

PRODUCT PRESENTATION

HYSTER J30-40XMT₂



From top to bottom, the J30-40XMT₂ lift trucks are versatile, reliable and provide exceptional performance. These 3-wheel electric lift trucks feature a twin steer axle design and a hydraulic rack and pinion actuator that are designed for excellent durability and serviceability. Smooth, quiet operation is achieved through Separately Excited Motor (SEM) technology that features the G.E. GEN III transistorized controllers. Complemented by ergonomic changes, the J30-40XMT₂ features include reduced heat in the operator compartment, optimum seat positioning, and easy reach placement of the hydraulic controls. The J30-40 XMT₂ is highly competitive in both performance and price.

MODEL, CAPACITY & WHEEL BASE

J30XMT ₂	3000 Lbs. @ 24"	50.8"
J35XMT ₂	3500 Lbs. @ 24"	54.2"
J40XMT ₂	4000 Lbs. @ 24"	54.2"

TOP SICs (Standard Industrial Codes)

Groceries - Retail Stores -General Warehousing and Storage

Industrial Machinery & Equipment -Motor Vehicle Parts & Accessories

Automotive - Photographic Equipment & Supplies

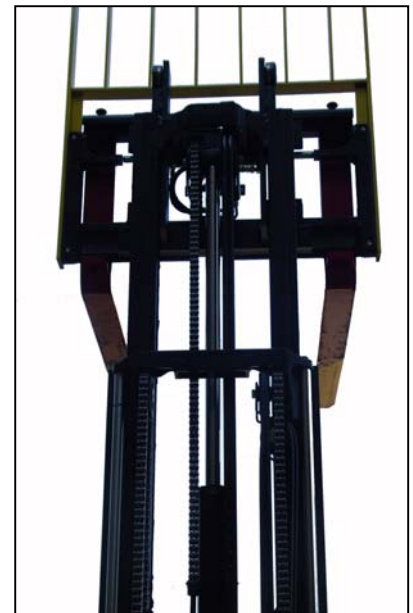
Lumber & Other Building Materials – Meat Packing Plants

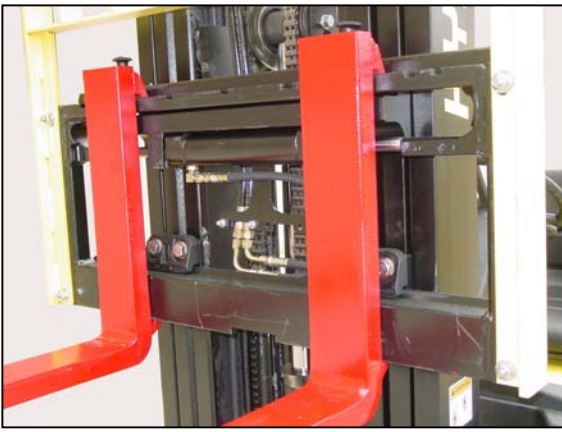


GLOBAL VISTA MAST

The J30-40XMT₂ is available with Single stage limited free lift (LFL), 2 stage full free lift (FFL), 3 stage (FFL). The Vista masts are available in a wide range of lift heights and feature the extensive use of high strength, cast steel cross-members. Optional 4 stage (FFL) masts are available for this series through SPED.

The mast channel, lift chains and main lift cylinder are widely spaced, contributing to good visibility through the mast.





The integral sideshift carriages are fabricated of medium strength steel, and are designed to provide better visibility, increase capacity and easier service accessibility than standard hang-on / hook-on type sideshifters.

Available in types and lengths to suit the application, all forks are forged from a single piece of high strength steel for improved toughness and durability.

Pre-lubed and sealed, full radius, angled load rollers give good load support during lifting and lowering.



The overhead guard features a right side battery removal slot. Maximum protection and overhead visibility for stacking and retrieving loads are enhanced by angled cross-members, and a bar on edge designed top. The overhead guard has been designed and tested to comply with ANSI B56.1 industry standards, and has an overall height of 78".



An all welded steel construction frame is capable of handling today's toughest applications with long term durability. The frame is designed through Finite Element Modeling (FEM) – a technique that uses mathematics and computer modeling to perform simulated stress tests on the frame. Computer modeling shows design engineers exactly where stress peaks occur and allows the engineers to focus on correcting peak stress areas. Once FEM is completed, the truck frame is then stress tested using conventional methods to verify FEM results. The frame provides the mounting for major components such as the steer axle, drive units and counterweight.

OPERATOR COMPARTMENT FEATURES



A contoured, rubber coated handgrip on the left overhead guard leg and a full 20" step provide easy entrance and exit. The hip restraint, located on a low mounted seat (36.1" from the ground), helps to provide handgrip and balance as the operator exits the truck.

The compact, 19" steering wheel is attached to a tilt column that offers 5 adjustable positions to suit different operators. Truck maneuverability is made simple by lock to lock steering that requires only 5.3 turns of the wheel.



The display is a rectangular gauge, mounted in the dash to the right of the steering column. This location eliminates clutter and provides improved knee clearance around the steering column. The J30-40XMT₂ is equipped with either a standard or premium display (price book options). The standard and premium displays share the following common features:

Battery discharge indicator

Service, hour and battery symbol that will light when selected

Service "wrench" symbol that appears when there is a fault code

Six LED warning lights that activate for :

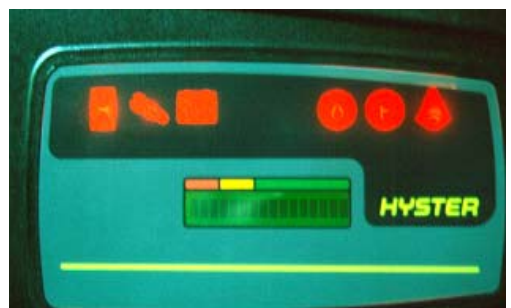
- (1) seat belt use (2) parking brake release (3) service brake oil check (4) general truck service (5) hour meter (6) battery status

Standard display features include:

16 character numerical display that represents fault codes

Fault code numbers that activate when fault conditions are detected.

