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WORK SAFE & WORK SMART

Upgrading manual equipment to electric at the tail end of the supply chain often pays for itself several times over by dramatically reducing the impact of injuries while also improving productivity.

One of the biggest challenges in distribution is the physical labor required to move goods and the impact injuries have on cost, productivity and morale. In this white paper, we will outline some of the costs of manual labor in distribution and illustrate how reducing strain with powered equipment can deliver substantial benefits.

Over the past 20 years many new strategies and technologies have provided gains in efficiency in the supply chain. However, the high cost of basic manual labor remains largely unaddressed**.**

Nowhere is this cost more pronounced than in the transport of heavy goods on delivery routes. It is here where the use of hand trucks and manual pallet jacks too often results in worker injuries, lost days of work, employee turnover, damaged product, low productivity, and other hidden costs.

While powered material handling equipment has been around for many years, such machines were traditionally too large, too heavy or too expensive to be a solution for many operators. Their size and lack of finesse made implementation at the tail end of the supply chain difficult and thus prevented widespread adoption.

Now with new power technologies such as AGM batteries, permanent magnet drive motors, and advanced control systems; a new breed of small equipment is now available to provide a solution.

Products such the **Big Joe E30 and D40** are now the same size as manual equipment options, can run all day, are easily charged from any outlet, and at a price point that is finally driving a change that has been needed to ***work safe & work smart.***

Manual pallet jacks and hand trucks place significant strain on workers spine, shoulders and back throughout a workday.

WORK SAFE

Products like Big Joe E30 and D40 electric pallet trucks have been specially designed to meet the unique needs found on route delivery trucks. These machines are the most compact and lightest available while having enough power and durability to perform on the job.

Big Joe D40 "Delivery Special" Electric Pallet Truck

When using these machines, operators have fully powered travel and lift, which eliminates the pulling, pushing, twisting, stretching and pumping required in the use of manual equipment. Companies that currently use manual equipment to deliver from lift gates or provide direct store delivery (DSD) from end gate trucks can specifically benefit from the inclusion of **electric brakes, load restraints, and unique fork configurations that support both standard and half pallet formats.**

Facts & Figures to Consider

According to the US Department of Labor, **musculoskeletal disorders (MSDs) accounted for 33 percent of all injury and illness cases in 2013.** Freight, stock, material movers and tractor-trailer truck drivers were among the occupations with the highest number of days-away-from-work cases reported in 2013. Tractor-trailer truck drivers required a median of 22 days away from work to recuperate from their injuries or illnesses, up from 19 days in 2012. The leading event or exposure for all private sector workers in 2013 was overexertion and bodily reaction, accounting for 35 percent of all cases. *(1)*

Due to delivery driver shortages noted by many large US retailers and wholesale distributors, the impact of injuries at the tail end of the supply chain has a multiplying effect. When factoring in associated soft costs such as employee turnover, retraining, and lost revenue the **true cost of MSDs and other work related injuries can often be 3 to 5 times hard expenses according to the National Safety Council.** *(2)*

One of the largest soft costs stemming from work related injuries is employee turnover. In 2012 the American Center for Progress reported that the median cost of employee turnover to an employer was equal to 21.4% of the employee's salary. *(3)*

Looking at the whole picture and with the cost of a work related injury recently averaging $38,000, the potential impact to companies that fail to curb such exposures can be enormous. *(2)*

(1) *U.S. Department of Labor Bureau of Labor Statistics December 16, 2014 Report USDL-14-2246*

(2) *National Safety Council 2005*

(3) *Center for American Progress: "*There Are Significant Business Costs to Replacing Employees By Heather Boushey and Sarah Jane Glynn November 16, 2012

WORK SMART

The rather small investment required to upgrade from manual to powered equipment at the tail end of the supply chain can yield big returns.

While each application is a bit different, the following example illustrates the type of analysis that a company might do to understand how a change may impact their bottom line.

Example: Regional Beverage Distributor *(4)*

Route Driver w/ Manual Equipment

Average salary	$50,000
Annual turnover cost 25% rate X 21.4% salary	$ 2,675
Work related injury rate 4.25% x $38,000 cost	$ 1,615
Soft costs from work injury 4x ($1,615)	$ 6,460
Productivity factor 0.00 of salary	$ 0
Annual manual equipment cost	$ 400
Total factored cost per driver	$60,750

Route Driver w/Electric Equipment

Average salary $50,000	$50,000
Annual turnover cost 13% rate X 21.4% salary	$ 1,391
Work related Injury rate 2.0% x $38,000 cost	$ 760
Soft costs from work injury 4x ($760)	$ 3,040
Productivity factor 0.10 of salary	($ 5,000)
Annual electric equipment cost	$ 2,400
Total factored cost per driver	$52,591

Factored savings per route driver $8,159 / year

Total savings across 48 drivers $391,632 / year

Required revenue to offset costs related to the use of manual equipment at a 10% margin?

$3,916,320.00

(4) Example based on customer research and feedback for illustration purposes only. Values do not originate from a specific user experience.

Calculate Your Potential ROI

Employee w/Manual Equipment

Average salary	$_____
Annual turnover cost ___% rate X 21.4% salary	$_____
Work related injury rate ___% x $38,000 cost	$_____
Soft costs from work injury 4x $ _____	$_____
Productivity factor 0.00 of salary	$_____
Annual manual equipment cost	$_____
Total factored cost per driver	$_____

Employee w/Electric Equipment

Average salary	$_____
Annual turnover cost ___% rate X 21.4% salary	$_____
Work related injury rate ___% x $38,000 cost	$_____
Soft costs from work injury 4x $ _____	$_____
Productivity factor ____of salary	$_____
Annual manual equipment cost	$_____
Total factored cost per driver	$_____

Factored savings per employee $ _____ / year

Total savings across employees $ _____ / year

Required revenue to offset costs related to the use of manual equipment?

$_____

Projecting actual reductions in injury rate and productivity is unique to each industry, company and unique operation factors. The examples and analysis format provided herein are meant for illustration and educational purposes only and no guarantee of benefit is implied by Big Lift LLC or its agents.