REDUCING COSTS BY INVESTING IN A SAFETY TECHNOLOGY SYSTEM

When considering the costs associated with running a worksite, companies are constantly trying to figure out efficiencies that lead to increased productivity and reduction of costs. When every dollar counts it is imperative that these decisions are constantly evaluated to ensure the profitability of each individual project. The raw costs of goods and labor associated with the project, and managing an efficient supply chain are typically the highest priority when managing a cost effective project. What is sometime overlooked are the potential cost reductions associated with investing in safety technology.

Much like an insurance policy, it takes something negative to happen before cost reductions can be measured; the potential cost savings that can be attributed to an investment in safety technology are only measurable when assessing the negative impact that a worksite accident might have on productivity and a company's bottom line—vehicle downtime, potential site shutdown, legal ramifications, etc.

When making an investment in a piece of machinery, insuring the equipment for damage or loss is not an option, but a requirement. However, in most cases the addition of safety technologies is viewed as an option—despite the inevitability of an accident in the lifecycle of the vehicle.

WHAT ARE YOUR OPTIONS?

As safety technology becomes more readily available you will find you have a variety of options. We are seeing the use of camera/monitors becoming more and more prevalent—in some cases standard—in many heavy duty industries. While this is a step in the right direction, a camera/monitor system is only part of the safety equation.

A camera/monitor system requires the operator to be looking at the monitor to identify a potential hazard. And as we know, when working in a busy worksite, it is not a realistic expectation that the operator be focused on their in-cab monitor at all times. Another limitation of camera/monitor systems is that in many, if not most cases, worksites are dirty places. It only takes a small amount of dirt, mud or dust to render the visual capabilities of the system useless. If the camera/monitor system is not supported by an active safety system, accidents will continue to occur and worksite costs will continue to rise.

WHAT MAKES A SAFETY SYSTEM ACTIVE?

An active safety system will alert the operator of an obstruction regardless of where there attention is directed. There are a number of technologies available that can detect obstructions including laser, ultrasonic radar, Doppler radar and pulsed radar.

For the purpose of automotive uses, both laser and ultrasonic radar has become commonplace. These are effective in passenger vehicles, but have serious limitations in heavy duty vehicle industries. Environmental factors such as dirt, mud, dust, rain, snow or ice can all render the effectiveness of the systems useless.

Relatively unchanged over the past 75 years Doppler radar has practical uses in a number of applications, however has a couple of major drawbacks for heavy duty vehicle industries. Independent testing has found that with current available products, the defined detection zone can be inconsistent, which means that the radar is only picking up objects accurately part of the time, negating the radar's effectiveness. Additionally, Doppler radar only picks up objects when movement is involved—a major flaw considering that if there is a stationary object or person behind a vehicle, it will only pick up that object or person after the vehicle is moving—unfortunately, by the time the object is detected, a collision may have already occurred.

Pulsed radar, which has been developed and refined over the past 15-20 years, overcomes all of the above issues. Pulsed radar technology has the ability to pick up both moving and stationary objects, which overcomes the potential danger associated with not seeing stationary objects or people; the detection range can be manipulated so only objects in the operator's blind zone are being detected; and there are products available that are impervious to environmental factors (dirt, mud, rain, snow etc…) and are hardened for the specific purpose of working on heavy duty equipment. For use in heavy duty equipment industries, pulsed radar technology is the best available option for worksite object detection.

The adoption of the best possible active safety system will undoubtedly pay off over the lifecycle of the vehicle. A small investment considering the overall costs associated with purchasing a vehicle, and the avoidance of potential costs associated with vehicle accidents should make the decision to invest in a heavy duty safety system standard for your company. It is worth noting that no matter what system your company decides to invest in, no value can be placed on the importance of operator education. This is the key to ensuring the safest, most efficient and cost effective worksite possible.

PRECO Electronics

After assessing a number of technologies that would enhance the safety of their wheel loaders, KCMA Corporation has teamed up with PRECO Electronics, who designs, engineers and manufactures a line of safety radar products under the PreView Radar Systems brand for their Kawasaki-KCM wheel loader line. PRECO has developed a patented radar designed specifically for heavy duty vehicle industries, and is leading the industry in advances in object detection technology. The collaboration marks a dedication to increasing the safety standard for heavy duty vehicle industries.

PREVIEW RADAR DETECTION ZONE

The PreView sensor sends a constant pulse to "look" for objects in the detection zone. When an object is detected, a warning tone will sound in the cab along with visual indicators overlaid on the vehicle monitor to give the driver the notification they need to avoid an accident.