 50 000 lb of known test weights to perform increasing / decreasing load, section, mid-span shift and corner tests. The scale was sealed and used until the 20-day minimum time and use requirements had been met. The increasing/decreasing load, shift corner and mid-span tests were repeated using 50 000 lb of known test weight. Previous test conditions are listed below for reference.

Certificate of Conformance Number 17-034: The emphasis of the evaluation was on the design, marking, and performance of the weighing/load receiving element. A Model Tufner OPT-1170-200K vehicle scale was submitted for evaluation (200 000 lb x 20 lb, five sections 11.6 ft x 70 ft, 80 000 lb CLC). This Weighing/Load Receiving element was interfaced with an Avery Weigh-Tronix (Model 665) Indicating Element (NTEP Certificate of Conformance 01-013A4). The scale was initially tested using 72 000 lb of known test weights to perform increasing/decreasing load and shift tests. The 72 000 lb load was also used to perform mid-span tests. A strain load test was conducted using 72 000 lb of known test weights to a maximum of 160 574 lb. 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 44 000 lb of known test weights. A strain load test was again conducted to a maximum load of 145 634 lb.

Evaluated By: M. Kelley (OH) 17-034, 17-034A1

Type Evaluation Criteria Used: *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2018 Edition. *NCWM Publication 14 Weighing Devices*, 2018 Edition.

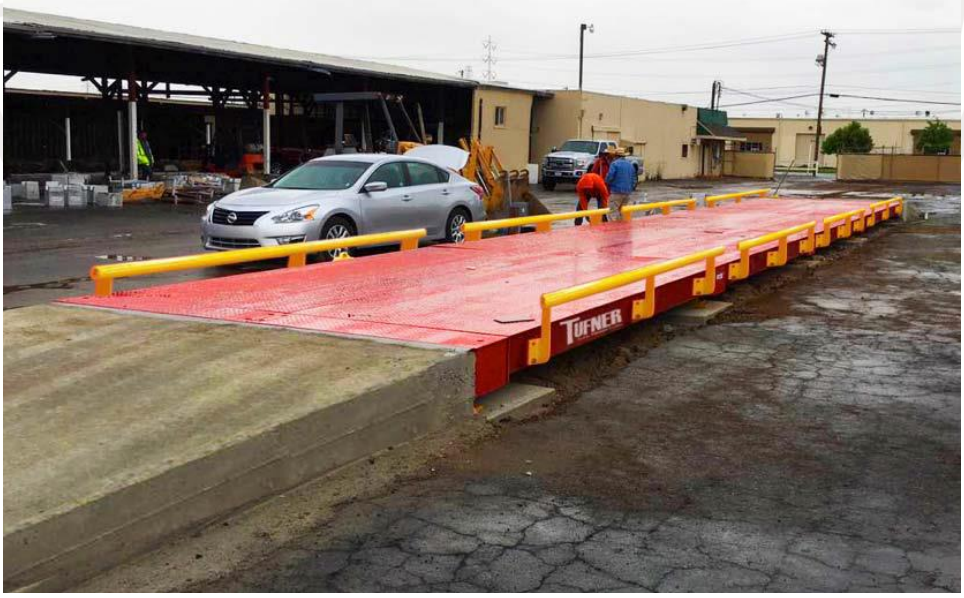
Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

Information Reviewed By: J. Truex (NCWM) 17-034, 17-034A1

Examples of Device:

Tufner Weighing Systems

Weighing/Load Receiving Element / Tufner Series OPT-XXYYY-ZZZ



Tufner Weighing Systems

Weighing/Load Receiving Element / Tufner Series OPT-XXYYY-ZZZ