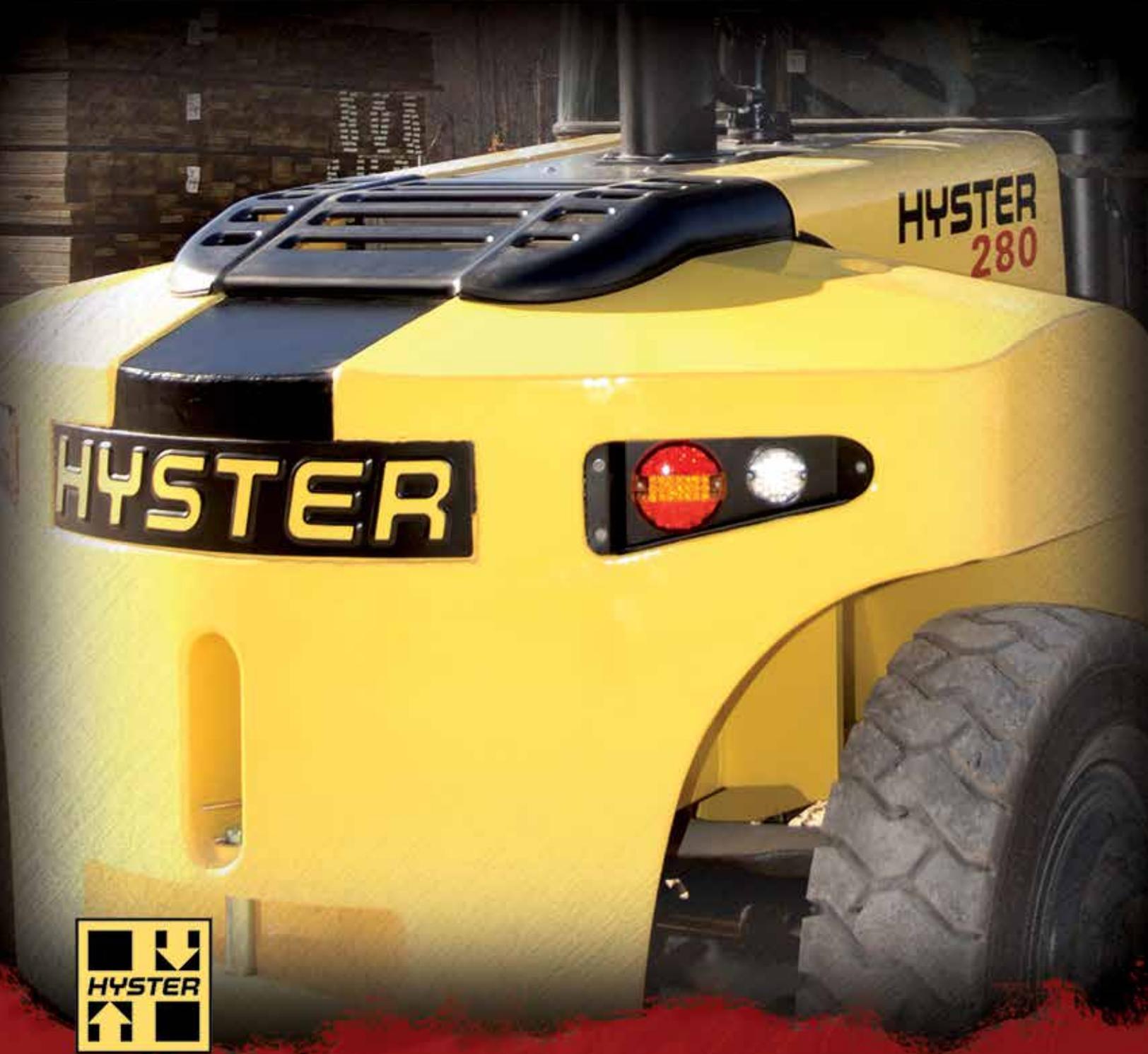


H190-360HD²SERIES



**STRONG PARTNERS.
TOUGH TRUCKS.™**

HIGH CAPACITY FORKLIFT TRUCK

H190-360HD₂ SERIES



■ Hyster Company has always produced some of the best pneumatic trucks in the 19,000-36,000 pound range. The H190-360HD₂ truck series takes the 'tried and true' features of its predecessor and makes them even better. Your customers depend more upon you than ever before. Your job has become more demanding and the H190-360HD₂ is up to the task. The Hyster® H190-360HD₂ series is the family workhorse lift truck that won't let you down.





Whether you like an open operator compartment or an enclosed cab, we have you covered on the H190-360HD₂ lift truck series. The tinted tempered glass of the ComforCab™II helps minimize the sun's glare while driving or handling loads in either direction. And for those really hot, sunny days the optional air conditioner and built-in 'sunshades' in the cab module help keep you cool. Best of all, the curved front and rear glass of the ComforCab™II maximizes your line of sight.

- Our all-season temperature controlled cab (optional) features a heater & defroster, circulation fan and an optional air conditioner to keep you comfortable from the heat of the summer to the coolest of winter shifts.

RAISING THE STANDARD

A Fatigue-Reducing Operator Compartment

The operator compartment and controls are ergonomically designed to help reduce operator fatigue and improve productivity. The operator compartment is large and uncluttered, allowing the operator ample room for auxiliary options. It features a spacious environment, an adjustable suspension seat with integrated armrest and low effort controls, adjustable steering wheel, and power-assisted steering and brakes. The cab's structural design creates excellent all-around visibility.

B ComforCab™II

The optional enclosed ComforCab™II features curved front and rear tempered glass panels for excellent visibility. The door handle is mounted low to allow the operator to open the door from ground level. Ten strategically placed air vents and an optional high-output air conditioning system, makes the operator's workspace comfortable, promoting operator productivity.

C Cooling System

