

## LTR788™ Scale Designed to Identify Overrated Tires in Dual-Tire Setups

Although exceeding the weight capacity of an individual tire is an out-of-service violation in the United States, these safety regulations have been essentially unenforceable due to the absence of a scale capable of measuring individual tire loads within dual tire configurations. Tire loading and tire conditions impact braking distance, and tire failure can lead to accidents and debris on roads. With this in mind, Intercomp was approached by the North Carolina State Highway Patrol (NCSHP) with a request to design a scale for direct measurement of individual tire loading within dual-tire configurations.

**“We wanted this capability to help us with enforcement, but I think it’s going to be a game changer for the industry in terms of vehicle efficiency and tire life.” – Kendell Jackson, North Carolina State Highway Patrol**

Despite the fact that tire failures within dual-tire setups have historically occurred more frequently on inner tires than outer tires, individual tires in a dual-wheel configuration were assumed to carry near equivalent loads because there was no scale which could directly measure individual tire weights. The result has been that private industry may be driving inefficient and unsafe vehicles, damaging public infrastructure and their own tires. Through the working partnership with NCSHP, the [LTR788™ Dual Wheel Load Scale](#) was created for direct measurement of individual tire loading within dual-tire configurations. This scale enables vehicle inspectors to identify overrated tires with safety, efficiency, and, most importantly, accuracy.

The LTR788™ Dual Wheel Load Scale features a long-lasting machined aluminum frame which reduces the overall weight to just 39 lb, making these scales easier to move for rapid roadside setup while the platform height of just 0.86" (22 mm) is convenient for vehicle approach and positioning. The LTR788™ is battery operated and features a solar panel which enables the batteries to maintain the charge and minimizes the need for manually charging.

Overrated tires are not only a major safety concern, they can also cause a cascade of costly equipment failures. When an overloaded tire blows, the weight it was carrying is transferred to the remaining tires, causing these tires to carry more load than their ratings allow and leading to further damage down the line. In addition, tire loading and tire conditions affect fuel and braking efficiency, making individual tire weights a critical piece of information that would be useful for private industry as well as state enforcement agencies. For example, preliminary studies using The LTR788™ scale indicate inside tires bear significantly more weight than the outside tires if the PSIs are equal, suggesting that adjustments to the tire air pressures might better equalize the weight load distribution.

With the LTR788™ Dual Wheel Load scale, it is now possible for vehicle inspectors to identify unequal weight distribution within a dual wheel with one portable digital scale. The information provided by the LTR788™ scale will enable government agencies to set and enforce safety standards and may lead to new efficiency standards within private industries to regulate and adjust weights on each tire.

**The LTR788™ Dual Wheel Load Scale is currently the only tool available to enforce [FMCSA Regulation 393.75](#). MCSAP Federal Funds can be used to purchase this tire rating inspection scale.**



Individual tires in dual-wheel configurations were assumed to carry near equivalent loads because the default procedure for measurement was weighing both tires together and dividing by two.



The LTR788™ Dual Wheel Load Scale features a platform height of just 0.86" (22 mm) weighs only 39 lb.



The LTR788™ Dual Wheel Load Scale has a split weighing platform for direct measurement of individual tire loading within dual-tire configurations.