

that total and could translate into significant unnecessary costs to the shipper.

Cat re-calibrates its scale every 90 days or four times per year. Cat states that typically a State will check calibration and reseal the scale once per year. However, Cat's scale is subject to a random check by the State at any time.

Important to the certified weighing process, Cat believes, is the necessity of the scale to be constructed on a level plane with a 10-foot level approach at each end of the scale. If the scale is not absolutely level, the potential for error exists and is multiplied the more out of level the condition is. Cat asserts it is very difficult to achieve a level surface on many streets or driveways.

Cat states the remote sensor processor on an on-board scale converts the pressure readings at the axle group's air spring to a number and updates the scale every 4.8 seconds. By contrast, on its scale unit, the scale indicator reads data from each load cell 16 times per second, or 76 times more often.

In addition, Cat states Air Weigh's on-board scale systems are not approved by the National Type Evaluation Program of the NIST and are totally unregulated by any standards organization. Cat states it is concerned with shipper protection and customer satisfaction and guarantees its weights to be accurate. If a driver weighs legal on its scale and then receives an overweight citation, Cat states it will either reimburse the driver or trucking company for the amount of the fine, or it will appear in court with the driver as an expert witness. Cat also keeps copies of all of its scale tickets for seven years as required by law. This gives the shipper the opportunity to request a copy of the original ticket if he/she suspects fraud. In the case of its weights being used for billing purposes, Cat's guarantee still applies to make sure that drivers get paid for what they've hauled—no more, no less.

Cat does not think it is in the best interest of the shipper for FMCSA to approve on-board scales for the moving and storage industry because of the potential for error and the lack of a governing body to check the accuracy of the scale system. These factors could equate to shippers incurring additional unnecessary expenses in connection with their household moves.

Weighing Consultants, Inc., (WCI) believes that on-board weighing systems for trucks and trailers are available that meet the tolerance requirements for commercial application, which are 0.1 percent of the applied (net) load. WCI attached to its comments the National Type Evaluation Program of the NIST Certificate of Conformance 99-091

issued to NORAC Systems International for an on-board weighing system. WCI stated the request by Air-Weigh for FMCSA to accept Air-Weigh's technology was based on data accurate at best to 1.0 percent of applied load. WCI recommends rejecting it based on product already available that meets commercial requirements.

A WCI representative made a household move and the net weight of the household goods was 9,540 pounds. WCI stated that this represented the contents of a four-bedroom house and was above the average net weight of a household move. On a certified platform scale the tolerance allowed on this 9,540 pounds would be plus or minus 20 pounds. (WCI refers to Table 6 Handbook 44 Class III scale). The 200–300 pound weight differential stated by Air-Weigh is 10 to 15 times greater. WCI stated, "If in fact the differential of the Air-Weigh system is 200–300 pounds per axle group, the differential from a certified scale would be 20 to 30 times greater than the presently allowable tolerance. Handbook 44 also states the allowable tolerance for Class III scales, allowed for use by law enforcement only, at a maximum of 5 divisions which would be 100 pounds on an axle scale. The Air-Weigh product accuracy is stated as 2 to 3 times the generous Class III tolerance."

WCI believes FMCSA should continue the policy of requiring all weights to be determined on scales certified by a State's Weights and Measures Department. This policy, it believes, will continue to ensure equity in the marketplace and leave the statutory authority for weights and measures with the states. WCI asserts that the National Conference on Weights and Measures and NIST Office of Weights and Measures have always encouraged the development of new technology and evaluate many new weighing device types each year under the National Type Evaluation Program. WCI believes Air-Weigh should be encouraged to submit its product to the National Type Evaluation Program for evaluation as its competitor NORAC System International did.

The Sisson Scale and Equipment Company, Inc., supports the current regulation requiring the use of certified scales for independent shippers by the moving and storage industry.

The Deskin Scale Company, Inc. states that the regulatory guide for its industry has been Handbook 44 since 1949. The NIST has a statutory responsibility for "cooperation with States in securing uniformity of weights and measures laws and methods of inspection," Deskins states.

The only on-board weighing systems that Deskin was aware of that are actually accepted for commercial use are fork lift scales and lifting devices for trash haulers, which use load cells connected to the forks for measuring and do not in any way derive weight information from the pressure of hydraulics or air. Deskin stated its experience has been that "those who do rely on hydraulics or air pressure do not repeat to any degree of accuracy which is demanded by H-44 and therefore in the interest of the shipper should not be considered for use." It is Deskin's opinion that the shipper's best interest will only be served by use of those devices that meet the requirements of Handbook 44.

The Action Scale & Weighing Systems, Inc., states Toledo, Ohio is a "hub" for truck traffic coming from the North, South, East, and West, including Michigan "train trucks" and grain vehicles from Canada. It is Action's opinion that "on-board weighing would not be in the best interest of the public, as the fox would virtually be guarding the hen house. The only way to insure accurate weights is on a static scale operated by a third party."

The California, Colorado, Idaho, Michigan, New Hampshire, Oregon, and Pennsylvania Departments of Agriculture strongly support the use of certified scales for all aspects of commerce done by weight. They support the retention of the regulation requiring the moving and storage industry to use certified scales when conducting commerce where cost is determined by weight. The Pennsylvania Department of Agriculture believes the use of on-board non-certified scales will be an invitation for unscrupulous operators to defraud shippers, based on its experience discovering and prosecuting moving and storage companies for falsifying weighmaster certificates by "bumping." "Bumping" is any method where additional charges to the customer are claimed by the moving and storage company by adding additional weight to the load or by adding weight to the scale and then weighing the load.

The State of Idaho Department of Agriculture, Bureau of Weights & Measures, does not dictate what type of scales the moving and storage industry uses, as long as they are commercial type scales, and are therefore capable of being certified. It believes there are a myriad of devices made today that fall short of the requirements for commercial use, but are manufactured for estimation, internal accounting, sorting, or other non-commercial applications. The Idaho Department of