The Quad-cooler radiator assembly consists of four separate aluminium cooler cores for engine coolant, engine charged air, hydraulic oil and transmission oil. Cooling cores can be removed individually for service. The hinged cover is gas-spring assisted to provide easy access for service and is louvered for maximum air flow.

D Counterweight

The superior design of the downward sloping counterweight allows for excellent rearward visibility. Lights are recessed in the counterweight for maximum protection.

E Hydrostatic Steer Axle

The Hyster designed, 'sandwich' type steer axle with transverse, double-acting hydraulic cylinder, tapered roller spindle bearings and non-adjustable tie rods provide maximum durability and superior steering control for easy maneuvering. Load-sensing steering provides precise steering control at all times regardless of engine RPM.

F Serviceability

The cab tilts to the right side for service access using the standard hand operated hydraulic pump or the optional electrically operated pump. All models have a common gull-wing hood design. A gas spring assures ease of opening the hood and keeps it securely in place when open. Tilting the cab, coupled with the easy-lifting hoods, provides access to the entire powertrain for service or repair, but is not required for daily checks.

G Electrical System

CANbus communications reduces wiring complexity while smart wire routing keeps wiring away from heat sources. Sealed electrical connectors help eliminate contamination caused by water, dirt and debris.





H Mast

The mast features high strength hot-rolled steel channel sections for strength and durability. Generous channel overlap reduces deflection. Mast rollers are pre-lubed and sealed for long life. All mast hoses utilize O-Ring face seal fittings to reduce leaks.

I Hydraulic Controls

Two levers offer control of the lift and tilt of the mast, while additional levers or switches are offered for control of other hydraulic functions. As an alternative, Hyster offers a joystick option for control of hydraulic functions.

J On-Demand Hydraulic System

With the load-sensing hydraulic system, the hydraulic fluid is only pumped when the system is required to do work. At low load conditions, drivers won't need to rev the engine to receive fast hydraulic speeds. This system leads to reduced fuel consumption, lower hydraulic oil temperature, and extends the life of all hydraulic components.

