



PRO FILES

OILFIELD SERVICES, ON/OFF-HIGHWAY

Without a scale on site, Rusch needed a reliable, consistent way to maximize payload, reduce stress on equipment, and minimize the risk of non-compliance. It spec'd TruckWeight's Smart Scale, the only wireless scale for commercial trucks and trailers.



RUSCH INC.

TruckWeight helps oilfield services company hit their payload targets

In the mountains of Western Alberta, drilling crews probe the rock thousands of feet underground in their search for oil. Bob Criss, however, is more interested in what's happening on the surface.

Criss is an area manager for Rusch Inc., a company that hauls fluids used to prime and maintain the wellheads that have made this one of North America's booming regional economies. Rusch hauls potassium chloride (KCl) solution, methanol, frac oil, crude oil, and other fluids using a fleet of four tank-truck and pup-trailer combinations. When the cargo is offloaded and used up by the drilling crews, the effluent is pumped back into the tanks and hauled away for disposal. The fluid waste is an imprecise mixture of brackish water and oils, which poses a real challenge.

"Our licensed gross combination weight is 51,300 kg. We want to maximize our payload, but there's no way to reliably weigh our vehicles when we load in the bush," says Criss, who manages Rusch's operation in Grande Cache, 450 kilometers west of Edmonton. The nearest certified scale is a two-hour drive from Grande Cache. Dial-type air gauges aren't precise or reliable enough.

"We needed an accurate way to manage our weight in the field because the consequences of running overloaded aren't good," Criss says. Enforcement officers with the Alberta Ministry of Infrastructure and Transportation are active with portable scales.

In Alberta, the cost of an overweight fine can far exceed the dollar-value on the ticket. The province monitors the compliance of all 21,000

KEY BENEFITS

- Consistently reach maximum payload
- Load quickly and with confidence
- Low-powered radio signals are intrinsically safe
- Drivers can take a measurement in the truck cab, the loading area, or wherever it's convenient—up to 500 feet away
- Accurate to within 0.3% of actual gross vehicle weight
- Reduce overweight violations and time spent redistributing loads
- Eliminate expense and downtime associated with a hardwired scale installation
- 2-year warranty



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commercial truck and bus operators based there. A history of violations can trigger an audit of a company's safety records and operating practices, a time-consuming and exhaustive process.

Running overweight also stresses axles, suspensions, wheel-end components, tires, and brakes. "Being hauled up a hill or operating on soft, muddy ground is hard on the vehicles," says maintenance manager Ken Marks. "We're a small fleet with specialized equipment, and we can't afford to have a unit go down unexpectedly." Sticking to the rated weight promotes uptime.

So last year the company installed Smart Scale, an accurate, wireless onboard scale for trucks, tractors, and trailers with air suspensions. Made by TruckWeight Inc., Smart Scale includes a sensor with an integrated antenna, 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. It produces readings once per minute, and every three seconds when the sensors detect the truck being loaded. The wireless receiver has a range of up to 500 feet.

Marks says the Smart Scale itself is virtually maintenance free because there are no electrical wires, cables, or connections. The sensors are accurate in temperature extremes ranging from -40 F to 158 F and use common AA batteries. Its housing is waterproof, weatherproof, shock-resistant, and non-corrosive.

"Being wireless is important. The ice, mud,

snow, and salt are hard on electrical connections," he explains. "We investigated a lot of onboard scales. The more connections they had, the less confidence we were in their ability to stand up to the conditions here."

A Rusch mechanic installed the scale himself in less than an hour. The simple, do-it-yourself installation lowers the cost of ownership and speeds up the return on investment, says TruckWeight president Peter Panagapko. "The cost to equip a tractor and trailer with a Smart Scale is about half the cost of a hardwired scale when you factor in installation and downtime."

Another key feature: Smart Scale is intrinsically safe. Its power output is not high enough to ignite gasses in the atmosphere near the wellhead. Electronics that are not intrinsically safe are illegal to use within 75 meters of a wellhead.

Criss says accurate weights are important to Rusch's customers. "The disposal companies pay our customers according to how much waste fluid we offload," Criss says. "Until we installed the Smart Scale, we could only estimate how much payload we were carrying. Now, we scale it off and can provide an accurate measurement to our customers. They really appreciate that."

Rusch plans to outfit its five vacuum trucks and tractor-trailer combinations with the TruckWeight scale. "We believe the Smart Scale can have a positive effect on every part of our operation," Criss says. "It shows our drivers, our customers, and law enforcement officers that we're serious about managing our payload, compliance and reducing wear and tear on the equipment. To us, that translates to more uptime and productivity." ?