

S135-155FT SERIES



**STRONG PARTNERS.
TOUGH TRUCKS.™**

SIT-DOWN, COUNTERBALANCED, IC, CUSHION TIRE

S135-155FT SERIES

THE POWER TO HANDLE YOUR TOUGHEST APPLICATIONS.

The S135-155FT is more than a lift truck series. It represents a transformation in how lift trucks are designed, built and acquired. Drawing on the Hyster legacy of strength, durability and toughness, the Fortis™ concept simplifies lift truck purchases with a two-tiered system of preconfigured engine-transmission bundles. Fortis means you maximize your purchasing power by buying only the features you need for your application. Using a truck from the S135-155FT series means low cost of operations, dependability and owning a unit that's still going strong long after the day's work is done.

The S135-155FT series is configured to provide the right lift truck for your application. Our truck packages with multiple powertrain combinations to choose from ensure that your cost of operations will be lowered. Each configuration offers improved efficiency, advanced dependability and simple serviceability.





■ **DEPENDABILITY**

- Pacesetter VSM
- CANbus communications
- Combi-cooler radiator
- Hassle-free hydraulics

■ **LOW COST OF OWNERSHIP**

- Auto Deceleration System
- Industrial strength hydraulics
- Easy service access
- Guaranteed Availability Parts Program

■ **SERVICEABILITY**

- Rear-opening one-piece hood
- One-piece floor plate
- On-board diagnostics
- Oil-cooled wet disc brakes

■ **ERGONOMICS**

- Low noise level
- Infinitely adjustable steer column
- Choice of five different seats
- Controlled rollback on ramps

■ **PRODUCTIVITY**

- Enhanced fuel efficiency
- Controlled power reversals
- Superior operator control
- Complete cowl-to-counterweight access

RAISING THE STANDARD FOR LIFT TRUCKS



A. Overhead Guard (OHG)

The unique grid-style pattern improves visibility while protecting operators and strengthening the truck's structure. The front, curved OHG leg design affords greater shoulder clearance for easier operator entry and exit.

B. Hydraulic Controls

The Hyster® Fortis™ line of lift trucks offers two configurations that employ cowl mounted levers or TouchPoint mini-levers to provide you unsurpassed, low effort, tactile control of all hydraulic functions.

C. Exclusive VISTA™ Mast

High strength hot-rolled steel mast channels and flush-faced design improve capacity retention at high lifts. Compact cast steel cross members optimize visibility and rigidity.

D. Tilt Steer Column

The infinitely adjustable tilt steer column accommodates operators easily. Assisted by a gas-spring and an easy-to-reach lever, obtaining your preferred position is simple. The standard 12-inch steering wheel with integrated spinner knob reduces fatigue while providing more knee room. And it goes lock-to-lock in just 4 turns for superior efficiency, maneuverability and control.

E. Pacesetter VSM

The computer "brain" of the Fortis™ line of lift trucks manages all vehicle systems to optimize performance and significantly increase overall reliability and enhance diagnostic capabilities for maximum uptime.

F. Hassle-Free Hydraulics

Use of leak-free O-ring face seals helps maximize uptime. In-tank filter increases hydraulic fluid filtration by 60% for particles down to 10 microns, significantly extending component life and creating a cleaner overall operation.

G. Carriage

The Fortis™ S135-155FT features a robust 48" canted 6-roller hook carriage with excellent visibility and the strength to handle long forks or tough attachment applications. Six 3-inch full-face load rollers roll on the web and the flange simultaneously, eliminating the need for side thrust rollers or wear plugs.

H. Heavy Duty Drive Axle

The full floating design of the planetary drive axle lets the axle housing, not the shafts, carry the weight of the load, enhancing dependability and reliability for a longer service life.

I. Oil-Cooled Wet Disc Brakes

These standard brakes provide excellent stopping power and extremely long service life. Brakes are completely sealed from water and dirt making them ready for your harshest environments.

J. Drivetrain Mounting

The Hyster® Fortis™ line of lift trucks has a fully isolated drivetrain through the use of elastomeric mounts for the engine and transmission.

K. Removable Floor Plate

One piece, steel floor plate is easily removed to provide incredible service access. A molded rubber floor mat seals the floor area to reduce noise and vibration for a more comfortable ride.

L. Hydrostatic Steer Axle

The elastomeric-mounted Hyster designed cast ductile iron steer axle with transverse, double-acting hydraulic cylinder, tapered roller spindle support bearings and non-adjustable tie rods provide maximum durability and superior steering control for easy maneuvering and low maintenance.

