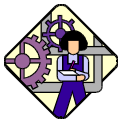
# Competitive Review

## A Comparison of the Hyster R30XM$_2$ vs. The Competition

This section compares the Hyster R30XM$_2$ to the competition. It will evaluate competitive models on the following product attributes:

- Increased Productivity
- Increased Operator Comfort
- Reduced Maintenance Costs
- Serviceability
- Reliability

Photographs of the Hyster R30XM$_2$ and competitor models are included in the competitive analysis. Each one of these product attributes will be thoroughly discussed feature-by-feature in a chart format. Also, the benefit of the Hyster R30XM$_2$ truck's features in comparison to the competitors' models will be pictorially displayed. These benefits are illustrated by four symbols:

| Benefit Types | Symbol |
|---|---|
| Increased Productivity |  |
| Increased Operator Comfort |  |
| Reduced Maintenance Costs |  |
| Serviceability |  |
| Reliability |  |

Note: Throughout the competitive presentation you will see this yellow check mark ✓ which indicates the Hyster advantage over the competition for a particular feature.

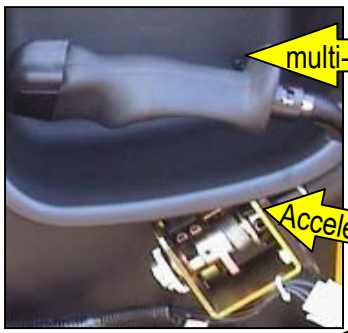
# COMPETITIVE REVIEW

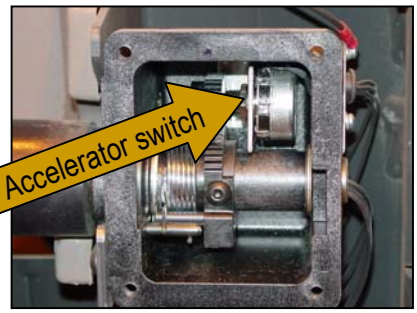

HYSTER R30XM$_2$

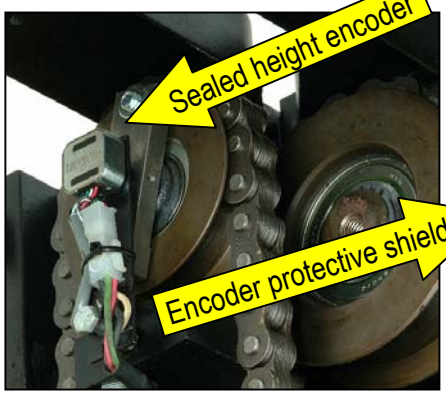
VS


CROWN SP3020-30

# REDUCED MAINTENANCE COSTS, RELIABILITY



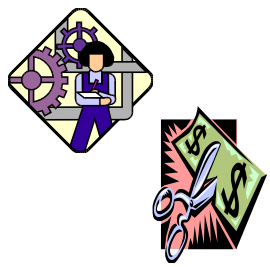



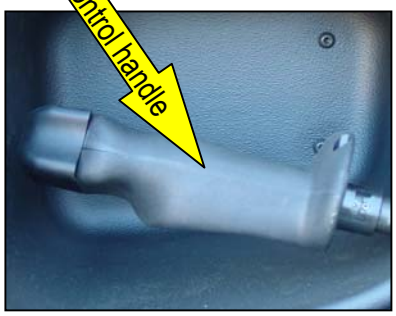

Protective encoder shield


Hyster accelerator switch and Hyster mast height encoder

Crown accelerator switch and Crown height sensing switches

| FEATURE | HYSTER | CROWN | BENEFIT |
|---|---|---|---|
| **Accelerator Switch** | The accelerator switch used on the R30XM$_2$ is a Hall effect sensor. Hall effect sensors are sealed to protect against moisture and other contaminates. Hall effect sensors have no wearable electrical parts and require no adjustments, which make them very reliable. | The Crown SP3020-30 features a potentiometer that is used as the accelerator switch. Potentiometers require adjustments, are less reliable and are prone to wear and contamination from moisture and vibration. |  The state-of-the art electrical devices used on the Hyster R30XM$_2$ are more reliable and require less maintenance and service requirements compared to the Crown SP3020-30 order picker. |
| **Height Sensing** | The Height encoder found on the Hyster R30XM$_2$ monitors the operator platform height by counting the number of mast chain pulley rotations, which is a direct relationship to platform height. The height encoder requires no adjustments. | The Crown SP3020-30 order picker features mechanical switches that control platform height. As compared to the height encoder, mechanical switches have more wearable parts, require more adjustments and are more susceptible to physical damage than the height encoder. | |

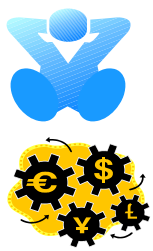
# OPERATOR COMFORT / INCREASED PRODUCTIVITY



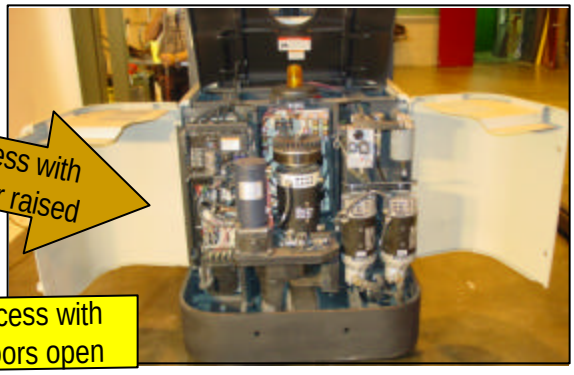



Hyster multi-function control handle and adjustable console


Crown accelerator handle. Crown does not offer an adjustable console

| FEATURE | HYSTER | CROWN | BENEFIT |
|---|---|---|---|
| **Multi-function Control Handle** | The multi-function control handle found on the R30XM$_2$ has a palm rest and is scalloped at the bottom of the handle for hand comfort and positioning. The handle also pivots to allow three different angled positions depending on operator preference. | The Crown does not feature a multi-function control handle. The twist grip accelerator is uncomfortable and requires more effort to activate, contributing to wrist and hand fatigue.The accelerator grip is fixed and is non-adjustable. |  Innovative designs such as the adjustable console and the adjustable multi-function control handle reduce operator fatigue, enhance operator comfort while contributing to higher productivity levels. |
| **Adjustable Console** | The R30XM$_2$ order picker features an optional adjustable console that has a full six inches of vertical travel. The adjustable console is an industry first, and is unique in that it allows a comfortable operator stance for various sizes of operators. | The Crown SP3020-30 does not offer an adjustable console. | |

