HAVE YOU CONSIDERED ALL YOUR LIFT TRUCK POWER OPTIONS?

Demanding materials handling applications, such as in the manufacturing, steel, and agriculture industries, have historically depended on lift trucks with internal combustion engines (ICEs), due to their consistent power delivery and high performance. However, with the expansion and advancement of of electric options like lithium-ion and thin plate pure lead (TPPL), the motive power landscape is shifting.

Lithium-ion batteries in particular are gaining traction in industrial warehouses and other heavier-duty lift truck applications. These power sources are now available on more lift truck product classes and capacities than ever before, capable of delivering the long-lasting, high performance that intensive applications require. While traditional ICE forklifts may still be the best fit for some jobs, more applications than ever are suitable candidates for these advanced electric options, which could, which could help operations overcome common challenges related to sustainability, productivity, labour efficiency, and more.

Rather than simply accepting the status quo of your lift truck power, it might be time to rethink your power options. This white paper explores four signs that it's time to make a change in your material handling operations.

MORE APPLICATIONS THAN EVER ARE SUITABLE CANDIDATES FOR ELECTRIFICATION

YOU ARE COMMITTED TO SUSTAINABILITY

Various regulations across Europe, the Middle East, and Africa are putting pressure on industries to reduce their environmental impact. Meanwhile, many businesses have their own green initiatives that seek to reduce fossil fuel emissions. From manufacturing to large-scale construction or port operations, this puts emissions. This puts emissions from industrial trucks in focus for those trying to meet sustainability targets.

For managers charged with finding ways to meet those targets, reducing emissions from ICE-powered lift trucks can provide environmental benefit related to emissions. Also, lead-acid batteries require off-gassing as part of the charging process and carry the risk of potential acid leak and corrosion. Newer power options like lithium-ion batteries, TPPL batteries, and hydrogen fuel cell and hydrogen fuel cells do not come with these characteristics, and they deliver the performance to keep business moving.

DEMANDING CONDITIONS CAN'T SLOW DOWN PRODUCTIVITY

Extreme temperatures, environments, and duty cycles can push equipment to increased, resulting in wear that can lead to a spike in equipment downtime and productivity bottlenecks. To manage this risk, operations should explore power sources that are proven to perform.

Historically, ICE lift trucks have been the tried-and-tested option for demanding outdoor applications. They offer remarkable durability and have a proven record of withstanding the hottest, coldest, and dirtiest environments. These trucks power through without depending on the electrical grid – an especially important consideration if local utilities cannot provide sufficient electricity to keep electric fleets moving.

But electric trucks can handle tough temperatures and outdoor operation too. Lithium-ion batteries, for example, help lift trucks run reliably and consistently over multiple shifts. So, lift truck drivers are able to spend more time being productive – not on complex battery charging and changing processes.

YOU STRUGGLE TO FIND AND RETAIN LABOUR

Lift truck operators are in short supply. With competition fierce for a limited talent pool, good employees are not only difficult to find, but hard to hang on to, with high employee turnover in manufacturing, warehousing and other logistics sectors. To keep lift truck operators engaged and performing at their best, ergonomics, and comfort are key. Electric-powered lift trucks produce less noise than their IC counterparts and transmit fewer vibrations to the operator, offering a smoother ride. They also do not emit harmful exhaust, improving air quality and creating a cleaner work environment.

Difficulty finding and retaining labour can sometimes force companies to hire employees who have limited experience operating forklifts. When working with traditional lead-acid batteries and LPG fuel bottles, lack of experience can potentially increase safety hazards with regard to battery handling and charging or gas bottle changing. In addition, unmotivated or fledgling operators may have poor charging habits, leading to shorter battery life over time for certain battery types.

With less-experienced operators, it's best to have forklifts that are intuitive to operate and simple to maintain. Newer power sources, like lithium-ion batteries, typically require less maintenance and less charging time in a shift, so you can make the best use of the operators you have. They may also benefit from operator assist technologies that can help support adherence to safety best practices, but are only available on electric lift trucks.

YOU NEED TO CONTROL COSTS

Eighty percent of of the total cost of a forklift comes *after* the initial capital investment, so it's important to understand how each power source influences lift truck maintenance requirements and energy spend. All forklifts require some level of planned and unplanned maintenance, whether on a weekly, monthly, or quarterly basis.

ICE power means a whole host of powertrain items that require periodic service or replacement, including fluid, filters, spark plugs, belts, or other items prone to wear.

Electric powertrains offer greater simplicity and fewer service items, which can drive savings through reduced maintenance and parts expenses. Lead acid batteries do require some maintenance and additional processes to ensure they perform to their potential, including equalising, watering, and off-gassing, but lithium-ion batteries offer a simpler approach. Lithium-ion batteries are maintenance free and can be plugged in without any special pre- or post-charging steps, which means lift truck operators are able to spend more time being productive. Some operations can also achieve significant energy cost savings by switching from LPG or diesel to electric, particularly with the charging efficiency and regenerative braking capability of lithium-ion.

TO KEEP LIFT TRUCK OPERATORS ENGAGED AND PERFORMING AT THEIR BEST, **ERGONOMICS AND COMFORT ARE KEY.**

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POWERING POSSIBILITIES FOR ELECTRIFICATION

Lithium-ion batteries started small, powering pallet trucks moving loads of consumer goods in and out of trailers and retail stores. These batteries are helping change the way operators work. The Hyster PC1.5 compact pallet truck, for example, is comparable to using a hand pallet truck, but with an onboard lithium-ion battery, it can work at three times the intensity.

And now, lithium-ion powered forklifts, like the Hyster® J2.5-3.0XNL, may offer some tough industry applications benefits over internal combustion engine (ICE) and lead-acid battery powered models.

The Hyster J2.5-3.0XNL is powered by an integrated high-voltage lithium-ion battery that can provide up to 8 hours of continuous operation in demanding applications and can be fully charged from flat within two hours. Moreover, the battery can be opportunity charged during breaks or downtime, which can extend the operating range and eliminate the need for battery exchange.

Four-wheel Hyster J1.5-3.5UTL and three-wheel J1.6-2.0UTLL lithium-ion counterbalance forklifts also make electrification accessible, with the dependability and strength expected from the Hyster brand, aftermarket support, warranty, and fast parts supply, all at a competitive price.

And even lift trucks carrying heavy loads in harsh conditions can benefit from lithium-ion batteries. For demanding applications, counterbalance lift trucks with integrated lithium-ion power are available from the factory at higher capacities, such as the Hyster J7.0-9.0XNL for lifts up to 9-tonnes. An even heavier duty option is the J10-18XD lift truck, with capacities up to 18-tonnes and the performance that operations previously expected only from an ICE-powered truck.

But to make the best choice when evaluating lift truck power, operations need access to specialised expertise across the whole range of industrial trucks and available power options. An understanding of the unique challenges of your industry is another important factor in making a recommendation that accounts for the unique characteristics of your operation. This is where Hyster and the global network of local, experienced dealers can provide support. The right fit can make fleets more efficient, help retain forklift operators, and help reach productivity targets all shift long, day after day. So, is it time to rethink your lift truck power?

HYSTER EUROPE
Centennial House, Frimley Business Park, Frimley, Surrey, GU16 7SG, England.

www.hyster.com /hyster-emea /HysterEurope /HysterEurope @HysterEurope @Hyster.Europe infoeurope@hyster.com

Visit us online at www.hyster.com or call us at +44 (0) 1276 538500.