M. Counterweight

The superior design permits a significant increase in airflow to assist the Fortis™ line of lift trucks to run cooler, even in extreme temperatures and environments.

N. Engine Cover

The tough engine cover is made of a durable, crack-resistant, thermoset polyester resin reinforced with glass. Hinged at the rear, it offers superior service access to the engine compartment with an opening angle of 85 degrees.

O. EZXchange™ Bracket

This optional bracket swings out from over the top of the counterweight and the gas-spring assisted fuel cylinder lowers into a reclined and locked position, providing a stable platform for quick, easy LP tank replacement.

P. Brake/Backup Lights

For superior functionality, the optional Hyster LED brake/backup lights resist vibration and offer extremely long life.

Q. Fatigue-Reducing Operator Compartment

Ergonomically designed compartment plays a big role to enhance overall productivity. Entry and exit are made easy by the optimized step height with non-slip step tread, soft touch contoured hand grip and rounded hood. Repositioned foot pedals provide improved floor space, while better engine cooling keeps operators more comfortable. Infinitely adjustable tilt steer column accommodates any size operator. A formed fiberglass liner provides increased noise suppression for a more comfortable ride.

ADVANCED DEPENDABILITY

DECREASE DOWNTIME BY UP TO 30%

Approximately 70% of industrial lift truck downtime results from problems with the powertrain, brakes, electrical system, cooling system or hydraulic system. With the S135-155FT, many of these mechanical issues become a thing of the past as design advances have reduced downtime by up to 30%.

TOUGHEST POWERTRAIN

- Pacesetter VSM industrial on-board computer monitors and protects the engine powertrain to maximize the S135-155FT series uptime.
- Transmission gears and shafts are up to 15% stronger to handle even the most demanding duty cycle.
- Electronically controlled powershift transmissions have state-of-the-art clutch packs that are stronger and larger and provide up to 3 times the life.
- Hyster® tough brakes are self-adjusting and self-energizing to provide optimal performance and lengthened service life. Standard oil-cooled wet disc brakes provide excellent stopping power and extremely long service life. Brakes are completely sealed from water and dirt, making them ready for harsh environments.

HASSLE-FREE HYDRAULICS

- Leak-free O-ring face seal fittings reduce leaks for enhanced reliability.
- A 10-micron high-performance in-tank filtration system captures 99.5% of hydraulic system debris, significantly extending component life.
- Smart placement of the control valve and hydraulic lines away from heat sources reduces operating temperature, extending the life of seals and hoses for unbeatable reliability.



EXCEPTIONAL COOLING

- Standard combi-cooler radiator provides 4-row aluminum core for additional transmission oil cooling capacity for the most demanding and intensive applications.
- Soft rubber isolator mounted radiators increase reliability and durability to significantly extend service life.
- A superior counterweight tunnel design coupled with a “pusher” type fan and enhanced shroud design improves airflow and significantly reduces the recirculation of hot air to maximize cooling capabilities.

INDUSTRIAL STRENGTH ELECTRONICS

- CANbus communications network reduces wiring complexity, providing superior dependability.
- Non-mechanical, Hall Effect sensors and switches are designed to outlast the life of the truck.
- Proven tough, Pacesetter VSM industrial on-board computer manages truck operation to maintain world-class dependability to maximize uptime.
- IP66 sealed electrical connectors keep out water and debris, so you can powerwash our trucks.
- Smart, one-way routing path for wire harnesses ensures consistent high-quality assembly while increasing durability and simplifying maintenance when needed.



LOW COST OF OWNERSHIP

WORLD-CLASS EFFICIENCY

- Auto Deceleration System extends brake life by up to 60% by automatically slowing the truck when the accelerator pedal is released. (DuraMatch™)
- Controlled power reversal feature virtually eliminates tire spin, increasing tire life by up to 50%. This feature is programmable to match the needs from delicate to more aggressive settings for maximum productivity. (DuraMatch™)
- Electronic hydraulic control valve precisely manages hydraulic pressure and flow to supply exactly the right amount of power for each function, reducing fuel consumption.
- Kubota turbo diesel engine features 500 hour service intervals, and provides advanced combustion technology that enhances fuel economy.
- Extended transmission and hydraulic fluid change intervals.

