



THREE LAYERS OF FORKLIFT SAFETY: PROMOTING OPERATING BEST PRACTICES

Is your operation doing enough to support lift truck operating best practices? The truth is, there's no single, silver bullet – forklift safety requires a comprehensive, multi-faceted approach, including training, real-time support and monitoring, and reactive evaluation after-the-fact. Not only that, but those elements must evolve over time, as technology makes a welcome impact to advance training, lift truck stability and ongoing coaching.

According to the European Agency for Safety and Health at Work (EU-OSHA), work-related illnesses and injuries cost 476 billion euros annually. Losing control of machines, tools, or transport and handling equipment is also the leading cause of both non-fatal and fatal workplace accidents, accounting for 25.7 % of the latter in the EU.

Likewise, industrial sites, including those involving lift trucks, are prone to incidents. Industrial sites account for more than three in ten of all non-fatal workplace accidents (European Commission).

In addition to the high-stakes challenge of safety, high-intensity operations must get the most production out of a limited labour pool – and it is very limited. According to an extensive study conducted by the United Nations, Europe will have 95 million fewer working-age people (between 20 and 64) in 2050 than in 2015. From finely tuned ports and terminals to industrial manufacturing facilities around the world, how are operations trying to bridge the gap?

Inexperienced operators and skeleton crews exacerbate the challenges that businesses face, but forklift safety remains essential in keeping operations moving and hitting targets on-time and on-budget. This white paper explores how lift truck operations can leverage the most comprehensive forklift safety strategy, and why this is non-negotiable for high-intensity applications.



THREE LAYERS OF FORKLIFT SAFETY PRACTICES

TAKE OPERATIONAL SAFETY TO THE NEXT LEVEL

TELEMATICS MONITORING

Enables supervisors to monitor and audit operator performance in real time for more informed training and management decisions.



FORKLIFT TRAINING

Operator training compliant with local guidelines and regulations helps support operational competence and best practice.

OPERATOR ASSISTANCE SYSTEMS

Helps reinforce best practices through automatic adjustments to equipment performance and real time alerts to inform operators of the cause of adjustments.

TRAINING: BUILD A STRONG FOUNDATION

In most regions, local health and safety regulation requires a certain standard of lift truck operator training for compliance. This typically comprises a combination of proven theory training, practical training, and training relevant to the particular workplace. In many cases, health and safety guidelines also require employers to authorise workers to operate a lift truck, which may mean additional levels of training or assessment are required.

No two operations are the same, so it is critical to strategise a training process tailored to equip your operators for the specific needs and challenges associated with your unique facility, workflows, and lift trucks.

TELEMATICS: MONITOR OPERATOR PERFORMANCE IN REAL TIME

Telematics systems can track several aspects of fleets, from equipment diagnostics and utilisation to individual operator performance. All this information can be

accessed in real-time via desktops, laptops and mobile devices to make informed fleet management decisions and assist with managing operator behavior. Tracking truck information by the specific operator provides visibility to information like travel locations and idle time. Some systems even have impact monitoring functionality that provides managers with notifications when impacts happen, with information about where the incident occurred and who was operating the truck. This data can be used to help identify high performers who deserve recognition and those who may require more training. Certain systems can also be used to apply equipment performance limitations based on operator experience and skill level. For example, new hires might have their trucks capped at slower speeds to help reduce potential risk, while more experienced operators can have controls set to allow access to higher levels of equipment performance.

Telematics tailored to operator development

- Restricts equipment access to only operators with proper certification for that truck type.
- Controls who can start equipment, through individual access cards with operator certification information encoded.
- Provides automatic notifications when operators have certifications expected to expire soon.



THREE LAYERS OF FORKLIFT SAFETY PRACTICES

OPERATOR ASSIST SYSTEMS (OAS): EQUIP OPERATORS WITH SUPPORT

Telematics is actually part of a broader category of products and technologies designed to assist lift truck operators, known as OAS. This umbrella term encompasses a variety of other solutions, from alarms to pedestrian awareness lighting like strobe or curtain lights that present reminders for those walking or working in proximity to lift trucks in operation. While telematics can help facilities monitor and reactively address operator behaviour and truck impact events at their facility, another type of OAS, integrated stability control systems, offer a more proactive approach to help minimise certain tip over risks and automatically reinforce safe operating practices.