K Carriages

The H190-360HD₂ series comes with a variety of carriage and front end options to accommodate a wide range of customer applications. The standard pin type carriage features excellent visibility and the strength to handle long forks or tough attachment applications. Other carriage options include the fork positioner, apron style sideshift, apron style sideshifting fork positioner, and the dual function sideshifting fork positioner.

L Brakes

Two heavy duty brake systems are available for the H190-360HD₂ series. The standard air brakes offer a proven, reliable system that is easy to service and simple to adjust. For more demanding and intensive applications, the optional wet disc brakes are available for all models.

M 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.

N Frame

The unitized design and welded steel construction of the frame was developed for long term durability. Three frame configurations are offered to meet the various capacities.

ENHANCED PRODUCTIVITY

Hyster engineers have moved the dash display to the right side, giving you the clearest view possible. Your upward vision is virtually free from obstruction, due to the unique overhead guard design. And you'll get no distortion looking through the curved front and rear glass. That's especially handy with the optional interior roller-type sunshade. Want the fresh air all year? The open driver compartment is available as the standard truck configuration.

The H190-360HD₂ series' on-demand load-sensing hydraulic system with lever controls (standard) or optional joystick, gives you unrivaled load control and an ease of operation you can't get anywhere else. By reducing lever efforts without a sacrifice of control, you will complete your work shift with less strain, dramatically increasing productivity throughout the day. All hydraulic controls are mounted in the fully adjustable right-hand armrest putting every function actuation within a fingertip's reach.

The on-demand hydraulic system features a variable displacement hydraulic pump to deliver just the right amount of oil needed to do the job, especially at idle engine speeds. A high-performance pump option is also available providing industry leading lift speeds.

A premium ZF WG 161 transmission is standard providing increased travel speed and drawbar pull performance for added productivity in the toughest applications.



REWARD PRODUCTIVITY

Whether it's the standard vinyl covered cushion seat, or optional deluxe cloth covered version with or without heated seating, the full-suspension seat is contoured to maximize your comfort. With armrests and an adjustable backrest angle separate from the seat, your Hyster seat features a weight sensitive adjustable spring rate. The seat's integral armrests/hip restraints provide an excellent arm or handhold to minimize torso strain when operating in a rearward position. All seats come fitted with an operator warning buzzer system that will sound if the parking brake is not applied.

The optional ComforCab™II has a 3-speed fan and high capacity heater as standard, with 10 air outlet vents for all around comfort. A replaceable paper air filter element filters the air from the outside. The optional two-speed air conditioner will keep you cool when the temperature is rising. Or you can order the optional circulation fan for even more air. Keeping the ComforCab™II a consistent temperature is easy, since doors create an air-tight seal when closed.

SUPERIOR OPERATOR COMFORT

Once again, Hyster reasserts industry leadership with the H190-360HD₂ lift truck's optional ComforCab™II operator compartment. A leading edge blend of ergonomics and technology helps keep you focused on the task at hand... materials handling.

The entire compartment is mounted on elastomeric rubber mounts isolating and minimizing the productivity-robbing effects of road-borne shocks and vibrations. Its uncluttered, spacious floor is covered with a high-density rubber mat, decreasing sound inside the optional enclosed ComforCab™II down to an amazingly low 76 dB(A) level. That's slightly less than the average sound level of music playing in your living room.

The combination of a tilt and telescoping steering column and an adjustable full-suspension seat places your operator in the utmost comfort. In addition, the right-side armrest's adjustability allows even the most demanding operator to place the truck's controls within easy reach. Control is second to none since the low effort, load-sensing power steering is standard equipment.



