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Feature Article

The Need for Speed

Careful consideration must be given to fork truck drivers' productivity-based incentives.

by Chris Webre



Palms sweating, smelling burnt rubber, feel the power, getting hot, c'mon c'mon, let's go, sweating more, yellow lights--feel the rush, pedal to the metal, ZOOOOOM. Does this sound like your fork truck driver? While this may get a chuckle, speeding fork trucks and dock safety do not go hand in hand.

Where did this need for speed and the ability to achieve it come from? It came from us. Warehouses are not only being built

wider but also taller, providing greater storage area per surface

square foot. We demanded trucks with more power so that we could lift more and faster, become more efficient. The equipment manufacturers listened. The result is trucks with larger engines, greater power, and yes, by the way, lots of ZOOM!

Who's Running the Show?

Many companies provide incentives to operators based upon product moved--never mind the amount of product and fork truck damage. One facility installed a transmission shift inhibitor to prevent fork truck damage on a truck operated by the "most" productive operator. The reason this was put on his truck was because he was tearing up transmissions, ring gears, tires, and floors and damaging freight.

No wonder--if you watched him operate, he never used the brakes. On paper he may have been the most productive operator, but after you take out downtime and the cost of repairs, is he really the most productive? If we supply them with fast trucks and give them productivity incentives, don't expect them to go slow. Careful consideration must be given to productivity-based incentives.

Jake Jacobs, service manager of Arnold Machinery's Flagstaff, Ariz., location, commented on the relationship between speed and safety. He said a transmission shift inhibitor for fork trucks with electric shift transmissions was helpful. "We had numerous problems with broken axles, ring and pinion, and clutch pack failures," Jacobs said. "The (inhibitors) helped a lot, but speed control devices

would be even more beneficial because we are convinced most of the product damage, overheating problems, and mechanical problems are directly related to speed. In loading areas, all of these mentioned problems are multiplied because of all the directional changes, stopping, and starting. Regulating the speed and having it variable for different applications would be a huge help for accidents and product damage in dock areas."

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We give operators a vehicle that can achieve high travel speeds and have one person telling them there is a speed limit while everyone else shouts "just-in-time" inventory, which is usually just not in time. Next, we introduce RFID. Now, operators don't even need to stop for a second to account for what's on their forks. Go, go, go!

All of us have heard the facts. In the United States alone on an annual basis, we average close to 95,000 accidents and 100 deaths from fork truck-related accidents. These accidents ranged from trucks tipping over to hitting pedestrians, falling off docks, hitting power wires, etc. A common link in many of these accidents is excessive speed.

Ways to Combat Speed

There are a number of ways to combat the speed issue:

- * *Stress this during driver training.* During fork truck operator training classes/certifications, reiterate continuously the dangers of excessive speed.
- * *Limit walking traffic.* Limit walking traffic in warehouses; where this is not feasible, paint a pedestrian walking path on the floor. Post warning signs for pedestrians and fork truck operators in these areas.
- * *Post speed limits.* While posting speed limits is a good first step, most fork trucks do not have speedometers. And even if they did, do we really want operators watching the dash-mounted speed indicator instead of what's in front of them? At the very least, this reminds them of the issue.
- * *Install overspeed lights or horns.* When a truck surpasses a set speed, a truck-mounted audible or visual indicator signals to the operator or others that they have surpassed the speed limit. In theory this is helpful, but someone must monitor which truck is speeding and when. Next, what are the consequences when caught speeding? If they are too light, what good are they? If they are too strong, they may be counterproductive. You may end up with operators driving at 4 mph when the speed limit is 6 mph, just to be sure they don't get fined. And, anyway, don't we have enough flashing lights and audibles on these trucks already?
- * *Use engine governors.* These are great at limiting travel speed but do so at the expense of production. Not the ideal solution.
- * *Re-invent production-based incentives.* Paying operators based upon product moved only encourages them to push the limit at the expense of product, facility, and fork truck damage. Too many times, that most productive operator is running the "standby" truck because his/hers is in the shop. Review incentives to take into account fork truck downtime and product and facility damage.

Speed Limiters

The most effective way to reduce vehicle speed and not negatively affect productivity is with a speed limiter. The ideal type reduces top travel speed yet allows full lift power. The top speed may come preset from a manufacturer or may be adjustable.

A note of warning: If you select one of the adjustable type systems, be careful when setting the top speed close to or below 5 mph. Top speeds set at or just below 5 mph may not allow the truck to achieve convertor lockup and may cause overheating conditions.

For operator comfort, look for systems with built-in hysteresis. In simple terms, hysteresis is the gap or lag time between actions. A speed limiter without hysteresis would surge every time the truck slowed below the set top speed. With hysteresis, the truck may fall below the top speed, yet the engine will not surge. Ideally, a gap of 1 to 1.5 mph between the top travel speed and the speed at which full power returns is ideal.

Further positioning itself as the best solution to reducing speed, speed limiters do not require operator or management action to function. Operators do not need to watch speed limits or flashing lights, nor listen to another buzzer. Their focus remains on moving products safely. Management need not post speed limit signs nor actively monitor truck speeds. They can get back to decision-making and leave patrol work alone.

While speed limiters may be the single best option to solving the speed/safety issue, combining speed limiters with some of the other actions listed above is recommended as the best overall solution to help reduce exposure. Remember that ZOOM ZOOM is nothing to chuckle about.

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