# SERVICEABILITY, REDUCED MAINTENANCE COSTS

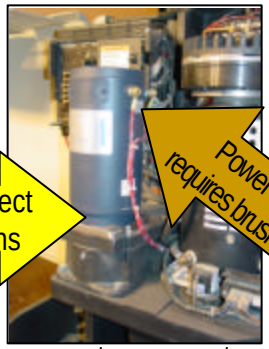


Motor compartment access with doors open and top cover raised

Motor compartment access with cover removed and doors open

Hyster's 3-phase brushless steer motor

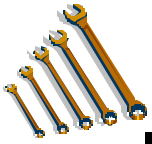
Both products feature direct drive steer motor designs



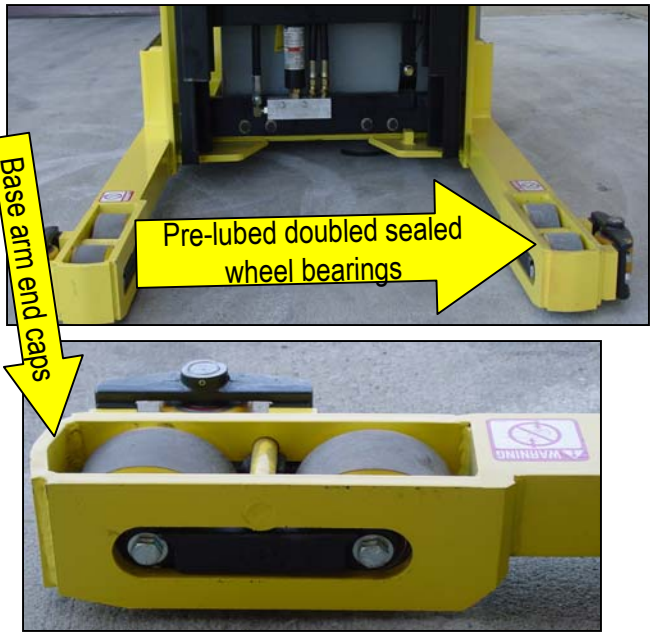
Power steering motor requires brush maintenance

Hyster motor compartment access and brushless power steering motor

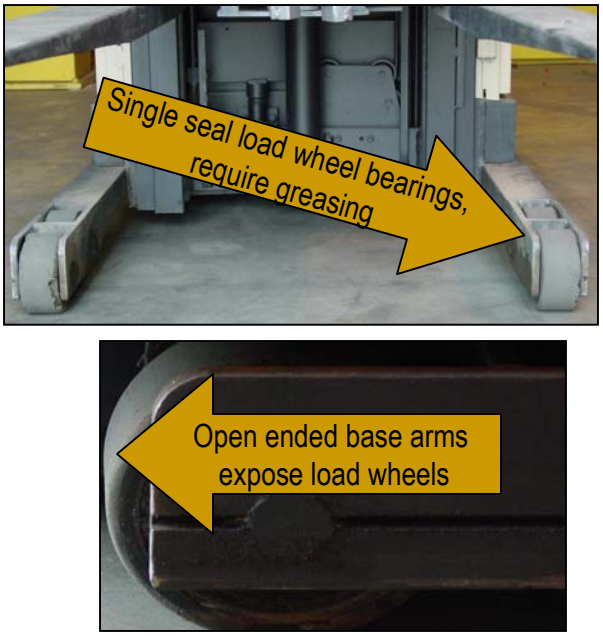
Crown motor compartment access and power steering motor

| FEATURE | HYSTER | CROWN | BENEFIT |
|---|---|---|---|
| **Motor Compartment Access** | The Hyster R30XM$_2$ motor compartment is accessed by simply removing two thumb screws (no tools required). The metal hinged doors swing open to provide adequate access to all motors. The motor compartment top cover lifts off and is easily removed by loosening 4 spring-loaded quarter-turn fasteners. | The Crown SP3020-30 motor compartment is accessed by removing two screws (tools required).Two hinged doors swing open and provide adequate access to all motors. The top cover of the motor compartment lifts up and down easily providing good access to the battery. |   The Hyster dual hinged metal doors provide protection with quick and easy access to the motor compartment. The Hyster order pickers feature a 3 phase brushless steer motor, which enhances reliability and reduces maintenance costs. |
| **Steer Motor** | The steer motor found on the Hyster R30XM$_2$ is a three-phase brushless design. Being a brushless motor, there is no service or maintenance requirements. The gearbox is integral to the motor itself for improved durability. | The steer motor found on the Crown SP3020-30 order picker is a standard DC motor. This is not a brushless motor and requires servicing and periodic brush adjustments and replacement. | |

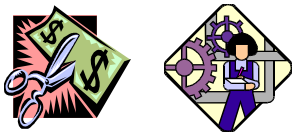
# REDUCED MAINTENANCE COSTS, RELIABILITY



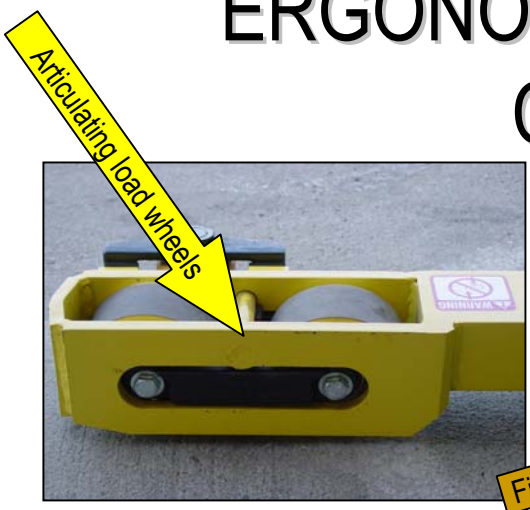

Hyster load wheels and base arm end caps



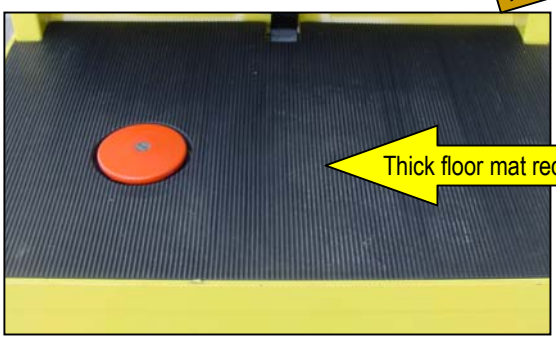

Crown load wheels and base arm end caps

| FEATURE | HYSTER | CROWN | BENEFIT |
|---|---|---|---|
| **Load Wheel Bearings** | The load wheel bearings used on the Hyster R30XM$_2$ are a pre-lubed double sealed bearing. Pre-lubed double sealed bearings are greased when manufactured and sealed to keep lubricants in and contamination out. Basically a maintenance free wheel bearing. | The Crown SP3020-30 does not utilize pre-lubed double sealed wheel bearings. The load wheels must be greased during maintenance PM's (preventative maintenance) checks. Non sealed bearings are much more susceptible to contamination. |  The R30XM$_2$ order picker with double sealed, pre lubricated wheel bearings eliminate bearing greasing and protect the wheel bearings from moisture, dirt and other contamination. The protective load wheel end-caps protect the load wheels from physical damage. These innovative designs reduce maintenance costs and improve reliability. |
| **Load Wheel Endcaps** | The Hyster order picker basearms feature protective load wheel end-caps. The end-caps help protect the load wheels from damage. | The Crown SP3020-30 basearms do not feature load wheel end-caps. Without the end-caps, the load wheels are left exposed and are prone to damage, especially with the platform raised. | |