ADVANCED DEPENDABILITY

- **Toughest Powertrain:** Electronic controlled transmissions reduce shock loading; clutch packs with 3 times the life; 15% stronger gears and shafts; and Hyster oil-cooled wet disc brakes all work to provide unmatched reliability.
- **Industrial Strength Electronics:** CANbus communications, non-mechanical sensors and switches and IP66 rated sealed connections mean electrical problems are a thing of the past.
- **Industry's Best Cooling:** The S135-155FT series' superior airflow and heavy duty cooling systems keep heat in check, while providing world-class dependability in even the harshest of environments.
- **Hassle-free Hydraulics:** Leak-free O-ring face seal fittings at all high pressure connection points, superior filtration (10 micron) system and smart placement of valve and lines take the worry out of hydraulics.



SUPERIOR SERVICEABILITY

- Pacesetter VSM continuously monitors fluid levels and powertrain, reducing daily service checks and preventing major repairs.
- Unmatched service access: Rear-opening one-piece hood (opens up 85 degrees) and easy-to-remove one-piece floor plate (no tools required) provide industry's best cowl-to-counterweight service access.
- Daily checks are easily accessed and performed.
- State-of-the-art on-board diagnostics reduce repair time and minimize expensive parts swapping.
- Standard oil-cooled wet disc brakes virtually eliminate brake maintenance.

■ SUPPORTING CUSTOMERS WITH WORLD-CLASS PARTS & SERVICE

Four Parts Distribution Centers strategically located around the world provide a full range of original equipment and aftermarket parts that help maintain our customers' uptime. In fact, our Guaranteed Availability Program ensures that parts for all lift trucks within two years of age are available within 24 hours, 100% of the time.*

We also take that commitment into the field with the Hyster CERTECH® Certification training program. This technical training program provides both systems level as well as product-specific education to ensure lift trucks are repaired right the first time.

* Contact your local dealer for program details.



SUPERIOR ERGONOMICS

SUPERIOR OPERATOR COMFORT

- Low noise level at the operator's ear lessens driver fatigue, improving driver satisfaction for an overall increase in productivity.
- Isolated drivetrain minimizes the effect of powertrain vibration and road-born shocks to increase operator comfort all shift long.
- Rear drive handle mounted on overhead guard leg (optional) provides an excellent hand hold for reverse driving while giving ready access to the auxiliary horn button for use when approaching cross-aisles and pedestrian traffic areas.
- An infinitely adjustable steer column and optional full-suspension swivel seat assures the right fit for any operator.
- Easy-to-use 3-point entry design of operator compartment uses a large molded hand grip and open non-slip step with a low step height to minimize muscle/joint strain during entry/exit.
- Adjustable armrest that accompanies the optional TouchPoint e-hydraulic control moves with the seat and telescopes forward/vertical in one simple movement to provide greater flexibility in achieving a more custom position.
- A swingout bracket frees the LP tank from over the counterweight to simplify changeout.
- Optional EZXchange™ bracket also lowers the tank on its stable platform to minimize arm and back strain for even easier changeouts.
- Choice of 5 different seats enables a more customizable level of operator comfort by its enhanced design and adjustable features.



PRECISE, EFFORTLESS OPERATION

- Improved brake pedal layout and the reduced braking requirements of the Auto Deceleration System significantly reduce operator fatigue. (DuraMatch™)
- 12-inch steering wheel with spinner knob improves steering response, increasing control and efficiency while minimizing shoulder strain with only 4 turns lock-to-lock.
- Controlled rollback on ramps contributes to lower driver fatigue and significantly enhances truck and load control on ramps. (DuraMatch™)

PERFORMANCE AT-A-GLANCE

- Advanced dash display uses a non-reflective, backlit LCD screen, and 21 indicator lights provide performance at-a-glance in all lighting conditions.
- Easy-to-use on-board diagnostics through the advanced dash display provide fast and accurate troubleshooting for first-time fixes.
- Optional premium monitoring package reports air and hydraulic oil filter restrictions and low engine coolant levels.
- A heads-up display is furnished to monitor and control the diesel emissions system.
- Emissions system features a diesel particulate filter (DPF) that captures and oxidizes particulate matter (soot).



ENHANCED PRODUCTIVITY

INCREASE THROUGHPUT AND SALES VOLUME WHILE REDUCING OPERATING COSTS

Productivity means moving more of your loads in less time with less cost. The Hyster® Fortis™ series has been proven to lead the industry in productivity through performance, ergonomics (operator comfort and control), service, uptime and dependability.

PERFORMANCE CUSTOMIZED FOR YOUR APPLICATION

- S135-155FT series choice of high output engines, performance transmissions, hydraulic controls and cooling system options allows you to customize your truck to optimize the productivity in your application.
- Both engine choices provide enhanced fuel efficiency so you can get more loads moved on a single tank.
- Pacesetter VSM industrial on-board computer enables you to adjust and optimize the performance of your S135-155FT trucks.
- Patented DuraMatch™ transmission provides breakthrough features that include the Auto Deceleration System, controlled rollback on ramps, controlled power reversals to move loads more efficiently with less operator fatigue and product damage.
- With the exceptional cooling and its ability for extended draw bar pull, the S135-155FT series will continue to perform when competitors' lift trucks may fail.



ESTIMATED ANNUAL LIFT TRUCK OPERATOR COSTS

Costs Related To Fatigue	Average Annual Cost Per Lift Truck Operator
Absenteeism ¹ Turnover ² Lift Truck and Property Damage ³ Workers Compensation ⁴ Productivity/Lost Sales	\$6,862
Potential Savings Level	Average Annual SAVINGS Per Lift Truck Operator
Savings at 10% - 20%	\$686 - \$1,372

- ¹ Absentee cost based on national average as published in Facility Management safety study, 2003.
- ² Average turnover cost according to U.S. Dept. of Labor 2002, 30% of income at \$15/hour for 2,000 hours per year.
- ³ Lift Truck and Property Damage based on data from NMHG Fleet Services.
- ⁴ Workers Compensation costs are average costs for high and low fatigue environments according to 2004 Shiftwork Practices Survey.

SUPERIOR OPERATOR CONTROL

- Superior ergonomic features like more foot and leg room, 2 choices of hydraulic controls, infinitely adjustable steer column, integrated dashboard display, 12-inch steering wheel with spinner knob, Auto Deceleration System, EZXchange™ tank bracket (optional), 5 choices of seats and the rear drive handle enable your operator to maximize productivity.

SUPERIOR SERVICEABILITY

- Complete cowl-to-counterweight access, daily service checks easily located and accessed, the integral dashboard display's on-board diagnostic capabilities and reduced service requirements significantly minimize service times to maximize uptime.

INNOVATIVE TRUCKS ENGINEERED TO MEET THE MOST DEMANDING APPLICATIONS

For more than 80 years, Hyster has been conquering the world's most demanding applications. In the 1920's Hyster started as a manufacturer of lifting machines used in the rigorous logging industry of the United States' Pacific Northwest. A few years later the first fork lift trucks were invented and the Hyster® brand quickly gained its reputation for rugged quality. Hyster® lift trucks are designed to lower your cost of operations. Every truck we make – gasoline, LPG, diesel and electric – is purpose-built to excel in its application. Every truck is also backed by an unmatched network of specialists.



Dealer Network — Through our Dealer Network, we can offer the expertise of fleet managers, parts suppliers, capital procurement specialists and trainers. Hyster's carefully chosen dealers — and the people they employ — fully understand customer applications, assist in selecting the right lift truck and provide fast, reliable support after the sale.



Hyster Fleet Services — Even if you operate other brands, we can manage your maintenance and replacement plan. We can offer complete fleet analysis, fleet history summary and a cost-effective proposal for replacement and scheduled maintenance.



Parts — With genuine Hyster replacement parts and UNISOURCE™ parts for all makes of lift trucks, we are your one-stop source for lift truck parts. In fact, we offer more than 2 million part number crosses for most brands of materials handling and other in-plant mobile equipment.



Rental Products — When leasing or buying isn't a practical option, we have access to more than 14,000 units for short- and long-term rental. We'll help you maintain output in a cost-effective manner.



Hyster Capital — We can arrange solutions for special financing requirements, taking the difficulties out of buying the equipment you need. Whether you purchase or lease a new or used lift truck, Hyster Capital offers superior service and competitive rates.



Special Products Engineering Department (SPED) — Different materials require different handling. That's why we can work with you to customize your lift trucks. From strobe lights to specially made forks, SPED has the tools to help you get the job done right.



Operator Training — Proper education in operating lift trucks minimizes the risk of injuries due to accidents while increasing productivity. Hyster offers OSHA-compliant materials that support the training of qualified operators.



Service — Your local Hyster dealer offers a flexible, customized and comprehensive maintenance plan based on each lift truck's application, make, model and operation environment. Hyster service programs offer scheduled inspections and maintenance, and when you need immediate service on a fleet or single truck, your local dealer offers quick, responsive service dispatched to your location.





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