



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Onboard Weighing System
Complete Vehicle Mounted Electronic Scale
Model: ANXXL-Y
 n_{\max} : 5000 Class III / 10 000 Class III L (see Page 2)
 e_{\min} : 0.2 lb Class III / 5 lb Class III L (see Page 2)
Capacity: 1000 lb to 77 000 lb (see Page 2)
Platform: (see below)
Accuracy Class: III / III L

Submitted By:

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Standard Features and Options

This Certificate of Conformance supersedes Certificate of Conformance number 99-091A8 for the Rice Lake Weighing Systems Model ANXXL-Y. The Model ANXXL-Y was removed from certificate number 99-091A9 to reduce confusion from other models listed on the 99-091A9 certificate

Installations must satisfy the relationships of $v_{\min} \leq d/N$, where N = number of load cells, and nominal capacity $\leq CLC \times (N - 0.5)$, where N is the number of sections in the scale.

Description:

- Model number denotes capacity and number of load cells.
Example: Model ANXXL-Y
 - where XX is the capacity in thousands of pounds, and
 - Y denotes the number of load cells in the system.
- The number of load cells vary depending on the trailer dimensions.
- Onboard Weighing of Bulk Products
- Weighing/Load-receiving Element Size: Maximum distance between load cells / length = 29 ft 4 in
Maximum distance between load cells / width = 6 ft 11 in

Load Cells Used:

Rice Lake Weighing Systems Model RL20000A-XXXX (NTEP CC 90-158) or NTEP Certified Equivalent.

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.

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Rice Lake Weighing Systems
Onboard Weighing System / ANXXL-Y

Capacities and Specifications by Model:

Model Number	Capacity Max (lb)	e _{min} (lb)	n _{max}	Class
AN1.0L-Y	1000	0.2	5 000	III
AN2.0L-Y	2000	0.5	4 000	III
AN5.0L-Y	5000	1	5 000	III
AN10L-Y	10 000	2	5 000	III
AN15L-Y	15 000	5	3 000	III
AN20L-Y	20 000	5	4 000	III / III L
AN25L-Y	25 000	5	5 000	III / III L
AN30L-Y	30 000	10 / 5	3 000 / 6 000	III / III L
AN35L-Y	35 000	10 / 5	3 500 / 7 000	III / III L
AN40L-Y	40 000	10 / 5	4 000 / 8 000	III / III L
AN50L-Y	50 000	10 / 5	5 000 / 10 000	III / III L
AN60L-Y	60 000	10	6 000	III L
AN70L-Y	70 000	10	7 000	III L
AN77L-Y	77 000	10	7 700	III L

Application: Vehicle or trailer mounted scale used for general purpose weighing, and/or weighing of bulk products in a static condition. When interfaced with an NTEP certified and compatible indicating element.

Identification: The required information is located on an identification plate riveted or voidable adhesive label attached to the side of the scale frame.

Sealing: There are no means of calibration at the scale. All calibration is done through the indicator/controller. The indicator/controller is sealed per the manufacturer's specifications.

Operation: The device is designed to be mounted on a vehicle or trailer. The unit is parked in a location that is no more than six degrees out of level (in any direction) for General Purpose Operation and no more than four degrees out of level for Livestock Operation. A level lamp on the indicator/controller shows the operator if the scale is within the out of level operating limits. If the scale is outside the operating range, the level lamp will not be illuminated and the indicator will turn off automatically.

General Purpose / Bulk Weighing Operation: The operator activates the lift mechanism to raise the scale into the working position. The weight registration on the display will show the starting weight. Press the "start" button on the controller to print the starting weight. Unloading chutes or hoses to be connected and the commodity transfer can begin. Once complete, the chutes and hoses must be returned to their original position. The weight registration on the display will show the net weight. The "end" button on the controller will print the amount of product transferred and release the ticket from the printer. Optionally, if no printer is connected, the operator can simply record the starting and ending weights manually. The operator activates the lowering mechanism to lower the scale into the transport position, and the vehicle or trailer can proceed to its next delivery location.