# ERGONOMICS / OPERATOR COMFORT







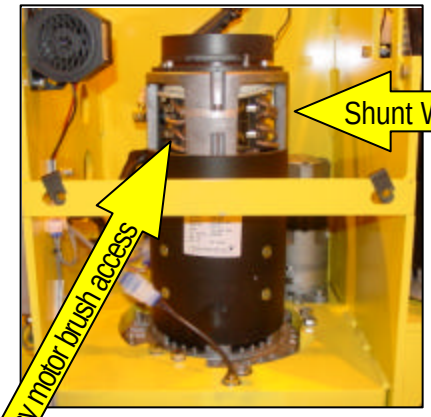


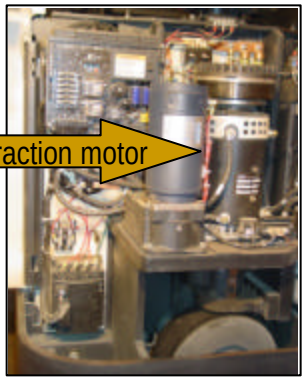
Hyster articulating load wheel and anti-slip floor mat

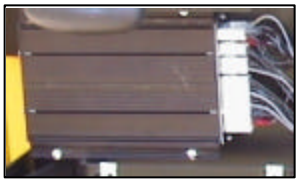
Crown fixed load wheel and anti-slip floor mat

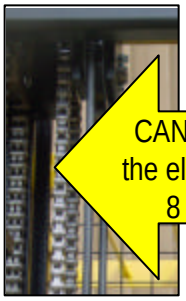
| FEATURE | HYSTER | CROWN | BENEFIT |
|---|---|---|---|
| **Articulating Load Wheels** | The Hyster R30XM$_2$ features articulating load wheels. Articulating load wheels provide a smoother ride than typical fixed mounted load wheels, especially on uneven or rough floor surfaces and expansion joints. | The Crown SP3020-30 does not offer articulating load wheels. The fixed load wheel design found on the SP3020-30 does not "float" like the articulating load wheel design; resulting in a rougher ride. | The innovative articulating load wheel design combined with a full one inch anti-slip rubber floor mat contribute to a smooth and comfortable ride, while reducing operator fatigue. |
| **Operator Compartment Floor mat** | The Hyster R30XM$_2$ operator compartment features a full 1 inch thick rubber floor mat. This thick rubber cushioned floor mat has a ribbed texture to not only provide a cushioning effect but also acts as an anti-slip mat. | The Crown SP 3020-30 features a .750 thick rubber floor mat. The floor mat is textured like the Hyster floor mat to provide a cushioning effect and act as an anti-slip mat. However, the Hyster floor mat provides .250 inches more cushion than the Crown floor mat. | |

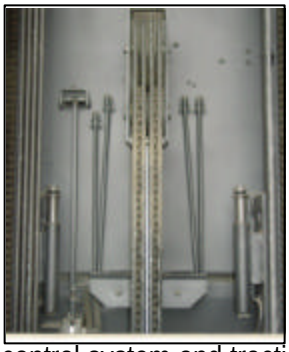
# REDUCED MAINTENANCE COSTS





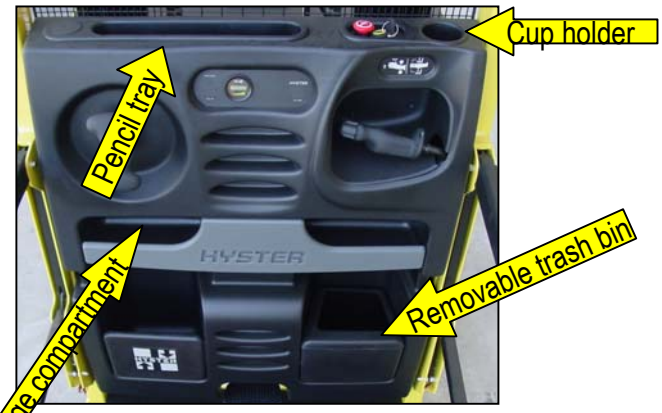




Hyster traction motor and MCU (Master Control Unit)

Crown control system and traction motor. Crown chassis to platform cabling

| FEATURE | HYSTER | CROWN | BENEFIT |
|---|---|---|---|
| **SEM Traction Motor** | The R30XM$_2$ features SEM (Separately Excited Motor) technology. The SEM traction system features an Auto Deceleration System which increases motor brush life, battery life and reduces brake wear. | The Crown SP3020-30 order picker does not feature a SEM traction system. The series wound drive motor and non-SEM traction system require more maintenance and do not prolong battery life. |  The combination of SEM and CANbus technology enhance product reliability and performance while simplifying the electrical system and reducing service and maintenance costs. |
| **CANbus Communication System** | The R30XM$_2$ features a CANbus communication system. This system reduces the number of wires and wire connections required to interface the platform to the tractor (chassis). This feature simplifies the electrical system and reduces maintenance requirements. | The SP3020-30 does not feature a CANbus communication system. The SP3020-30 carries three times the number of over the mast electrical conductors as the R30XM$_2$, resulting in a more complex electrical system; contributing to expensive service and maintenance costs. | |

# OPERATOR COMFORT, INCREASED PRODUCTIVITY





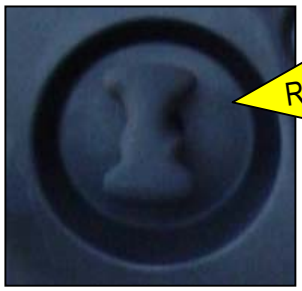


Hyster operator compartment cover and light and fan package

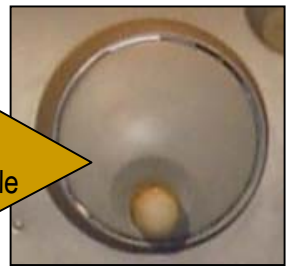
Crown operator compartment cover and light and fan package

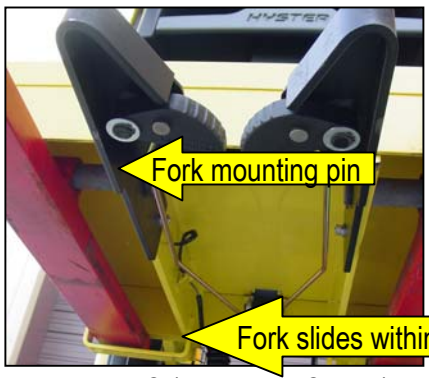
| FEATURE | HYSTER | CROWN | BENEFIT |
|---|---|---|---|
| **Storage Amenities** | There are several storage pockets found within the Hyster R30XM$_2$ operator compartment. The storage pockets are large enough for a clip board or a hand held scanner. Also featured is a removable trash bin which requires no tools to remove or install. | The Crown SP3020-30 operator compartment provides two storage bins. They are large enough for a clip board or scanner, however, there is no cup holder or removable trash bin provided. |   The Hyster R30XM$_2$ features many operator amenities. Designs like the spacious storage compartments, pencil tray, removable trash bin and light and fan package enhance operator comfort and contribute to a more productive operator. |
| **Operator compartment light and fan package** | The Hyster R30XM$_2$ features a dual light and fan package as standard equipment. The standard light and fan package contains a dome light, a fixed spot light and a two speed fan. Two additional work lights are available as a standard price book option. | The Crown SP3020-30 order picker does not provide a light and fan package as standard equipment. In fact, the light and fan package that Crown offers is a $425.00 price book option and must be ordered as a complete package. (Includes dome light, 2 work lights). | |

# INCREASED PRODUCTIVITY

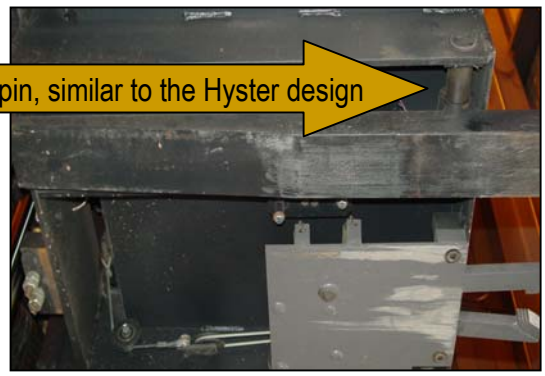



Multi-turn steer system
Return to center steering not available





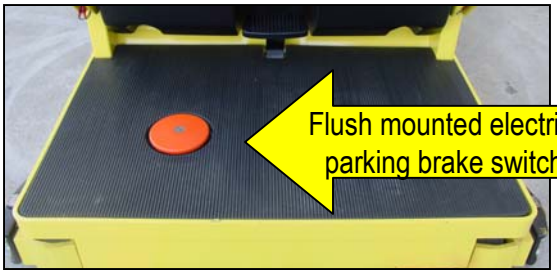

Hyster RTC (Return To Center) steering and fork adjustment




Crown multi-turn steering and fork adjustment

| FEATURE | HYSTER | CROWN | BENEFIT |
|---|---|---|---|
| **Return To Center (RTC) Steering** | The Hyster R30XM$_2$ features Return To Center steering as the standard steer option. RTC steering is recommended for rail guided and wire guided applications, and applications where fork end travel is the primary means of travel. Multi-turn steering is available as a no charge price book option | The Crown SP3020-30 does not offer a return to center steering option. |  Hyster Company provides the customer with two optional steering systems to accommodate their specific applications for a more productive operation. Fork adjustments require no tools and no mounting hardware removal or installation, which saves time, contributing to increased productivity potential. |
| **Fork Adjustment** | Fork adjustment on the Hyster order picker is quick and easy. To move the forks to different positions simply lift up on the fork tip and slide the fork into the desired position. There are no tools required and no removal and installation of mounting hardware. | The Crown fork adjustments is very similar to the Hyster fork adjustment design. To slide the forks to another position simply lift up on the fork tips and slide into position. No tools required. | |

# OPERATOR COMFORT, INCREASED PRODUCTIVITY





Hyster flush mounted electric parking brake switch and retractable side gates



Crown raised electric parking brake switch and retractable side gates

| FEATURE | HYSTER | CROWN | BENEFIT |
|---|---|---|---|
| **Flush Mount Electric Foot Switch** | The flush mounted electric foot switch reduces foot fatigue and requires no extra lifting of the leg to activate. The switch is also located within the operator's natural stance, regardless if driving fork first or tractor (chassis) end first. | The Crown electric foot switch is a pedal design. The raised foot switch pedal requires the operator to lift and depress the pedal each time to travel between picks; which contributes to operator leg and foot fatigue. |  The ergonomic designs like the flush mounted electric foot switch and rubber coated side gate assembly hand grips found on the Hyster R30XM$_2$ contribute to operator comfort and enhances productivity potential. |
| **Rubber Coated Retractable Sidegates** | The R30XM$_2$ retractable side gate handles are coated with a soft touch, sure grip rubber coating. The rubber coating is pleasing to the touch while providing a good hand grip. | The Crown retractable side gates do not feature a rubber coated hand grip for raising and lowering. The side gates do not provide soft touch - sure grip rubber coating | |

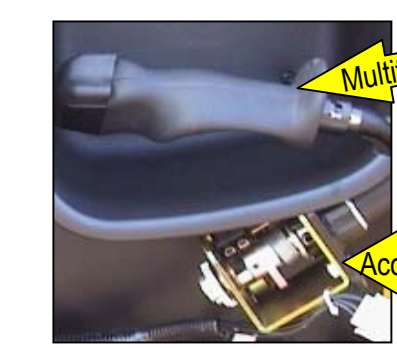
# COMPETITIVE REVIEW

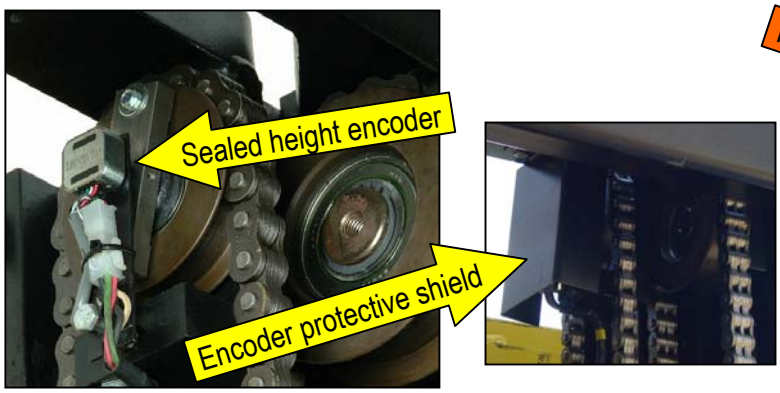

HYSTER R30XM$_2$

VS

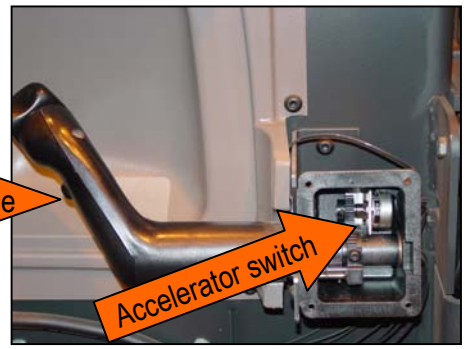

RAYMOND OPC30TT

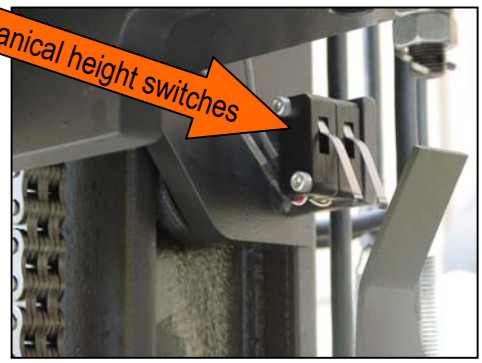
# REDUCED MAINTENANCE COSTS, RELIABILITY



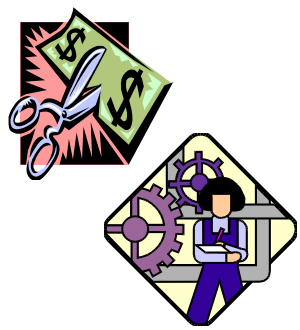




Hyster multifunctional control handle and mast height encoder



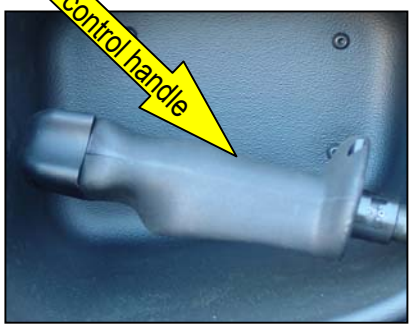




Raymond multifunctional control handle and mechanical mast height switches

| FEATURE | HYSTER | RAYMOND | BENEFIT |
|---|---|---|---|
| **Accelerator Switch** | The R30XM$_2$ accelerator switch is a hall effect sensor. Hall effect sensors are sealed to prrotect against moisture and other contamination. Hall effect sensors have no wearable electrical parts and require no adjustments. | The Raymond OPC030TT accelerator switch is a potentiometer. Potentiometers have more wearable parts and require more adjustments as compared to Hall effect sensors. Potentiometers are also more prone to vibration and moisture contamination. |  |
| **Height Sensing** | The Height encoder found on the Hyster R30XM$_2$ monitors the operator platform height by counting the number of mast chain pulley rotations; which is a direct relationship to platform height. The height encoder requires no adjustments. The height encoder is used on standard and freezer construction trucks. | The OPC030TT order picker features mechanical switches (standard) that control platform height. Compared to the height encoder, mechanical switches have more wearable parts, require more adjustments and are more susceptible to physical damage than the encoder. Raymond offers an optional flow sensor for mast height measurement in lieu of mechanical switches. | The state-of-the-art electrical devices used on the Hyster R30XM$_2$ are more reliable and require less maintenance and service requirements as compared to the Raymond OPC030TT order picker. |

# OPERATOR COMFORT / INCREASED PRODUCTIVITY

Multi-function control handle



Multi-function control handle

Adjustable console push butt

Hyster multi-function control handle and adjustable console

No adjustable console

Raymond multifunction control handle and operator console

| FEATURE | HYSTER | RAYMOND | BENEFIT |
|---|---|---|---|
| **Multi-function Control Handle** | The multi-function control handle found on the R30XM$_2$ has a palm rest and is scalloped at the bottom of the handle for hand comfort and positioning. The handle also pivots to allow three different angled positions depending on operator preference. | The Raymond OPC030TT also features a multi-function control handle. However, the control handle design does not feature a palm rest and is not adjustable. In addition, the hand is not in its natural position when gripping the control handle as compared to the R30XM$_2$ hand grip. |  Innovative designs such as the adjustable console and the adjustable multi-function control handle reduce operator fatigue, enhance operator comfort while contributing to higher productivity levels. |
| **Adjustable Console** | The R30XM$_2$ order picker features an (optional) adjustable console that has a full six inches of vertical travel. The adjustable console is an industry first, and is unique in that it allows a comfortable operator stance for various size operators. | The Raymond OPC030TT does not offer an adjustable console. | |

# REDUCED MAINTENANCE COSTS, RELIABILITY

Access doors provide component protection and quick access

Motor compartment access with rear cover removed

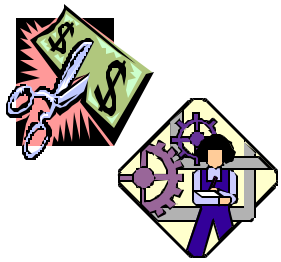
Power steering motor requires brush maintenance

Hyster's 3-phase brushless steer motor

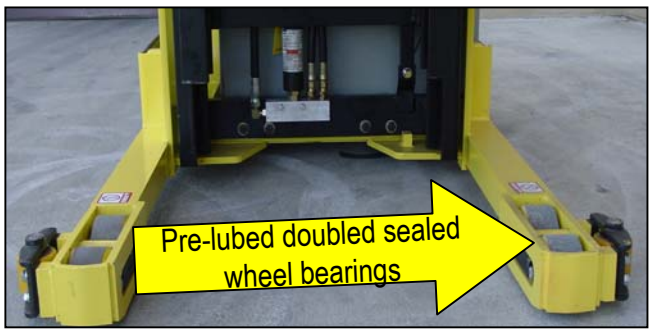
Both products feature direct drive steer motor designs

Hyster service compartment and

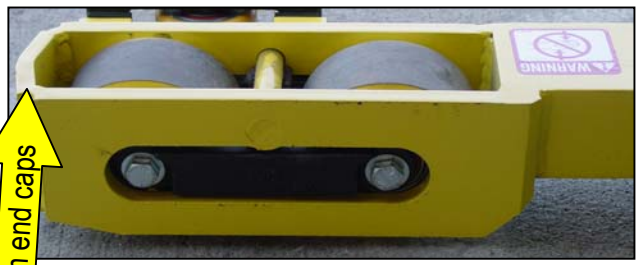
Raymond service compartment and

| FEATURE | HYSTER | RAYMOND | BENEFIT |
|---|---|---|---|
| **Steer Motor** | The Hyster R30XM$_2$ features a three-phase brushless steer motor. Utilizing a brushless steer motor enhances reliability and requires no servicing, which reduces maintenance costs. | The Raymond OPC030TT uses a typical DC steer motor. With the standard DC motor design, brush servicing and replacement is inevitable. Compared to the Hyster product, the Raymond steer motor is less reliable and more expensive to maintain. |  The Hyster motor compartment features dual hinged metal doors that provide protection and quick, easy access to the motor compartment. The R30XM$_2$ featuring a 3 phase brushless steer motor, enhances reliability while reducing maintenance costs. |
| **Motor Compartment Access** | The Hyster motor compartment features dual hinged metal doors that provide protection and quick, easy access to the motor compartment. The Hyster R30XM$_2$ features a plastic top motor compartment cover and is easily removed by 4 spring loaded quarter-turn fasteners. | The Raymond OPC030TT motor compartment is accessed by lifting off the rear cover (no tools required). The rear cover is made of a non breakable plastic, and when removed, good motor compartment access is achieved. | |

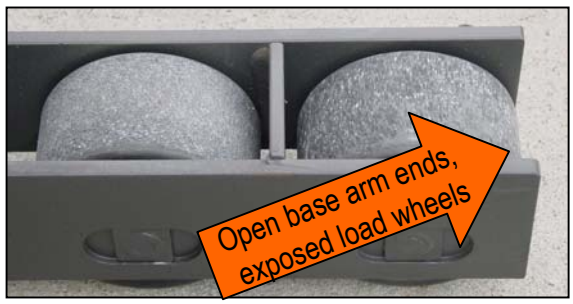
# REDUCED MAINTENANCE COSTS, RELIABILITY



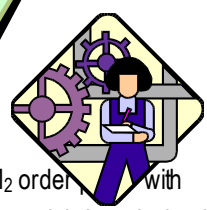




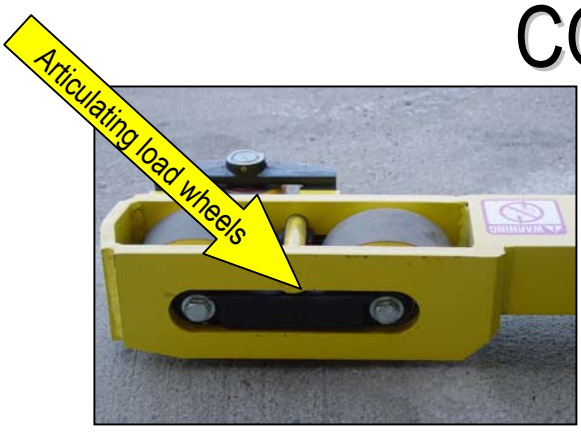

Hyster sealed load wheel bearings and base arm end caps



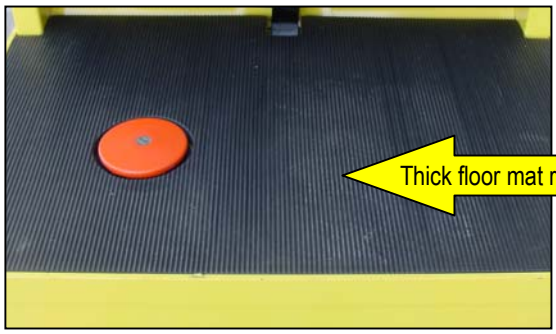

Raymond load wheel bearings and base arm end caps

| FEATURE | HYSTER | RAYMOND | BENEFIT |
|---|---|---|---|
| **Seald Load Wheel Bearings** | The load wheel bearings used on the Hyster R30XM$_2$ are a pre-lubed double sealed bearing. Pre-lubed double sealed bearings are greased when manufactured and sealed to keep lubricants in and contamination out. Basically, this produces a maintenance free wheel bearing. | The Raymond OPC030TT does not utilize pre-lubed double sealed wheel bearings. The load wheels must be inspected / greased during maintenance PM's (preventative maintenance) checks. Non sealed bearings are much more susceptible to contamination. |   The R30XM$_2$ order[illegible] with double sealed, pre lubricated wheel bearings eliminate bearing greasing and protect the wheel bearings from moisture, dirt and other contamination. The protective load wheel end-caps protect the load wheels from damage. These innovative designs reduce maintenance costs and improve reliability. |
| **Load Wheel Endcaps** | The Hyster R30XM$_2$ basearms feature protective load wheel end-caps. The end-caps help protect the load wheels from damage. | The Raymond OPC030TT basearms do not feature load wheel end-caps. Without the end-caps, the load wheels are left exposed and are prone to damage, especially with the platform raised. | |

# ERGONOMICS / OPERATOR COMFORT







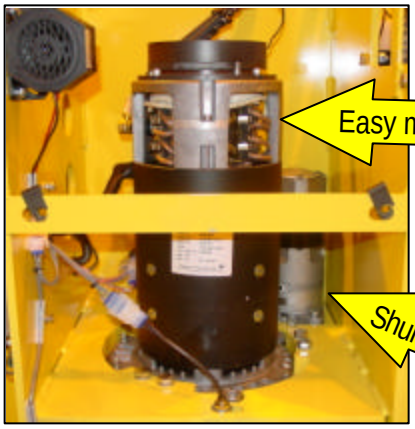


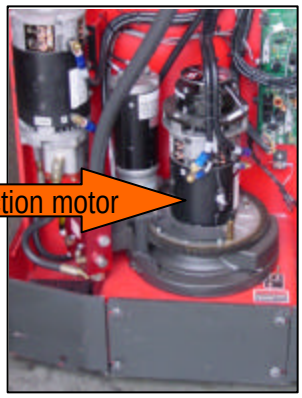
Hyster articulating load wheel assemblies and floor mat

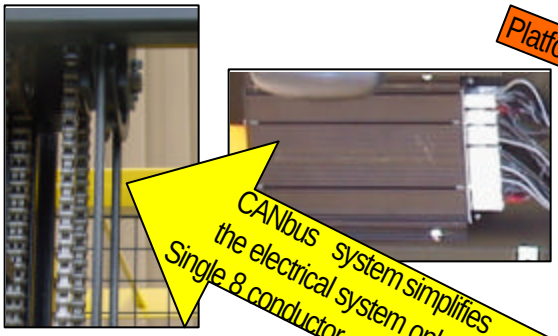
Raymond load wheel assemblies and floor mat

| FEATURE | HYSTER | RAYMOND | BENEFIT |
|---|---|---|---|
| **Articulating Load Wheels** | The Hyster R30XM$_2$ features articulating load wheels. Articulating load wheels provide a smoother ride than typical fixed mounted load wheels, especially on uneven or rough floor surfaces and expansion joints. | The Raymond OPC030TT does not offer articulating load wheels. The fixed load wheel design found on the OPC030TT does not "float" like the articulating load wheel design; resulting in a rougher ride. | The innovative articulating load wheel design, combined with a full one inch anti-slip rubber floor mat, contribute to a smooth and comfortable ride while reducing operator fatigue. |
| **Operator Compartment Floor mat** | The Hyster R30XM$_2$ operator compartment features a full 1 inch thick rubber floor mat. This thick rubber cushioned floor mat has a ribbed texture to not only provide a cushioning effect but also acts as an anti-slip mat. | The Raymond features a .5 inch thick rubber floor mat. The floor mat is textured with dimples to provide a cushioning effect and act as an anti-slip mat. However, the Hyster floor mat provides twice the cushion as does the Raymond. | |

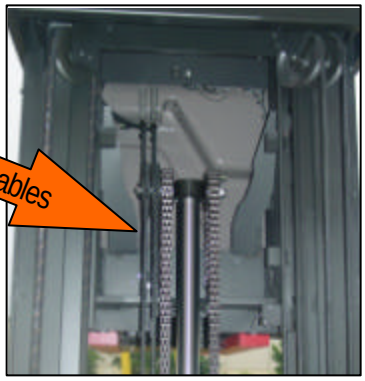
# REDUCED MAINTENANCE COSTS




Hyster traction motor and electrical cables




Raymond traction motor and electrical cables

| FEATURE | HYSTER | RAYMOND | BENEFIT |
|---|---|---|---|
| **SEM Traction Motor** | The R30XM$_2$ features SEM (Separately Excited Motor) technology. The SEM traction system features an Auto Deceleration System which increases motor brush life, battery life and reduces brake wear. | The Raymond OPC030TT order picker also features a SEM traction Motor. The Raymond OPC030TT shares the same tractive benefits as the Hyster traction system. |  The combination of SEM and CANbus technology used on the Hyster R30XM$_2$ features a much less complex electrical system compared to the Raymond system. Plus the Hyster electrical system does not reflect proprietary costs or specialized handsets to trouble shoot. |
| **CANbus Communication System** | The R30XM$_2$ features a CANbus communication system. This system reduces the number of wires and wire connections required to interface the platform to the tractor (chassis). This feature simplifies the electrical system and reduces maintenance requirements. | The OPC030TT order picker features Raymond's own designed electrical system. However Raymond's CANbus version requires two 6 conductor over the mast electrical cables as compared to Hyster's R30XM2 single 8 conductor over the mast electrical cable. | |

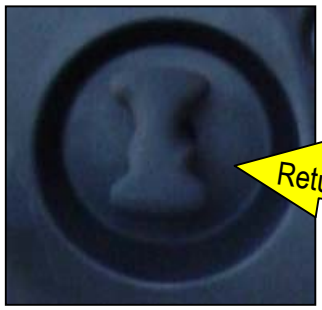
# OPERATOR COMFORT, INCREASED PRODUCTIVITY


Hyster operator compartment cover and light and fan package


Raymond operator compartment cover and light and fan package

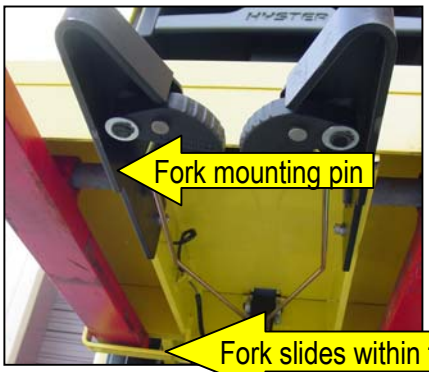
| FEATURE | HYSTER | RAYMOND | BENEFIT |
|---|---|---|---|
| **Storage Amenities** | There are several storage pockets found within the Hyster R30XM$_2$ operator compartment. The storage pockets are large enough for a clip board or a hand held scanner. Also featured is a removable trash bin which requires no tools to remove or install. | The Raymond OPC030TT operator compartment provides two storage bins. They are large enough for a clip board or scanner, however, there is no cup holder or removable trash bin provided. |  The Hyster R30XM$_2$ features many operator amenities. Designs like the spacious storage compartments, pencil tray, removable trash bin and light and fan package enhance operator comfort and contribute to a more productive operator. |
| **Operator compartment light and fan package** | The Hyster R30XM$_2$ features a dual light and fan package as standard equipment. The standard light and fan package contains a dome light, a fixed spot light and a two speed fan. Two additional work lights are available as a standard price book option. | The Raymond OPC030TT does not provide a light and fan package as standard equipment. The light and fan package is a $375.00 price book option. The light and fan package contains a fan, work light and dome light. | |

# INCREASED PRODUCTIVITY



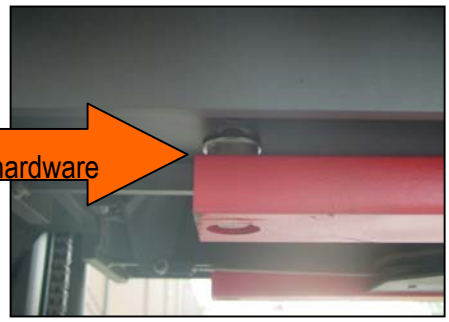
Return To Center steering

Multi-turn steer system
Return to center steering not available




Hyster's RTC steering and fork adjustment

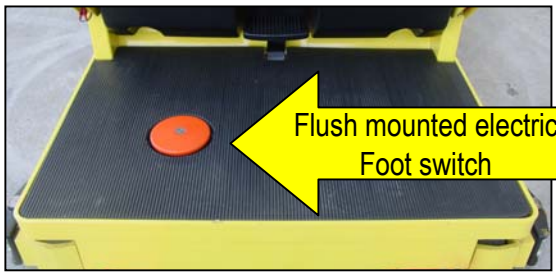
Fork mounting hardware

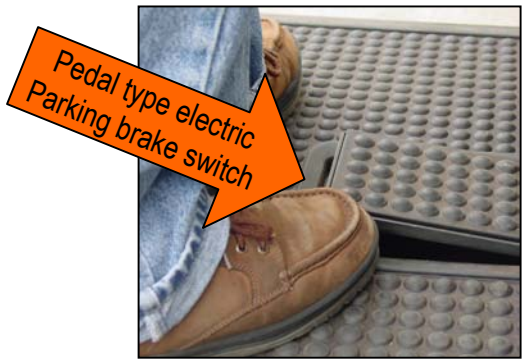


Raymond's multi-turn steering and fork adjustment

| FEATURE | HYSTER | RAYMOND | BENEFIT |
|---|---|---|---|
| **Return To Center Steer** | The Hyster R30XM$_2$ features RTC (Return To Center) steer as the standard steer option. RTC steer is recommended for rail guided and wire guided applications, and applications where fork end first is the primary means of travel. Multi-turn steer is available as a no charge price book option. | The Raymond OPC030TT does not offer a return to center steering. |  Hyster Company provides the customer with two optional steering systems to accommodate their specific applications for a more productive operation. Fork adjustment requires no tools and no mounting hardware removal or installation, which saves time, contributing to a more productive operator. |
| **Fork Adjustment** | Fork adjustment on the Hyster order picker is quick and easy. To move the forks to different positions simply lift up on the fork tip and slide the fork into the desired position. There are no tools required and no removal and installation of mounting hardware. | To adjust the forks on the Raymond OPC030TT, tools for removing and installing fork mounting hardware are needed. Fork adjustment requires removing mounting hardware, sliding the forks while aligning the mounting holes. The weight of the forks makes it difficult for one person to slide and align the forks at the same time. | |

