

Comments in Opposition to S&T Item 320-2
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I request that the S&T Committee consider the history of these issues, past votes of the NCWM, documentation and the comments that were provided to the regional S&T Committees, since that information is relevant to this item.

Issue 320-2 is tied to the basic principles that underlie Handbook 44 and W&M enforcement.

1. Are weighing and measuring devices categorized by their application and how they operate? Does it matter how the manufacturer has designed the weighing system to operate determine how W&M inspectors can apply the requirements of Handbook 44?
2. Do Handbook 44 requirements apply to the first indication of the final values that are the basis of the transactions or can the manufacturers of the weighing or measuring devices claim that “calculator functions” performed by the devices are not subject to W&M enforcement?
3. Do all features of weighing and measuring devices have to comply with NTEP criteria or do some companies get exemptions from NTEP criteria for their weighing or measuring devices?

Weighing and measuring devices are categorized by their application and how they operate. The manufacturers can design weighing systems any way that they wish, as long as the final product complies with Handbook 44. Weights and measures inspectors should not have to ask scale manufacturers how scales were designed to determine if scales used to weigh trucks must comply with the requirements for truck scales. If weights and measures officials have to ask the scale manufacturer how a scale was designed before making a decision of compliance or noncompliance with Handbook 44, then weights and measures officials forfeit some of their regulatory authority to the scale manufacturers.

To paraphrase “the duck test,” if a scale looks like a truck scale, operates like a truck scale and weighs trucks, then it is a truck scale. It doesn’t matter if the truck scale has one platform, three platforms or 10 platforms. If it is a truck scale, then it has to meet all the requirements for truck scales. This is the only way that weights and measures officials can ensure a “level playing field,” that is, fair competition. One company should not get favored treatment over other companies by virtue of special exemptions in Handbook 44.

The SMA proposal is disguised as a broad “technical” argument, when it is a proposal to exempt a Cardinal three-platform, 385,000-lb capacity truck scale from one or more requirements of Handbook 44. This particular scale does not comply with the following requirements of Handbook 44 or NTEP criteria.

1. Scales Code S.5.4.: The v_{\min} requirement for the 14 load cells in the three-platform, truck weighing system does not met the relationship for the 20-lb scale division.
2. General Code G-S.5.1., G-S.5.2.2. and sections 15, 31 and 32 in the DES checklist: There is a lack of mathematical agreement of the axle-load weight indications to the summed

- weight indication when the summed load exceeds 200,000 lb. Cardinal admits that there are times when the weighing system does not have mathematical agreement.
3. General Code G- S.5.3. and the Digital Electronic Scale (DES) checklist [11.4]: The 50-lb scale divisions for the summed weight values when the load exceeds 200,000 lb are not uniform in width.
 4. NTEP CC for the load cells (05-076) requires that the indicator must have a linearity correction algorithm to correct the load cell output for the **individual** load cells, but the Cardinal configuration sums the analog signals from load cells before the indicator; hence, the indicator cannot apply the correction algorithm to the output of the **individual** load cells.
 5. General Code G-S.1.: The model numbers that Cardinal uses for the multiple-platform truck scale (which Cardinal says are catalog numbers) are not covered by NTEP CC, 95-162A2. CC 95-162A2 does not cover a weighing system with a capacity of 385,000 lb.

Cardinal has argued that the summed weight indication for the three platforms with separate weight indications is “nothing more than a mathematical summation.” Someone else has argued that the weight indications for the individual (axle-load) scales are the commercial weight indications and the digitally summed weight indication is only a calculator function and not a commercial weight indication. However, it is a long-standing policy that Handbook 44 and NTEP criteria apply first indication(s) of the final values that are the basis of commercial transactions. The DES checklist paragraph 34.3.4. states:

“Sum only indication. The summed display shall be evaluated as an individual scale and must meet appropriate requirements. The indicator may provide a display for each load-receiving element, but the only display that will be considered "legal for trade" will be the summed display. In this case, the total number of divisions for the system shall not exceed 10 000 for Class III and IIIL.”

If the summed weight indication would be considered to be noncommercial (which it shouldn't), then the weight display should be marked “Not legal for trade or for use in law enforcement applications” to prevent the inappropriate use of noncommercial weight indications in law enforcement or commercial applications.

W&M officials must decide, “Is the summed weight display for vehicle scales with axle-load weight indications (a) part of the scale and must comply with Handbook 44 requirements or (b) is it ‘nothing more than a mathematical summation’ and does not have to comply with Handbook 44 requirements?” Correspondingly, are the unit price and total price indications on a retail fuel dispenser part of the dispenser and have to comply with Handbook 44 or are they just calculator functions that don't have to comply with Handbook 44? Are the unit price and total price indications on price computing scales part of the scales or just calculator functions that don't have to comply with Handbook 44?

I strongly urge the members of the S&T Committee to withdraw or oppose the SMA proposal. If the S&T Committee supports the SMA proposal and sends it forward for a vote, then I urge weights and measures officials to vote against the SMA proposal.