Test Conditions: This certificate was issued to separate the Model ANXXL-Y from NTEP Certificate of Conformance (CC) 99-091A8 for clarification purposes. Models AN1.0L-3, AN15L-3, AN70L-4 and AN15L-4 have all been evaluated and tested by NTEP. Test conditions from CC 99-091A8 pertaining to the ANXXL-Y are stated below for reference. Please refer to Certificate of Conformance number 99-091A8 for all previous test conditions. Note that the certificate was initially issued under the name NORAC Systems International and was transferred to Rice Lake Weighing Systems (traceable to CC 99-091A6) per the sale of company.

Certificate of Conformance Number 99-091A3: This certificate supersedes Certificate of Conformance Number 99-091A2 and is issued to include an option for onboard livestock weighing. As a representative sample an AN15L-4 scale (7 ft x 14 ft four load cell design with wood deck) was interfaced with a Western Scale Co. Model M2000A-xx Indicating element (NTEP CC 00-076). Initially the scale was set up and tested by conducting two sets of increasing / decreasing load and shift tests over each corner with 4400 lb of known test weights. Increasing / decreasing load tests were also conducted to capacity using 14 990 lb of known test weights. Out of level testing was accomplished using the trailer's independent suspension and wood blocks. Tests were conducted at the device's



Rice Lake Weighing Systems Onboard Weighing System / ANXXL-Y

maximum working angle (just below where the indicator would shut off). The scale was then used for over 20 days with over 300 weighments using actual livestock (non simulated weighments), while being towed in excess of 300 miles. The scale was again set up and tests were repeated as in initial test.

Certificate of Conformance Number 99-091A1: This certificate supersedes Certificate of Conformance Number 99-091 and is issued to include larger capacities in the family of onboard-weighing systems. A model AN70L-4, trailer mounted scale, 77 000 lb by 10 lb, (35 000 x 5 kg) capacity, with a load receiving platform that measured 29'4" by 6'11" was submitted. For the purpose of this evaluation the scale was interfaced with a Western Scale Co. Model M2000A-xx Indicating Element (Certificate of Conformance number 00-076). The device was set up to evaluate tolerances for 5 lb divisions for capacities from 30 000 lb to 50 000 lb for Class III. The emphasis of the evaluation was on the design, operation, performance, permanence and marking requirements. The scale was loaded by placing the known test weights directly on the load receiving platform. Out of level testing was accomplished using the manufacturer's hydraulic incline fixture. Several increasing/decreasing load and shift tests were conducted with the vehicle level and tilted in all four directions to 6 degrees from level (front, back, left side and right side). These tests were conducted to the capacity of the scale, 77 000 lb (35 000 kg). The vehicle was tilted past 6 degrees to insure the indicator would blank out properly. The scale was used for a period of 20 days with the minimum requirements for an on-board-weighing system being met and re-tested in the same manner as above.

Certificate of Conformance Number 99-091: The emphasis of the evaluation was on the design, operation, performance, permanence and marking requirements. For the purpose of this evaluation three models were tested. Two truck-mounted (Models AN1.0L-3 and AN15L-3) and a trailer mounted (Model AN40L-4) were interfaced with a Western Scale Co. Model DF2000 (Certificate of Conformance Number 87-029). The scales were loaded by placing certified weights on racks specially designed for load receiving elements. Out-of-level testing was accomplished using the manufacturer's hydraulic incline fixture. Several increasing/decreasing load and off center loading tests were conducted using 1000 lb, 15 000 lb and 40 000 lb of known test weights. Testing was conducted with the devices out-of-level 6 degrees in all four directions (i.e., front, back, right side, left side). Testing was also conducted with the devices three degrees out-of-level in a twist condition (i.e., one rear set of wheels raised). The devices were tilted beyond the maximum angle to insure the indicator would blank-out properly. The scale was used for a period with the minimum requirements being met and re-tested in the same manner.

Evaluated By: A. McCoy (OH) 99-091; W. West (OH), Darrel Norman (Canada) 99-091A1; J. Kane (MT), Terry Voinorosky (Canada) 99-091A3; D. Flocken (NCWM) 15-0xx

Type Evaluation Criteria Used: *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2015 Edition. *NCWM Publication 14 Measuring Devices*, 2015 Edition.

Information Reviewed By: D. Flocken (NCWM), J. Truex (NCWM)

Examples of Device:

