



Matthew Ritcey:
Rigid enforcement of
weight laws was eating
into the company's
profits. TruckWeight's
Smart Scale is helping
Ritcey run legal.

RITCEY & SONS

TruckWeight helps log hauler roll out of the woods and into compliance

Matthew Ritcey has been hauling stud wood out of the bush in southwestern Nova Scotia for the better part of a decade. So when Ritcey slips into the seat of his loading machine, he has a pretty good idea how much timber he can pile on seven-axle tractor-trailer unit

But nowadays, the cost of trucking is so high and enforcement so strict, gut feel or air gauges aren't good enough. "If we're overweight, the fine can eat up our profit," says Ritcey, who operates Ritcey & Sons, a family-run log truck operation in Bridgewater, N.S. "Now, with our weight tolerance gone, there's extra pressure to run legal."

Nova Scotia allowed a 500-kilogram (1,100 pounds) tolerance per axle, the only jurisdiction in North America with a tolerance written into regulation. That was then and this is now. Today, tolerances are left to the discretion of enforcement officers.

On a seven-axle vehicle, that's a loss of 3,500 kg, or 7,700 pounds. "If you're used to loading logs to the tolerance all these years," Ritcey says, "and you don't have a way to verify your weight when you leave the bush, you're risking big fines and safety infractions."

Ritcey deployed a wireless onboard scale called Smart Scale, an inexpensive, accurate onboard scale for vehicles with air suspensions. Made

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BENEFITS

- **Low-powered radio signals transmit weight information to a handheld reader upto 500 feet away**

- **Wireless feature means drivers can take a measurement in the truck cab, the loading area, or wherever it's convenient**

- **Accurate to within 0.3% -1% on air-suspensions, and 1-2% on mechanical suspensions of actual gross vehicle weight**

- **Reduce overweight violations and time spent redistributing loads**

- **Accurate to – 40 degrees.**

- **Eliminate expense and downtime associated with a running to scale.**

- **Reliable product and service since 2005.**

by Smart Scale Technologies Inc., it is wireless onboard scale for air and mechanical suspensions trucks, tractors, and trailers.

The payback was immediate. Ritcey averaged six overweight fines a year. Fines can range from \$300 to \$5000 and higher each, depending the State or Province. Ritcey hasn't had one since Smart Scale was installed.

"The wireless scale not only helps us maximize our legal payload, we're more efficient than anyone else because we can easily fine-tune the load distribution," says Ritcey, who uses his Smart Scale handheld unit to check his axle weights from the seat of his loader.

While other guys are missing around trying to connect using Blue tooth, eyeballing and repositioning logs or sliders, Ritcey is strapping down and getting ready to go.

Smart Scale includes a sensor with an integrated antenna using robust LoRa technology, DOT fittings for the vehicle's air line, and a handheld receiver. The sensor measures temperature and pressure changes in the air suspension and relays the data to the handheld receiver using a low-powered radio transmitter. A small computer in the receiver interprets the information and provides an axle weight and gross vehicle weight measurement that's accurate to within 150 pounds per axel group. It produces readings once every 2 seconds. The sensor delivers a wireless range of 500 feet line-of-sight.

Ritcey installed and calibrated the scale himself in less than an hour, with no special skills or tools. "Other scales require you to run wires to a readout in the cab," he says. "It's a hassle."

Wires, cables, and electrical connections can be maintenance headaches when they're exposed to rain, snow, ice, mud, and debris, he says. Smart Scale's waterproof, weatherproof, shock-resistant, and non-corrosive housing requires no regular maintenance. The sensors are accurate in temperatures ranging from -40 F to 158 F.

Onboard scales are gaining in popularity for two reasons, says Peter Panagapko, president of Smart Scale (TruckWeight). "To protect their infrastructure, states and provinces are supplementing roadside



"The wireless scale not only helps us maximize payload, we're more efficient in the loading area because we can fine-tune weight distribution from the loading machine," says Ritcey.

scale houses with portable scales they can put anywhere, even outside the gates of mills, dumps, and quarries, where truck operators probably don't have access to an on-site scale," he explains. "The second reason is the cost and liability of overloads especially in markets like forest products, refuse, steel, agriculture, asphalt and aggregates, containerized freight, and liquid and dry bulk products."

Onboard scales have been available for many years, but few truck owners want the complexity and downtime associated with installation.

"That's why we're wireless using cell phone bandwidth instead of flimsy Bluetooth and WiFi connections," Panagapko says. "The fast, simple, do-it-yourself installation lowers the cost of ownership and speeds up the return on investment."

For Ritcey, the onboard scale has eliminated the need for check-weighing and the time-consuming, sometimes dangerous work of repositioning logs.

"I know I'm legal because I can monitor my weight from the cab while I travel," he says. "When I go across the government scale now, I'm carrying the most payload that's legally allowed. I'm as productive as I can be." ■