

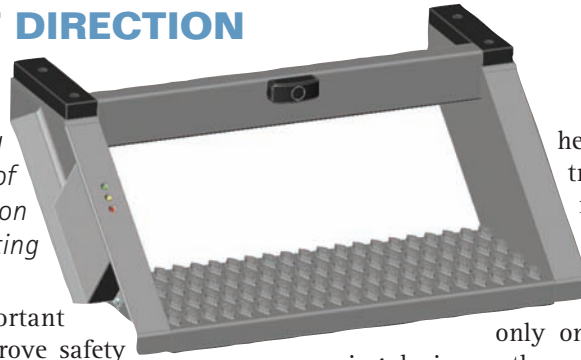
Spotlight on Best Practices

A STEP IN THE RIGHT DIRECTION

How do you balance efficiency with safety? That was the dilemma facing the City of Oshawa concerning the use of its mobile compacting equipment on garbage trucks and refuse collecting vehicles.

“Safety is always our most important concern but sometimes trying to improve safety can have some unintended effects,” says Brian Elliott, the city’s manager of fleet maintenance.

The problem facing the city’s public works staff was that Ministry of Labour’s guidelines for mobile compacting equipment called for a presence-sensitive device to interrupt the packing cycle when the operator stepped on the loading platform but the options for meeting the MOL guidelines seemed less than ideal.



“We use the platform for loading heavy bags and containers onto the trucks. Without the platform we might actually increase the risk of injury to the operator and we would certainly decrease productivity,” explains Elliott. “But there was

only one acceptable mechanical presence-sensing device on the market and we weren’t convinced that it was reliable. Get rid of the platforms or use a device that may not be reliable - not a choice we wanted to make.”

As is often the case, innovation comes from the synthesis of ideas, taking one concept and using it in a novel way to solve a different type of problem. Oshawa had installed some ultrasonic object detection devices to warn drivers of objects hidden behind their vehicles. It occurred to Brian that if the sensing pattern and range could be shortened and narrowed the same principle could be used to detect objects on the compactor platform. If it worked, the presence-sensing device would meet MOL requirements and be much more reliable than the mechanical device

Brian Elliott contacted Marlex Engineering, an Ancaster Ontario research company specializing in the research, design and development of new electronic technology, which had developed the ultrasonic object detection device on the Oshawa vehicles.

“I explained to Uwe Schaible, Marlex’s president and one of its engineers, what we were hoping to do and after a few tweaks and changes from the original prototype, he had a winner,” recalls Brian.

Using its own patented designs for ultrasonic presence-detection, Marlex developed the PSS-36 Presence Sensing Step. When the step detects an object on the platform (most importantly, the operator’s leg), it trips a relay which immediately halts the forward motion of the compactor’s hydraulic ram. The relay cannot be reset until the object detected by the step has been removed.

The Ministry of Labour approved the presence-sensing step and Oshawa has now installed them on its mobile compacting equipment.

“Using this device has allowed us to continue to deliver our service efficiently and safely,” says Elliott. “And since the device sells for less than \$2,000 our retrofit costs were relatively modest - more than worthwhile in light of our ability to reduce injury and WSB claims.”

A number of other Ontario municipalities are now installing the device on their mobile compacting equipment as well. **M**

