

# National Conference on Weights and Measures

15245 Shady Grove Road, Suite 130 • Rockville, MD 20850

Certificate Number: 89-077A3

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## *National Type Evaluation Program Certificate of Conformance for Weighing and Measuring Devices*

**For:**

Vehicle Scale Weighing Element  
Modular, Load Cell Electronic  
Model: FT2  
 $n_{\max}$ : 10 000  
 $e_{\min}$ : 20 lb  
Capacity: \* See Below  
CLC: \* See Below  
Accuracy Class: III L

**Submitted by:**

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### Standard Features and Options

Model FT2:

Capacities	CLC**	Platform Width in feet		Module Length in feet	
		Minimum Width	Maximum Width	Minimum Section Span	Maximum Section Span
35 000 lb to 270 000 lb	Maximum of 35 ton	7 feet	15 feet	7.5 feet	24 feet
35 000 lb to 270 000 lb	Maximum of 50 ton	7 feet	15 feet	7.5 feet	18 feet

**\*\*NOTE:** Any Model FT2 Weighing Element with a CLC higher than 35 ton to 50 ton must not exceed a Section Span longer than 18 feet.

**Platform area:** Increased lengths for scales with two or more modules are not restricted as long as the width complies with the platform construction and material evaluated and the load cells meet the  $v_{\min}$  formula ( $v_{\min} = d/n$ ). Additional modules to increase length must be of the same type as those used in the device submitted for evaluation.

**Nominal capacity must be less than, or equal to the number of sections minus one-half (0.5) times the CLC.**

**Platform material:** Concrete or steel

**Installation:** Above ground and pit versions

**Load cells used:** Revere Transducers; Model 5223-B10 (CoC No. 86-038)

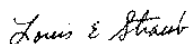
Revere Transducers; Model LCT (CoC No. 88-126A)

Artech; Model 80210 (CoC No. 90-083A)

Temperature Range of  $-10^{\circ}\text{C}$  to  $40^{\circ}\text{C}$  ( $14^{\circ}\text{F}$  to  $104^{\circ}\text{F}$ )

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of 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.

Effective Date: May 24, 2001



Louis E. Straub  
Chairman, NCWM, Inc.



G. Weston Diggs  
Chairman, National Type Evaluation Program Committee

Issue date: May 26, 2001

Note: The National Conference on Weights and Measures does not "approve", "recommend", or "endorse" any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product or material by the NCWM.

**Holtgreven/Loadmaster Scale**  
**Vehicle Scale Weighing/Load Receiving Element**  
**Model: FT 2**

**Application:** A general-purpose vehicle scale.

**Identification:** The metal identification badge is riveted to the side of the weighbridge.

**Sealing:** A wire security seal can be threaded through drilled head bolts on the load cell junction box(s).

**Test Conditions:** This Certificate supersedes Certificate of Conformance No. 89-077A2 and is issued to increase the CLC to 50 ton, increase the scale deck width to 15 feet and to clarify the strain load weights on the prior NTEP tests performed on this device. The FT 2 weighing/load receiving element (200 000 lb x 20 lb, 60 feet x 15 feet, 5 sections, 50 ton CLC) was tested. The scale was tested using 94 500 lb of known test weights. Increasing/decreasing loads, section and mid-span test were performed. Strain load tests were conducted on both ends to 194 540 lb. Similar tests were conducted after 300 weighments and 35 days using 66 000 lb of known test weights and strain load tests to 195 320 lb. The previous tests conditions are repeated below for reference.

**Certificate of Conformance No. 89-077A2:** Additional testing was required when the manufacturer requested an option in increasing the size of the scale deck. The FT 2 weighing element (200 000 lb x 20 lb, 100 feet x 11 feet, six sections, 60 000lb CLC) was tested. The scale was tested using 58 000 lb of known test weights. Increasing/decreasing loads, section and mid-span test were performed. Strain load tests were conducted to 181 580 lb.

**Certificate of Conformance No. 89-077A1:** The FT 2 weighing element (70 000 lb x 20 lb, 20 feet x 10 feet, two sections, 70 000lb CLC) was tested in 1992. The scale was tested initially by placing 18 000 lb of test weights over each load bearing point. Increasing/decreasing loads and mid-span tests were performed using 66 000 lb of known test weights. Similar tests were repeated after the scale was used for more than 400 weighments and 21 days using 70 000 lb of known test weights.

**Certificate of Conformance No. 89-077:** The FT 2 weighing element (200 000 lb x 20 lb, 60 feet x 10 feet, four sections, 70 000lb CLC) was initially tested using 40 000 lb of known test weights. Increase/decrease load tests were conducted. Strain load tests were conducted to 156 000 lb. The scale was used for more than 30 days and tested again.

The results of the evaluation indicate the device complies with the applicable requirements of NIST Handbook 44.

**Type Evaluation Criteria Used:** NIST Handbook 44, 2001 Edition

**Tested By:** A. McCoy (OH), B. Badenhop (OH), B. DeSalvo (OH), & P. O'Connor (OH); T. Lucas (OH), W. West (OH) & P. O'Connor (OH) 89-077A3

**Information Reviewed By:** S. Patoray (NCWM) 89-077A3