DEPENDABILITY



At Hyster we strive to do our part in a “cleaner” environment while providing a durable product. That is why Hyster has paired up with Cummins to offer the next generation of engines. Two capable powertrain solutions are available for our customers. The H190-280HD₂ trucks feature a right-sized Tier 4i 4.5L Cummins QSB engine with a turbocharger and intercooler. Featuring a HPCL fuel injection system, this high pressure common rail fuel injection system delivers quicker throttle response, while a more efficient variable flow turbocharger optimizes boost. An after treatment system using a 2-stage Diesel Oxidation Catalyst (DOC) and Diesel Particulate Filter (DPF) are standard on this truck.

The H300-360HD₂ trucks feature a Tier 4i 6.7L Cummins QSB engine with a turbocharger and intercooler. The HPCL system ensures quick throttle response while variable flow turbochargers optimize boost.

The standard powertrain on both the H190-280HD₂ and the H300-360HD₂ features the proven and highly reliable ZF WG 161 3-speed autoshift transmission with oil-cooled wet disc brakes for maximum durability.

The Quad-Cooler contains four separate cooling cores (engine, transmission, charge air cooler and hydraulic system). The cores are horizontally stacked and are individually replaceable. The integrated hydraulic cooler maintains normal system operating temperatures at ambient temperatures of 122°F.

A resistive electric grid preheats intake air to dramatically increase cold weather startability. No need to slow down with the shift on the fly 3-speed powershift transmission. The use of torque control allows for precise inching. Large durable multi-disc clutch packs and high flow transmission cooling help keep the temperature down. The fully electronic autoshift control system makes this a smooth truck to operate.



ENGINEERED TO LOWER YOUR TOTAL COST OF OWNERSHIP

Fuel economy is significantly improved thanks to the on-demand hydraulic system featuring a variable displacement system that pumps oil only when required. When hydraulic loads are not required, additional engine power is available for acceleration or increased drawbar pull to get the job done.

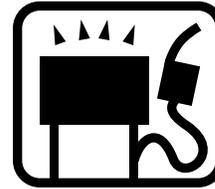
Extended service intervals keep the truck out in the yard and away from the service shop. Hydraulic system fluid service life can extend to 6,000 hours with periodic sample testing, while a comprehensive filtration system traps particles down to 5 micron. Oil-cooled wet disc brakes provide the most cost effective solution for high service life, even under the toughest work conditions with multi-shifts.

Hyster Company Fuel Economy Estimates

Hyster® H190-360HD₂ Series

Fixed Displacement Hydraulic System

9,000
GAL/YR



On-Demand Hydraulic System

8,010
GAL/YR

Estimates Annual Fuel Savings

SAVE \$3960 per year*

Typical 3000 hrs/yr with Hyster On-Demand Hydraulic System and \$4/gal Fuel Price

* Based on fuel consumption savings from original Tier 4i launch validation testing.



Service Checks

Service checks made simple. Thanks to the gas-spring assisted gull-wing doors, gaining access to the filter is easy. Daily service checks and regularly scheduled maintenance will keep your H190-360HD₂ at peak performance.



Steer Axle

The Hyster hydrostatic steer axle is as tough as they come. It's maintenance free and that's not easy with the beating it takes. Its durable spindles are supported by pre-lubricated tapered roller bearings which resist shock and wear. Periodic adjustment is eliminated by its fixed length tie rods. Adjustable steer axle stops can be adjusted to extend tire wear, when extreme maneuverability isn't required, to dramatically improve steer tire life.

■ The on-demand hydraulic system with variable displacement pump technology extends the life of the entire system through reduced oil temperatures by pumping oil only when required. The O-ring face seal fittings used throughout this series help ensure that hydraulic connections are sealed to prevent leaks. The air intakes on the H190-360HD₂ truck series will reduce the need for filter replacements.