One such solution, the optional Dynamic Stability System (DSS) from Hyster, promotes lift truck stability by applying limitations to truck performance in certain conditions, accompanied by audible and visual alerts that communicate the cause of the intervention to the operator. These automatic interventions happen in real time, helping to support stable travel and provide operators with an immediate layer of feedback that can help reinforce the proper lift truck operation established during their training. This innovative technology is made up of four sub-systems:

- **Lateral stability** reduces truck lean in turns, to help reduce the likelihood of sideways tip overs. The steer axle is designed to allow for superior travel over uneven surfaces.
- **High-lift tilt control** limits tilt speed and forward tilt range when the carriage is raised above the height threshold while carrying a load.
- **High-lift traction control** limits truck speed when handling an elevated load if the carriage is raised above the height threshold.
- **Corner control** dynamically limits speed when driving around corners, based on how tightly the truck is turning. Truck speed is limited in a manner which produces a smooth deceleration.

STABILITY CONTROL IN ACTION

Heavy loads, tough environments – safety is critical in material handling. How can systems designed to support confidence and safe operating practices keep pace? On the production floor, stability systems offer a helping hand to operators in real time, while keeping the operator in command of the truck. Picture this:

- An operator retrieves a load stored at height. When they back up and move while lowering the load, the system automatically prevents them from driving too quickly and limits forward tilt to support stability.
- As they travel between point A and B, including around corners, the system limits speed based on how tightly the truck turns, while also working to reduce truck lean.
- The operator is not left in the dark – visual indicators on the truck display and audible alerts supplement the noticeable feedback from performance reductions to let operators know the system is intervening with real-time input.

LATERAL STABILITY



CORNER CONTROL



HIGH-LIFT TRACTION CONTROL



HIGH-LIFT TILT CONTROL





THREE LAYERS OF FORKLIFT SAFETY PRACTICES

ADVANCED TECHNOLOGY FOR OPERATOR AWARENESS

In addition to stability systems, solutions for operator awareness can also help support human operators in adhering to best practice and site specific safety processes.

Many Operator Assistance Systems (OAS) for materials handling applications focus on supporting operator and pedestrian awareness. For example, lights and camera systems. Others will support operators by adjusting and controlling truck movements, including travel speed, lift speed, or reverse speed.

An example of an advanced OAS is Hyster Reaction™. Hyster Reaction proactively adjusts lift truck performance based on real-time conditions, dynamically adapting speed and fork control to maintain the combined stability of the lift truck and load.

Hyster Reaction also continuously monitors the combined centre of gravity of the lift truck and load it carries to apply carefully measured performance adjustments to avoid abrupt shifts or jerks that can upset stability, while keeping the operator in control of the lift truck.

With a combination of specialised sensors and location sensing technologies, Hyster Reaction is designed to assist with stability, collision avoidance, and adherence with location-based rules, such as speed, fork height restrictions, and exclusion zones.

However, Hyster Reaction leaves the operator in full control of the truck at all times. While OAS can be extremely valuable in supporting safety objectives, these solutions are designed for added support, and should not take the place of the correct operator training and supervision.

SAFETY IS NONNEGOTIABLE

As businesses continue to demand more from materials handling operations, safety must remain in focus. Training and trucks are both advancing to help better equip operators to perform in line with best practices. The key is a layered approach and choosing the training protocols and solutions best suited for the particular application, and its operators.

To learn more about how Hyster can help you build robust strategies to support your safety initiatives, contact a solutions expert at your local [Hyster® dealer](#) or visit [Hyster.com](#).



HYSTER EUROPE

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



www.hyster.com



[/hyster-emea](https://www.linkedin.com/company/hyster-emea)



[/HysterEurope](https://www.facebook.com/HysterEurope)



[/HysterEurope](https://www.youtube.com/channel/UCqWz8v8v8v8v8v8v8v8v8v8)



[@HysterEurope](https://twitter.com/HysterEurope)



[@HysterEurope](https://www.instagram.com/HysterEurope)




infoeurope@hyster.com

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

HYSTER-YALE UK LIMITED trading as Hyster Europe.

Registered Address: Centennial House, Building 4.5, Frimley Business Park, Frimley, Surrey GU16 7SG, United Kingdom.

Registered in England and Wales. Company Registration Number: 02636775.

© HYSTER-YALE UK LIMITED. 2024, all rights reserved. Hyster and  are trademarks of Hyster-Yale Materials Handling, Inc.

Hyster products are subject to change without notice. Trucks may be shown with optional equipment.