A message that will read "Turn key off", when the operator leaves the truck.





Premium display features include:

- An alpha numeric display that features 2 lines with 20 characters per line. The display will not only show numeric fault codes, but also provide a brief explanation of the fault condition.
- A keyless password entry for operating the truck is a customized

enhancement that can be programmed into the display. A record of operator history is also a new feature. When the key switch is turned on, the display will require the operator to key in a password before the truck will operate. The operator password can also be tied to an authorization status that will monitor maximum speed modes according to the operator using the truck. An inexperienced operator in training might be given only slow mode access. This feature is disabled at the factory and can be activated by the customer with a laptop computer.



A standard, non-suspension, vinyl seat, offers a comfortable ride with easy on and off operation of the truck. The operator's seat height is approximately 36" from the ground. All seats have an electrical seat switch that senses the presence of the operator, allowing the truck operation when closed. If the parking brake is not applied, a continuous buzzer will sound for 10 seconds if the operator leaves the seat. Retractable seat belts are standard.

An easy, step-down parking brake pedal is positioned on the left hand side of the truck. The brake assembly is mounted to the cowl with the pedal being the only brake component in the operator's area. This feature provides minimum entry and exit interference. An easy pull release handle is located on the left cowl cover, just above the parking brake pedal. An electromechanical switch senses and signals a dash mounted "brake-on" LED (premium display), or a parking brake when leaving the seat.



Other foot control pedals consist of the Monotrol pedal and service brake. Standard trucks feature the exclusive Monotrol directional pedal. The Monotrol directional pedal located on the right hand side of the operator compartment floor, controls the forward and reverse directions as well as acceleration. An optional accelerator pedal features a pedal that controls acceleration only. The optional accelerator pedal is ergonomically shaped and positioned like the Monotrol. A single directional control lever with forward, neutral and reverse detents is located on the left hand side of the steering column for quick, easy activation.



Service brake

The hydraulic service brake pedal is positioned on the left hand side of the operator compartment floor. Disc brake assemblies are mounted on each drive unit providing stopping power with low operator pedal effort. The disc brakes are minimally affected by water and operates with little or no loss of performance in wet conditions.



A convenient storage box, is located on the left hand side of the cowl, and is within easy reach of the operator for marking pens, pencils and other useful items.



Ergonomically shaped hydraulic lift and tilt control levers are positioned at the right hand side of the seat for ease of operation and reach. The molded shape of the levers maximizes grip and minimizes required tension when squeezing the lever knobs. The standard truck features two levers, one for hoist and one for tilt, and three valve spools. (The third spool allows for an optional addition of an attachment control lever.



The battery compartment hood is styled and molded from heavy duty, UL approved plastic. The hood opens by tilting rearward for battery compartment access. To reduce operator effort, gas cylinder assistance is provided when opening and closing the hood.





The single cast counterweight has been designed to provide an easy access compartment for all major electrical and steer system components. Easy removal of two bolts releases the aluminum rear counterweight cover from the truck frame giving the operator or mechanic full access to electric and steer components. Those components are water resistant due to an internal seal that protects the interior of the counterweight compartment. The height of the new counterweight improves the turning radius, increases maneuverability and reduces the overall truck length.

GE GEN III Traction Controllers

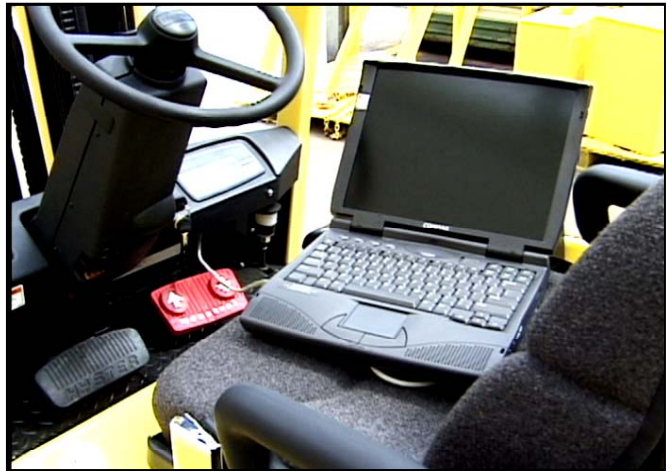


The traction motors are controlled by two GE GEN III controllers. The transistorized controller system has done away with all but one of the contactors (the power / line contactor), eliminating servicing of the consumable parts. All of the electrical internal connections in the GE controller are soldered, reducing possible loose connections due to improperly tightened hardware. The controller features a faster pulse rate that is above the frequency range of human ears. The system is virtually silent. A standard feature of the transistorized controller is Regenerative Braking. This occurs when travel direction is reversed during plugging. This action draws heat away from the motor and prolongs the life of the motor brushes by 3 to 5 times. The energy generated during plugging goes into the battery as a positive charge and not as heat to the motor. An additional benefit is Auto-Regen. With Auto-Regen, whenever the accelerator pedal or directional switch is in the release (neutral) position, the regenerative braking signal is initiated.

Other special features of the transistorized controller include adjustable controls, adjustable hour meter and a periodic maintenance service reminder. The adjustable controls can be changed through the use of a G.E. handset. The hand-held instrument can be connected without disrupting any of the normal truck wiring. Operating the handset requires little training.



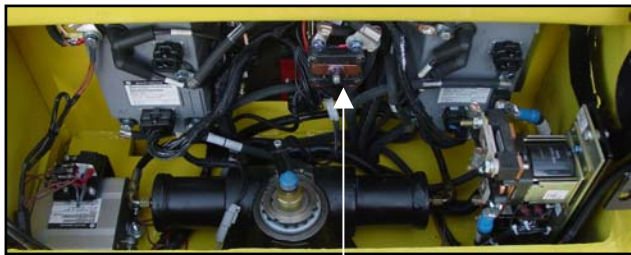
The hour meter can be reset. If the controller is replaced on the truck, the customer can insert the trucks original work hours into the new controller, so the display will show the total truck hours. A separate hour meter, located in the controller, records the hours of the new controller. The separate meter cannot be reset.



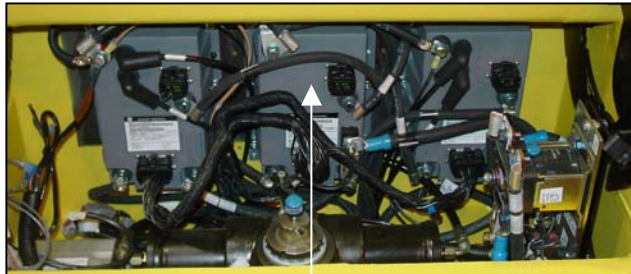
A flashing service symbol on the dash display will signal the operator that the truck is scheduled for periodic maintenance. Following the first warning signal, if the truck is still being operated for an additional 19 hours, the travel speed will be reduced until the truck goes in for service. The hoist pump will also de-activate at this time. This feature is turned off at the factory and can be activated by the customer with a laptop computer or handset.



Each controller is self-contained in a "Gray box" component. The "Gray box" is actually a plastic molded cover that is backed with an aluminum plate that is then mounted directly to the truck. The aluminum plate, as well as a coating of silicone grease, serve to dissipate heat that is generated by the controller. If problems with the GEN III controllers cannot be corrected through diagnostics, users can simply replace the entire unit. No more changing rectifiers, capacitors, control cards, contactors and wires.

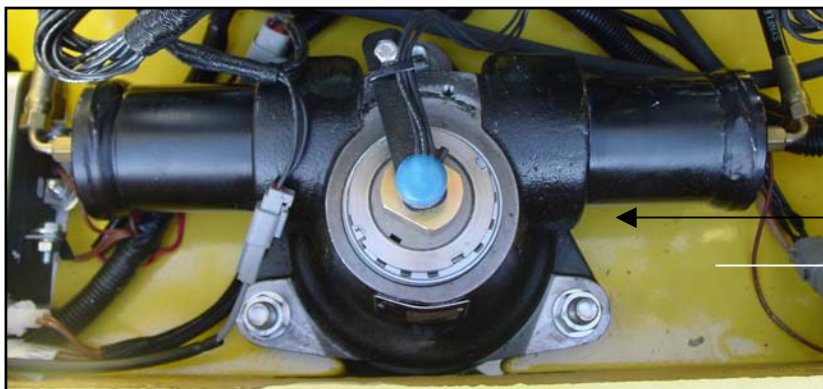


Standard Contactor Hydraulics configuration



Transistorized Hydraulics configuration

The J30-40XMT₂ features 3 hydraulic pump motor controllers: One standard and two optional. The standard feature is a one speed , contactor controlled hydraulic system. The controller delivers full flow to the lift and tilt speed functions. Optional selection is a two speed, split voltage connector and a transistorized hydraulic controller. The two speed controller delivers full and half flows by splitting the battery voltage in half for hydraulic functions. Tilt function speed is half flow, minimizing energy losses. A second option, the transistorized controller (GE SR 450), reduces pump and motor loadings on start-up for increased system life. Some application test results yield motor brush life increased by over 3 times standard hoist systems. The transistorized hydraulic controller is strongly recommended on any truck with high attachment usage such as clamp, rotating clamp or any other single, double or triple function attachments.

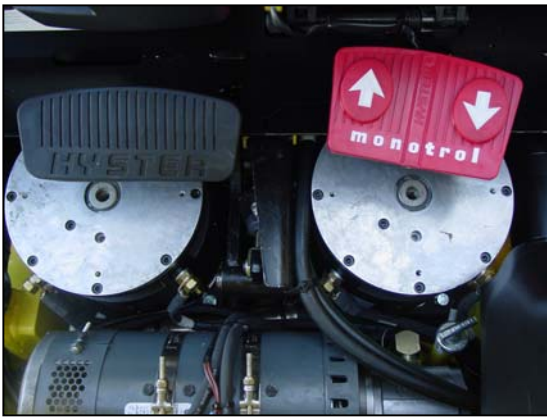


Hydrostatic steer actuator assembly

The hydrostatic steer system is all hydraulic and is designed to give precise, reliable control. It consists of the steering wheel, tilt column assembly, steering control unit, pump and motor, hydraulic rack and pinion actuator assembly and steer axle. The rack and pinion actuator supports all wheel loadings, thrust and torque through large automotive type tapered roller bearings. Additionally, it provides rotating motion for the dual tire and wheel assemblies. The steering control unit features an “on-demand” steer option. As the phrase implies, on-demand steering activates the hydrostatic steer system when needed. Movement of the steering wheel sends a signal to the steering system to turn on the power steering system at full capacity, such as traveling a straight path, power to the system is cut back, thereby reducing power usage, noise and heat.

The floor plates are easily removed by hand without the use of tools. Hand holes on each side of the floor plates provide below the floor plate ventilation that also reduces heat within the operator compartment. Tilt cylinders are located below the floor plate to enhance operator foot space.





Hidden from view are the dual SEM (Separately Excited Motor) traction motors and hoist motor. All motors are specified to keep maximum Revolutions Per Minute (RPM) below 3000 (for traction motors the gear ratios are specified and for hydraulics the pump size are specified to meet the RPM limits). The dual SEM traction motors feature an additional .63" longer stack length to improve thermal capacity.

With independently controlled drive motors, the inside wheel reverses during turning to allow the truck to pivot at the center of the front axle. The minimum turn radius is obtained by gradual power reduction to the inner drive motor / transmission in turns up to approximately 85 degrees. When the steer angle approaches the maximum, the inner motor / transmission is reversed for maximum allowable turning.

The twin wheel hydrostatic steer axle design offers significant advantages in truck ride, maneuverability and extended tire life. Three interchangeable tire types are available on the steer and drive tires for the 3000 and the 3500 lb. Capacity trucks (Super-elastic, Solid cushion and Pneumatic). The 4000 lb. Capacity truck features Super-elastic and Solid cushion tires only.



The hoist motor, manufactured by General Electric, is a series wound, class "H" electric motor. The series motor works best for frequent start and stop applications. It can be easily tilted up for brush motor inspection and for brush replacement. The hoist motor, power steering motor and hydraulic components are mounted to the chassis on rubber isolator mounts for reduced noise and vibration to the chassis and the operator.

Hyster 3-wheel trucks use class "H" insulation for long life operation. A class rating on insulation materials has been established based on a motor's ability to withstand an armature temperature of 356 degrees over a 60 minute period of operation. Hyster lift trucks use class "H" insulation – the highest class rating.

POPULAR OPTIONS

Voltage – 36 volt standard – 48 volt no charge option

Premium instrumentation: Thermal sensor & brush wear indicator

Seat – Semi-suspension, vinyl or cloth

On-Demand power steering with transistor control

Smaller hydraulic pump and motor (12cc/rev displacement) as an energy saving package

Split voltage hydraulic controller or Transistorized hydraulic controller

UPCOMING CHANGES

The hoist motor used in current production trucks will be changed to an Iskra hoist motor in the March, 2002 timeframe. The Iskra motor is a Class "H" series wound motor and has performance capabilities equal to or greater than the current hoist motor supplied by G.E.

ELECTRIC POWERED THREE WHEEL TRUCKS



MODELS

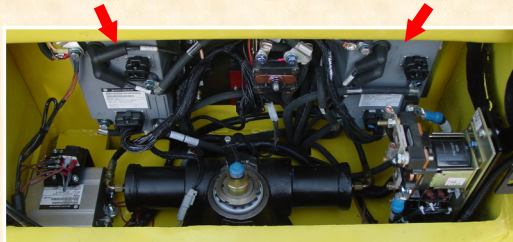
- ✓ J30XMT₂
- ✓ J35XMT₂
- ✓ J40XMT₂

FEATURES TO BE COVERED

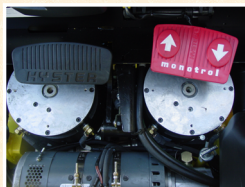
- ✓ **Productivity & Maneuverability**
- ✓ **Ergonomics & Safety**
- ✓ **Serviceability**

PRODUCTIVITY

ADDED PRODUCTIVITY with SEM FEATURES



✓ GE GEN III Traction
Motor Controllers



✓ Dual SEM Traction
Motors

The dual SEM traction motors feature an additional .63" longer stack length than the previous truck series. Long stack drive motors reduce heat in the operator compartment through improved heat dissipation. The larger mass of these motors absorb peak loads and permit heat to be dispersed throughout a large surface area.

Three wheel trucks use Class "H" insulation for long life. A class rating on insulation materials has been established based on a motor's ability to withstand a specific temperature over a specific period of operation. Hyster lift trucks use class "H" insulation -- the highest class rating. The class "H" motor must withstand an armature temperature of 356 degrees. The motor's frame temp is normally lower than the armature temp which is measured internally.

SEM TECHNOLOGY

- ✓ The traction system uses Separately Excited Motor (SEM) technology
- ✓ Separately Excited Motors feature independent armature and field controllers
- ✓ The transistorized controller system has only one contactor, a line contactor, thereby reducing maintenance requirements

Significant Transistor Controller features: The transistor controller traction system has only one contactor, the line contactor. The line contactor closes when the key switch is on and stays closed until the operator leaves the seat or turns the switch off. With only 1 contactor, this system eliminates up to 5 contactors that were part of the earlier SCR controller system. The elimination of contactors offers significant savings due to the elimination of parts and the need for labor associated with the replacement of parts.

Smooth, quiet operation. Operates at 12kHz, above the normal audible range, so there is no controller hum.

Regenerative braking (standard feature) is fully electronic, without the need for a contactor. Regenerative braking occurs when travel direction is reversed during plugging. This action draws heat away from the motor during plugging and prolongs the life of the traction motor brushes by 3-5 times. The energy generated during plugging goes into the battery as a positive charge and not as heat to the motor. An additional control feature is **Auto-Regen**. With Auto-Regen, the traction control automatically goes into a light regenerative braking whenever the accelerator pedal is in the release position. (This feature is turned off (not actuated) at the factory)

GEN III Transistorized Traction Motor Controller

- ✓ **A molded plastic cover encloses all of the power devices**
- ✓ **The controller is serviced as a complete assembly**
- ✓ **The hour meter is adjustable**
- ✓ **The truck is equipped with a Periodic Maintenance Service reminder**

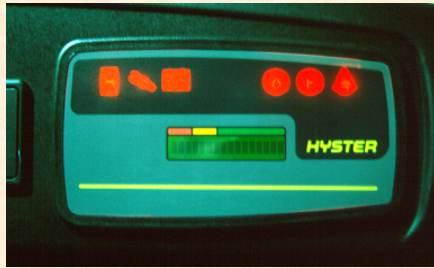
The plastic molded cover is backed with an aluminum plate that is then mounted directly to the truck. The aluminum piece serves to dissipate heat that is generated by the controller. (An additional heat reduction factor is the silicone grease that is placed between the aluminum plate and the mounting surface.)

If the controller is replaced on the truck, the customer can insert the original truck hours into the new controller, so that the display will show the total truck hours. A separate hour meter, located in the controller, records the hours on the new controller. This meter cannot be reset and can only be read by a PC.

Periodic Maintenance : A flashing service symbol on the dash display will signal to the driver that the truck is scheduled for periodic maintenance. About 19 hours of truck use after the first warning signal is displayed, the travel speed is reduced until the truck goes in for service. The hoist pump will also be de-activated at this time. This feature is turned off on the standard truck. The customer can activate it with a PC or handheld instrument.

DASH DISPLAY

- ✓ A rectangular gauge, mounted in the dash to the right of the steering column
- ✓ Two option levels



STANDARD



PREMIUM

To aid in consistency, serviceability and aftermarket distribution, Hyster Company utilizes common components between products when applicable. The standard and premium dash displays are part of this approach. The same dash display used in many of the electric 4-wheel truck models is also used in the J30-40XMT2 3-wheel trucks.

COMMON DISPLAY FEATURES

- ✓ **Six Warning LED lights**
- ✓ **Battery discharge indicator with lift interrupt (standard)**
- ✓ **Service, hour and battery symbol will light when selected**
- ✓ **The service “wrench” symbol will show when there is a fault code**

Six warning LED lights:

Seat belt (lit for 10 seconds after key is turned on)

Parking brake (lit when parking brake is applied and key turned on)

Low brake fluid indicator (lit when brake fluid in reservoir is low)

Service (lit when service is required. Accompanies fault code display on LCD)

Hour meter (lit when hour meter time is displayed on LCD)

Battery (lit when BDI reaches warning level)

Note: All lights are displayed for 2 seconds after key is turned on

STANDARD DISPLAY FEATURES

- ✓ **16 character numerical display**
- ✓ **Under fault conditions, the display will show the fault code number**
 - ➔ **When operator leaves the truck, the display will read “TURN KEY OFF”**
 - ➔ **The display is adjustable**

The fault code will display only while the truck system is experiencing a problem or is disabled by the detected problem.

The standard display has only one adjustment option. The operator can disable fault codes so that they do not appear on the display.

The premium display can be changed to:

Disable fault codes

Disable full text

Disable seat belt warning

Disable the ability to adjust the BDI and lift lockout setting

Enable checklist questions for startup maintenance

PREMIUM

DISPLAY FEATURES

- ✓ **An alpha-numeric display, 2 lines with 20 characters per line**
- ✓ **Under fault conditions, the display will show the fault code numbers, followed by the text explanation**
- ✓ **Customized enhancements can be programmed into the display, including a password entry for each operator**

A keyless password entry and record of operator history are also premium dash display features. When the key switch is turned on, the display will require the operator to key in a password before the truck will operate. This feature is disabled at the factory and can be activated by the customer with a laptop computer. The operator password can be tied to authorization to work at specific maximum mode levels. An inexperienced operator in training might be given only slow mode access.

HYDRAULIC SYSTEMS

- ✓ Low noise, main hydraulic pump
- ✓ Select from 3 motor controller options: one speed contactor, two speed contactor & transistor



TRANSISTOR CONTROLLED
HYDRAULIC ARRANGEMENT

The main hydraulic pump is available in 2 sizes. The standard hydraulic pump (19 cc/rev displacement) is driven by a 36/48 volt direct current, series wound motor. An energy saving option is a smaller pump (12 cc/rev displacement). The major difference between these 2 pumps is hoist speeds. The larger, standard pump provides high speed lifting. The smaller pump uses minimal energy and is recommended for applications where lift speeds are less critical to performance.

Hydraulic pump-motor controller

Standard: One speed, contactor controlled hydraulics. Delivers full flow to all hydraulic functions (lift speeds and tilt speeds).

Option: Two speed, split voltage, controlled hydraulics. The main pump motor delivers full and half flows by splitting the battery voltage in half for hydraulic functions. Tilt function speed is at half flow, minimizing energy losses.

Option: A transistorized, GE SP 400NR hydraulic controller (replaces the current GE100LX SCR controller). Reduces pump and motor loadings on start-up for increased system life. Some application test results yield motor brush life increased by over 3 times standard hoist system. Strongly recommended on high attachment usage such as a clamp, rotating clamp or any other attachment functions used on 3 wheel trucks.

POWER STEERING SYSTEM

- ✓ **High efficiency, power steer hydraulic pump is designed for reliability and long life**
- ✓ **The steering control unit features an “on demand” steer option**

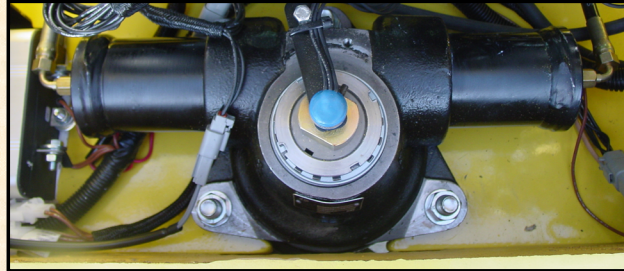
The hydrostatic steering system is all hydraulic and is designed to give precise, reliable control. It consists of a steering wheel, tilt column assembly, steering control unit, pump and motor, hydraulic rack and pinion actuator assembly and steer axle.

Just as the phrase implies, on-demand steering activates the hydrostatic steering system when needed. Movement of the steering wheel sends a signal to the steering system to turn on the power steering components. When there is no need to run the power steering system at full capacity, such as traveling a straight path, power to the system is cut back, thereby reducing power usage, noise and heat.

Lock-to-lock steering requires just 5.3 turns of the wheel.

POWER STEERING SYSTEM

- ✓ The steer axle assembly consists of a hydraulic rack and pinion actuator -- designed for excellent durability and serviceability



The system provides hydraulic oil flow to the steer axle through the rack and pinion hydraulic actuator.

The rack and pinion actuator supports all wheel loadings, thrust, and torque through large automotive type tapered roller bearings, as well as providing rotating motion for the dual tire and wheel assemblies.

DURABLE FRAME



- ✓ All welded steel construction frame is capable of handling extensive stress with long-term durability

The frame is designed through finite element modeling (FEM) to distribute loads and stress uniformly throughout the structure. Finite element modeling uses mathematics and computer modeling to perform computer simulated stress tests on the frame. The computer modeling program subdivides the frame into many small pieces and calculates the stresses on each of the frame's elements. Computer modeling shows design engineers exactly where stress peaks are and allows them to focus on correcting peak stress areas. Once FEM is completed, the truck frame is stress tested using conventional methods to verify FEM results. The frame provides the mounting for major components such as the steer axle, drive units, and counterweight.

MANEUVERABILITY

TWIN WHEEL STEERING



- ✓ Provides stability
- ✓ Reduces tire wear and increases tire life
- ✓ Provides operator with a comfortable ride

Twin wheel steering offers distinct advantages in truck ride, maneuverability (better turning radius and shorter truck length) and tire life. Dual wheels have more rubber to absorb shock on rough floors and dock plates.

Three interchangeable tire types on 3000 and 3500 lb capacity trucks (super-elastic, solid cushion and pneumatic). Super-elastic and solid cushion only on 4000 lb capacity trucks.

Steer tire dimensions:

15x4x11.2 for Solid Cushion tires (J30-35-40XMT2) (Standard)

15x4.5x8 for Pneumatic tires (J30-35XMT2) (Option)

15x4.5x8 for Superelastic (Pneumatic Shaped Solid) tires (J30-35-40XMT2) (Option)

Drive tire dimensions:

18x7x12.1 for Solid Cushion tires (J30-35-40XMT2) (Standard)

18x7x8 for Pneumatic tires (J30-35XMT2) (Option)

18x7x8 for Superelastic (Pneumatic Shaped Solid) (J030-35XMT2) (Option)

200/50x10 Superelastic (Pneumatic Shaped Solid) (J40XMT2) (Option)

OPERATES IN CONFINED SPACES

- ✓ Independently controlled drive motors
- ✓ Shortened truck length
- ✓ Reduced turning radius



With independently driven drive motors, the inside wheel reverses during the turn to allow the truck to pivot at the center of the front axle. The minimum turning radius is obtained by gradual power reduction to the inner drive motor/transmission in turns up to approximately 85 degrees. When the steer angle approaches the maximum, the inner motor/transmission is reversed for maximum allowable turning.

Shortened truck length is due to reconfiguration of the counterweight. The height and depth of the new counterweight also provides improved turning radius.

Turning radius, min. outside: 3,000 lb capacity truck = 58.3"

3,500 lb capacity truck = 61.8"

4,000 lb capacity truck = 61.8"

ERGONOMICS & SAFETY

OPERATOR'S COMPARTMENT

- ✓ Contoured, rubber coated handgrip on left overhead guard leg
- ✓ A full step located on the left side for easy entrance and exit



Handgrip features 2 height position options.

Full step is a low step height of 20".

Mounting is also made easy by the 36.1" seat height and easy to grab hip restraint.

OPERATOR'S COMPARTMENT



- ✓ Tilt column with 5 adjustable positions to suit different operators
- ✓ Compact steering wheel
- ✓ Lock-to-lock steering requires just 5.3 turns of the wheel



← Optional spinner knob shown

The tilt angle of the steering wheel is adjustable by releasing the latch on the steering column assembly.

Steering wheel = 19" diameter.

A SPED option of the steering wheel is the Spinner knob. The spinner knob is a device mounted to the outside radius of the steering wheel that fits in the palm of the hand. As the steering wheel is turned, the knob spins. The advantage to the spinner knob is quicker turns and a better grip (reducing the likelihood of the steering wheel slipping out of the hands of operators).

Lock-to-lock steering requires just 5.3 turns of the wheel.

OPERATOR'S COMPARTMENT

- ✓ **Standard, non-suspension, vinyl seat features a low operator seat height for quick entry and exit from the operator compartment**
- ✓ **All seats have an electrical seat switch**
- ✓ **Retractable seat belts are standard**



Premium seat: Semi-suspension with vinyl or fabric covering

The low operator's seat height, approximately 36.1" from the ground, provides easy on and off for the operator.

The seat switch senses the presence of the operator, allowing truck operation when closed.

Opening of the seat switch for greater than 1.5 seconds will activate the traction control return to neutral feature requiring the operator to return the direction control to neutral on the optional column mounted handle before selecting direction to be traveled (forward or reverse).

If the operator leaves the truck without applying the parking brake, a warning buzzer will sound.

OPERATOR'S COMPARTMENT

- ✓ 78" high Overhead Guard
- ✓ Designed and tested to comply with industry standards
- ✓ Maximized overhead visibility



The overhead guard has been designed and tested to meet ANSI B56.1 industry standards.

The overhead guard provides maximum overhead visibility for stacking and retrieving loads with the use of angled crossmembers and fore and aft bars. This method of construction adds overall strength to the overhead guard.

Features include a right side battery removal slot for overhead chain hoist clearance.

VISIBILITY FEATURE

- ✓ The mast channel, lift chains and main lift cylinders are widely spaced, contributing to good visibility through the mast



Global VISTA Mast availability: 2 stage limited free lift (LFL), 2 stage full free lift (FFL), 3 stage (FFL). Optional 4 stage (FFL) masts are available through SPED.

Mast mounting features trunnion mounting. The transmission housings for right and left sides provide a location for the trunnion mounting.

OPERATOR'S COMPARTMENT



- ✓ Easy, step-down parking brake pedal
- ✓ Non-asbestos brake pads
- ✓ Parking brake warning buzzer

Foot applied brake pedal is located on the left hand side of the cowl assembly for easy step down application motion with left foot.

The assembly is mounted through the cowl with only the pedal in the operator's area for minimum entry and exit interference.

Brake is released by a pull handle located on the left side of the cowl.

An electromechanical switch senses and signals a dash mounted "brake-on" LED, or an audible signal sounds if the operator does not apply the park brake when leaving the seat. In addition, setting the parking brake with the key switch on, and operator off the set, activates a 15 second timer that shuts off hydraulics.

An optional electric seat parking brake is also available for this series.

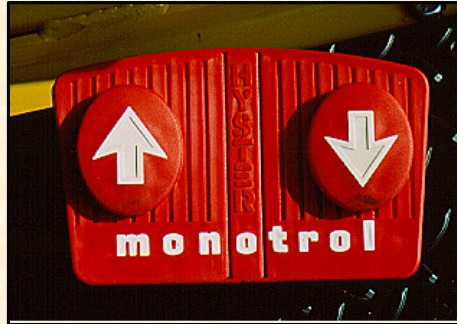
OPERATOR'S COMPARTMENT



- ✓ A convenient storage box, located on the left hand side of the cowl, is within easy reach of the operator for marker pens, pencils and other helpful items.

OPERATOR'S COMPARTMENT

- ✓ Standard Monotrol pedal is located on the right hand side of the compartment floor



A Standard feature, the Monotrol pedal operates direction as well as acceleration. Optional features include an accelerator pedal located on the right hand side of the operator's compartment floor. A direction control lever with forward, neutral, and reverse detentes is located on the left hand side of the steering column. The lever must be returned to neutral to start the truck. No levers are used with the Monotrol pedal.

OPERATOR'S COMPARTMENT

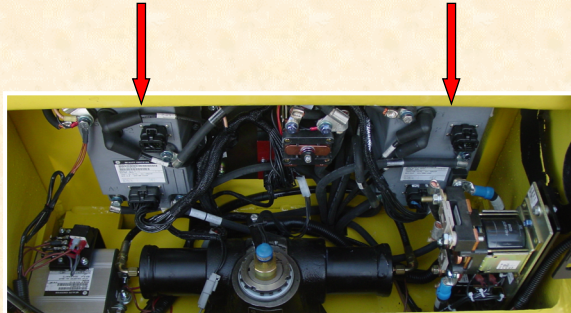
- ✓ Ergonomically shaped hydraulic Lift/Tilt Control Levers are positioned at the right hand side of the seat for ease of operation and reach



The levers feature ergonomically shaped ends and a soft touch sure grip molded material for operator comfort. The shape of the levers improves grip and minimizes required force.

GE GEN III NOISE REDUCTION

GE GEN III Traction Controllers



- ✓ Only 1 contactor
- ✓ Virtually silent

The pulse rate of the SEM transistor system is about 12,000 times per second (12KHz). This faster pulse rate is beyond the frequency range that human ears can hear, so the system is virtually silent.

With an SCR system, there is a constant hum as contactor switches activate and deactivate, creating clicking sounds. With SEM, this noise factor is eliminated, as there is only one contactor (the line contactor) operating.

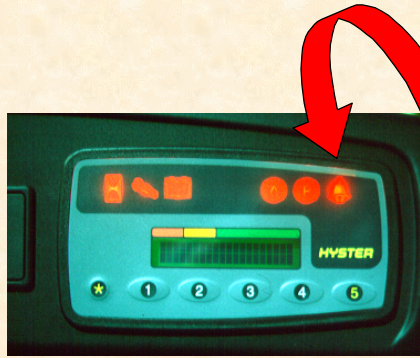
ADDITIONAL NOISE REDUCTION FACTORS

- ✓ **Low rpm traction and hydraulic motors**
- ✓ **Quality transmission bearings**
- ✓ **Spiral bevel and helical gears**
- ✓ **Low noise pumps and steer control unit**
- ✓ **Motors and hydraulic components mounted on elastic mounts**

All motors are specified to keep the maximum revolutions per minute (rpm) below 3000. (For traction motors the gear ratios are specified and for hydraulics the pump sizes are specified to meet the rpm limits)

The motors and hydraulic components are mounted to the chassis on rubber isolator mounts for reduced noise and vibration to the chassis and the operator.

DASH DISPLAYS



PREMIUM DISPLAY

- ✓ Six warning LED lights on Standard and Premium Displays
- ✓ Password feature and startup checklist available on Premium Display and ready to be activated by the customer

Six warning LED lights: Seat belt, park brake, low brake fluid indicator, service, hour meter and battery.

Premium Display Customer-selected Enhancements:

Keyless password entry -- When the key switch is turned on, the display will require the driver to key in a password before the truck will operate. The display will record the driver code number and truck hours when the driver started operating the truck. The history will be recoverable by PC. Password access can also be used to tailor the truck to the application or the individual. For new operators or for handling delicate loads, like eggs or glass, the truck can be password protected into mode 1 (slow mode).

Startup Checklist -- Customer can program the display to ask up to 10 customer selected questions (up to 40 characters each)

The following list of questions could be asked at the beginning of each operating shift:

- Check hydraulic oil level and hydraulic functions
- Check tire condition
- Check gauges and warning lights
- Check horn, lights and reverse alarm
- Check park brake
- Check service brake
- Check leaks
- Check forward and reverse operation

SERVICEABILITY

EASY CONTROLLER MAINTENANCE



- ✓ Control adjustments are made with a G.E. handset. A “hand-held” device that is connected to the truck without disturbing any normal truck wiring

The GE GEN III transistorized controller has eliminated all of the high cycle contactors, eliminating the servicing of these consumable parts.

All of the electrical connections in the controller are soldered, eliminating possible loose connections due to improperly tightened hardware.