When it comes to slowing down, you have your choice of air brakes with air system drier or optional wet disc brakes. Both styles of brake systems feature a full floating axle assembly design, allowing its housing, not the shafts, to carry the weight of the load, for greater durability. Either system gives you positive consistent stopping and superb inching capabilities. All hydraulic and air systems have been constructed to minimize the number and length of lines and connections to avoid potential leak sources.

SUPERIOR OPERATOR CONTROL

Adjust the standard 3-way adjustable contoured full suspension seat where you want it. Then refine your position further with the multi-position tilt and telescoping steer column adjustments. The H190-360HD₂ truck's hydraulically assisted steering minimizes effort required to get into and out of tight spaces. The hydraulic levers are always at your fingertips. Performance data is ready at-a-glance. And the MONOTROL[®] pedal is at the ready, to provide you single touch foot-pedal control of travel speed and direction. This unique Hyster feature frees your hands to do other tasks, making maneuvering easier and saving you time. And if you prefer, an optional direction control lever with forward, neutral and reverse is available with range control.



Inching and braking are not the same. On the H190-360HD₂ lift truck series you have two pedals, one located on either side of the steering column. The left-hand side pedal provides you braking and inching capabilities by partially disengaging transmission clutch packs. Fully depressing this pedal engages the brakes. The brake pedal is on the right-hand side of the column.

PERFORMANCE AT-A-GLANCE

The H190-360HD₂ lift truck series' console, located on the right side of the operator, houses the instrumentation and electronics package. Soft-touch controls give you the confidence to complete a full day's worth of work, and then some. We also moved the state-of-the-art multifunction display panel to the right-side console. With 16 warning lights, 5 gauges and a dual function LCD, your operator has a clear, true reading of how your machine is performing.





Picture shown with optional light package.

Exceptional All-Around Visibility

Clear sight lines are enabled due to the low cowl when operating an H190-360HD₂ series truck. Hyster Company's exclusive mast optimizes your field of vision for better load handling. Your vision through the overhead guard is exceptional. Air intake and exhaust pipes are located in parallel to minimize rearward visibility obstructions. The rounded form of the hood, fenders and counterweight design allow you to see objects sooner, dramatically increasing your rearward visibility. Large wide-angle side view mirrors mounted in the upper front left and right corners of the ComforCab™II provide you a clear look behind.

SERVICEABILITY



Imagine having ready access to the engine and vital functions of the truck without straining or tying yourself in knots. The answer is the side tilting ComforCab™II of the Hyster® H190-360HD₂. The cab, mounted on four rubber isolators pivots over to the right side of the truck, giving you complete access to all the major components.

Hyster lift trucks make their name with what they do for your operations. But it doesn't hurt to have a little styling along the way. The rounded form of the operator compartment, hood, fenders and counterweight are testimony of the H190-360HD₂ truck series' combination of form and functionality. The rear fenders include unique rear light clusters that improve component durability. The low-profile counterweight offers improved visibility, while the hood design provides improved service access. The rear hood is hinged for ease of radiator access and maintenance.



- All engine, transmission and other service check points are conveniently situated for quick maintenance. The daily service checks can be completed in less than 10 minutes and do not require the cab to be raised.

- The H190-360HD₂ series' standard tilting operator compartment feature is manually actuated or you can choose the optional electric (pushbutton) version.

Pulling the 'notched holding device' lever allows it to slide free as the hydraulic cylinder extends, raising the compartment. Once open, you have complete access to the hydraulic system, transmission and engine.