# OPERATOR COMFORT






Hyster electric parking brake switch and retractable side gates

Raymond electric parking brake switch and retractable side gates

| FEATURE | HYSTER | RAYMOND | BENEFIT |
|---|---|---|---|
| **Flush Mount Electric Foot Switch** | The flush mounted electric parking brake switch reduces foot fatigue and requires no extra lifting of the leg to activate. The switch is also located within the operator's natural stance, regardless if driving fork first or tractor (chassis) end first. | The Raymond electric foot brake switch is a pedal design. The raised foot switch pedal requires the operator to lift and depress the pedal each time to travel between picks; which contributes to operator leg and foot fatigue. |  The ergonomic designs, like the flush mounted foot switch and rubber coated side gate assembly hand grips found on the Hyster R30XM$_2$ contribute to operator comfort and enhances productivity potential. |
| **Rubber Coated Retractable Sidegates** | The R30XM$_2$ retractable side gate handles are coated with a soft touch, sure grip rubber coating. The rubber coating is pleasing to the touch while providing a good hand grip. | The Raymond retractable side gates do not feature a rubber coated hand grip for raising and lowering. The side gates are padded on the inside and have a gas assist cylinder to help control raising and lowering. | |

# COMPARATIVE EVALUATION

HYSTER R30XM$_2$

VS


RAYMOND OPC30TT


CROWN SP 3020-30

# *Order Picker*
# *Comparative Evaluation*

| Truck Model | | | | |
|---|---|---|---|---|
| Test Parameter | | Hyster (24v) R30XM$_2$ | Raymond (24v) EASI OPC030TT | Crown (24v) SP3020-30 |
| **Energy Consumption** | | 4.3 amp hours/cycle | 5.4 amp hours/cycle | 4.6 amp hours/cycle |
| **Travel Speeds** | | | | |
| *Empty Forward* | | | | |
| Travel Speed | | 6.0 mph | 6.08 mph | 6.05 mph |
| Current Draw | | 97 amps | 100.7 amps | 80 amps |
| *Loaded Forward* | | | | |
| Travel Speed | | 5.50 mph | 5.81 mph | 5.22 mph |
| Current Draw | | 129 amps | 164 amps | 92 amps |
| *Empty Reverse* | | | | |
| Travel Speed | | 6.03 mph | 5.51 mph | 5.82 mph |
| Current Draw | | 92 amps | 97.3 amps | 74 amps |
| *Loaded Reverse* | | | | |
| Travel Speed | | 5.61 mph | 5.57 mph | 5.08 mph |
| Current Draw | | 124 amps | 118.7 amps | 88 amps |
| **Acceleration** | | | | |
| Empty | | | | |
| 0-25 feet | Fwd | 4.84 sec | 3.84 sec | 5.17 sec |
| | Rev | 4.76 sec | 4.93 sec | 5.23 sec |
| 0-50 feet | Fwd | 7.10 sec | 7.68 sec | 8.22 sec |
| | Rev | 7.07 sec | 7.80 sec | 8.32 sec |
| 0-75 feet | Fwd | 10.23 sec | 10.21 sec | 11.44 sec |
| | Rev | 10.24 sec | 10.77 sec | 11.26 sec |
| 0-100 feet | Fwd | 12.76 sec | 12.74 sec | 14.11 sec |
| | Rev | 12.69sec | 13.73 sec | 14.36 sec |
| Loaded | | | | |
| 0-25 feet | Fwd | 4.88 sec | 5.75 sec | 5.59 sec |
| | Rev | 4.71 sec | 5.91 sec | 5.47 sec |
| 0-50 feet | Fwd | 8.23 sec | 9.05 sec | 9.14 sec |
| | Rev | 8.05 sec | 8.91 sec | 9.21 sec |
| 0-75 feet | Fwd | 11.41 sec | 11.85 sec | 12.77 sec |
| | Rev | 11.57 sec | 11.93 sec | 12.76 sec |
| 0-100 feet | Fwd | 14.4 sec | 14.48 sec | 15.95 sec |
| | Rev | 13.95 sec | 14.44 sec | 16.15 sec |

# *Order Picker*
# *Comparative Evaluation*

| Truck Model | | | |
|---|---|---|---|
| Test Parameter | Hyster (24v) R30XM$_2$ | Raymond (24v) EASI OPC030TT | Crown (24v) SP3020-30 |
| **Hoist Performance** | | | |
| Lift Speed Empty | 65.03 fpm | 56.31 fpm | 63.35 fpm |
| Current Draw | 240 amps | 235 amps | 284 amps |
| Lift Speed Loaded | 45.46 fpm | 34.23 fpm | 42.36 fpm |
| Current Draw | 402 amps | 404 amps | 452 amps |
| Lowering speed | | | |
| Empty | 68.0 fpm | 74.76 fpm | 80.10 fpm |
| Loaded | 68.0 fpm | 85.21 fpm | 78.47 fpm |
| **Sound Test** | | | |
| @ Ear | | | |
| Lift Loaded | 74-65 dBA | 60-57 dBA | 65-69 dBA |
| Lift Unloaded | 68-56 dBA | 65-56 dBA | 72-58 dBA |
| Travel Loaded | 67-72 dBA | 74-76 dBA | 63-65 dBA |
| Travel Unloaded | 69-71 dBA | 66-68 dBA | 66-67 dBA |

The previous two pages represent comparative data between the Hyster R30XM$_2$ and the competition. The tests were performed by the WPDC (Warehouse Product Development Center) Engineers in Greenville, N.C. using units that represent the very latest models by both Raymond and Crown. As can be seen from the test data results, the Hyster R30XM$_2$ performs head to head with both the Raymond OPC30TT and the Crown SP3020-30 order pickers. In most cases, the R30XM$_2$ out performed the competition, and used the least amount of energy consumption (battery discharge). The test data speaks for itself, as does the R30XM2.

Note: The data highlighted in yellow represents a Hyster R30XM$_2$ advantage.

Original Files

Competitive Review Cover Page (WORD)

Comparative Chart (XLS)