The control is in a self-contained “gray box” component. If the gray box cannot be corrected through diagnosis, simply replace it. This eliminates the need to change rectifiers, capacitors, control cards, contactors and wires. (Others must replace these items on their SCR systems)

COMPUTER DIAGNOSTICS

- ✓ A laptop computer with a standard serial port can program or change a control in seconds



EASY CONTROLLER MAINTENANCE

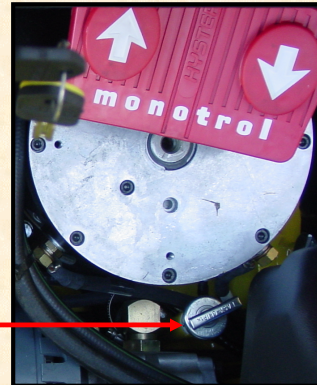
- ✓ **Overall lower maintenance due to fewer components, simpler layout and less wiring connections**

FLOOR PLATE

- ✓ Easily removable two-piece floor plate provides access for the oil level check



Oil Level check - dip stick style



Metal floor plates are easily removed by hand (slide out and lift off) without the use of tools.

Hydraulic oil level check is made easy by removing right floor plate.

Tilt cylinders are located below the floor plate for a more uncluttered floorboard area.

FLOOR PLATE

- ✓ Hand holes on each side provide below the floor plate ventilation



FLOOR PLATE

- ✓ The left side floor plate serves as the operator's step



COUNTERWEIGHT

- ✓ The counterweight has been designed to provide an easy access compartment for all major electrical and steer system components



All major electrical and steer system components are stored beneath the counterweight cover. Easy removal of two bolts releases the counterweight cover from the truck frame giving the operator and/or mechanic full access to electric and steer components. All truck fuses are also located beneath the counterweight cover. The cover has a watertight internal seal to protect the components.

BATTERY COMPARTMENT

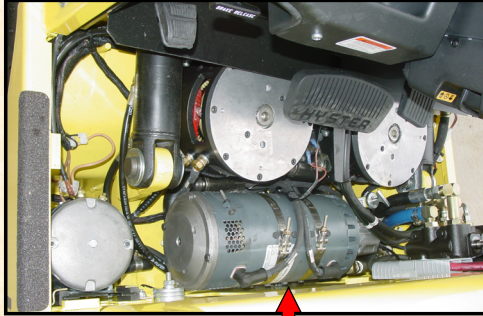
- ✓ Battery compartment hood is made of heavy duty, UL approved plastic
- ✓ Hood tilts rearward for battery removal and access



The J30-40XMT₂ comes standard with a 36 volt electrical system. The truck can be ordered with a 48 volt electrical system as a no charge option. This interchangeable option provides dealerships with added stocking flexibility.

The battery compartment hood can be easily lifted due to a gas cylinder assistance feature. This provides reduced operator effort when opening the hood.

HOIST MOTOR ACCESS



Hoist Motor

- ✓ The hoist motor can be easily tilted up for motor brush inspection and removed for brush replacement
- ✓ Premium hoist motors feature motor temperature and brush wear sensors

The hoist motor, located beneath the floor plates, can be easily tilted up for motor brush inspection and brush replacement. (The motor is held in place by two screw clamps.) The premium hoist motor features can be used with the premium display option.

J30-40XMT₂

FEATURE SUMMARY

- ✓ **PRODUCTIVITY**
- ✓ **MANUEUVERABILITY**
- ✓ **ERGONOMICS & SAFETY**
- ✓ **SERVICEABILITY**

PRODUCTIVITY FEATURES

- ✓ **Dual SEM Traction Motors**
- ✓ **GE GEN III Transistor Motor Controllers**
- ✓ **Enhanced Dash Displays**
- ✓ **Hydraulic Systems**
- ✓ **Power Steering System**

Dash Display: Standard & Premium

Hydraulics: 2 motor controller options

Power Steering: Rack and pinion actuator, on-demand steer option

MANEUVERABILITY FEATURES

- ✓ **Twin Wheel Steering**
- ✓ **Independently driven Drive Motors**
- ✓ **Shortened truck length**
- ✓ **Reduced turning radius**

ERGONOMICS & SAFETY FEATURES

- ✓ Rubber coated handgrip on left overhead guard leg
- ✓ Full step for easy entrance and exit
- ✓ 5 position tilt column steering wheel
- ✓ Lock-to-lock steering (5.3 turns)

ERGONOMICS & SAFETY FEATURES

- ✓ **Easy on and off, low operator seat height, electrical seat switch**
- ✓ **Maximized overhead visibility**
- ✓ **Good visibility through the mast**
- ✓ **Easy, step down parking brake**
- ✓ **Standard Monotrol pedal**

ERGONOMICS & SAFETY FEATURES

- ✓ **Controller Noise Reduction**
- ✓ **Additional Noise Reduction**
- ✓ **Dash display warnings and safety startup checklist**
- ✓ **Ergonomically shaped hydraulic Lift/Tilt control levers**

Additional Noise Reduction: Low rpm motors, quality transmission bearings, spiral bevel and helical gears, low noise pumps and steer control unit, motors and hydraulics mounted on rubber isolators

SERVICEABILITY FEATURES

- ✓ **Easy Motor/Controller Maintenance**
- ✓ **Easy access for oil level checks through removable floor plates**
- ✓ **Easy access to electrical and steer system components through removable counterweight cover**

SERVICEABILITY FEATURES

- ✓ **Hoist motor can be tilted up for motor brush inspection and brush replacement**
- ✓ **Premium hoist motors feature motor temperature and brush wear sensors**

SUMMARY

The three wheel, twin steer trucks provide state-of-the-art transistorized electric motor controls. These innovative designs make this model of trucks highly competitive in performance and price.

SUMMARY

Complemented by ergonomic enhancements, including reduced heat in the operator's compartment, optimum seat positioning and easy-reach placement of the hydraulic controls, these trucks will be well received in the marketplace.

Original Files

[Cover Page \(WORD\)](#)