STANDARD FEATURES AND OPTIONS



STANDARD EQUIPMENT

- H190-280HD₂: Cummins QSB 4.5L diesel engine
 - Tier 4i emissions compliant
 - 230HP (160kW) rated horsepower
- H300-360HD₂: Cummins QSB 6.7L diesel engine
 - Tier 4i emissions compliant
 - 240HP (164kW) rated horsepower
- ZF WG 161 3-speed autoshifting transmission
- Air brakes with air system dryer
- Pin type carriage with mechanical fork locks
- Planetary drive axle
- Premium pneumatic super-lug tires
- On-demand load-sensing hydraulic system featuring:
 - Variable Displacement Pump (VDP) technology
 - Standard hydraulic performance
- 3-function hydraulic control valve with three levers
- Mast tilt: 15° forward / 12° back
- UL Classification D
- Open operator compartment with integral overhead guard featuring:
 - Integrated armrest hydraulic controls
 - Monotrol[®] pedal
 - Multifunction display panel
 - Interior wide angle side view mirrors
 - Telescoping & tilting steering column
 - Floor mats
 - 24-12V DC converter
 - Isolated mounting for low Noise, Vibration and Harshness (NVH)
 - Steering wheel without spinner knob
- Electronic horn (105 dBA)
- Mechanical, full suspension vinyl seat with integrated adjustable armrest and seat belts
- Operator restraint system
- Operator presence system
- Overhead exhaust
- 24V electrical system
- 120 amp alternator
- Manual tilt operator compartment for easy service access
- 2 LED stop / tail / back-up lights
- Non-locking fuel cap
- Literature package - English
 - Operator's manual
 - Service manual
 - Parts manual
- Warranty
 - 12 months / 2,000 hours manufacturer's warranty
 - Parts, labor and travel coverage

OPTIONAL EQUIPMENT

- H190-360HD₂: Cummins QSB 6.7L diesel engine
 - Tier 3 emissions compliant (while supplies last)
 - 240HP (164kW) rated horsepower
- ZF WG 161 3-speed power shift transmission
- ZF WG 161 3-speed power shift with HD drive axles
- Wet disc brakes
- On-demand load-sensing hydraulic system featuring:
 - Variable Displacement Pump technology
 - High performance hydraulic system
- Hydraulic control and valve group
 - Hydraulic control 4 - , 5 - , or 6-function lever
 - Hydraulic control 6-function joystick
- Mast tilt
 - 2-stage VISTA™ mast:
 - 5° forward / 12° back
 - 20.5° forward / 7° back
 - 5° forward / 12° back
 - 5° forward / 6° back
- Carriages
 - Pin type carriage with mechanical forks (w/o fork positioner)
 - Pin type fork positioner - simultaneous fork control
 - Pin type fork positioner - individual fork control
 - Pin type apron sideshift
 - Pin type apron style sideshift fork positioner - simultaneous fork control
 - Pin type apron style sideshift fork positioner - individual fork control
 - Pin type dual function sideshift fork positioner (DFSSFP)
- Tires
 - Pneumatic-shaped soft-ride solids
 - Michelin XZM radials
- Enclosed cabin with or without air conditioning:
 - Seat-side hydraulic control levers
 - Multifunction display panel
 - Interior wide angle side view mirrors
 - Telescoping and tilting steering column
 - Floor mats
 - 24-12V DC converter
 - Front, top and rear wipers
 - Heater
 - Recirculation fan
- Seats
 - Mechanical, full-suspension cloth seat
 - Air ride, full-suspension vinyl or cloth seats
 - Deluxe air ride full-suspension cloth seats
 - Deluxe air ride full-suspension heated cloth seats
- Engine air intake
 - Sy-Klone spinner type heavy duty air intake
- Operator compartment
 - Powered tilt
 - Various light kits
 - Hydraulic accumulator
 - Lifting eyes
 - Engine block heater - 110V
- Empty seat engine shutdown
- Traction speed limiter
- Loaded traction speed limiter
- Steer wheel lug protection rings

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 forklift 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 — Our Dealer Network can offer the expertise of fleet managers, parts suppliers, capital procurement specialists and trainers. Hyster's carefully chosen dealers fully understand customer applications, assist in selecting the right lift truck and provide fast, reliable support.



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 operation environment. Hyster service programs offer scheduled inspections and maintenance, along with quick, responsive service dispatched to your location.



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Part No. H190-360HD2/B
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