

# 966M XE/972M XE

Wheel Loaders

2017



	966M XE	972M XE
<b>Engine Model</b>	Cat® C9.3 ACERT™	Cat C9.3 ACERT
<b>Maximum Net Power – ISO 9249</b>	222 kW (302 hp metric)	232 kW (315 hp metric)
<b>Bucket Capacities</b>	3.20 m³-7.40 m³	3.20 m³-9.94 m³
<b>Operating Weight</b>	23 220 kg*	24 897 kg**

\*For 4.2 m³ general purpose buckets with BOCE.

\*\*For 4.8 m³ general purpose buckets with BOCE.



RELIABLE, PRODUCTIVE AND FUEL EFFICIENT

- Up to 25% more fuel efficient than the industry-leading M Series\*
- Up to 35% more fuel efficient than K Series\*
- **Cat continuously variable transmission** – Power is transmitted through a variator unit (hydraulic pump and motor) as well as a parallel mechanical gear path (highest efficiency) in order to maximize the transmission efficiency over a wide range of operating conditions
- **Performance Series buckets** are easy to load and improve material retention
- **Cat Fusion™ coupler system and work tools** provide a wide range of work tools and allow the same work tool on different sizes of wheel loaders
- **Cat engine with ACERT Technology** meets EU Stage IV emission standards and includes Cat Clean Emissions Module for continuous and efficient operation
- **Next generation axles** with standard on-the-go disc-type front manual differential locks provide optimal traction in varying underfoot conditions for improved productivity
- **Next generation load-sensing hydraulic system** provides optimal control of machine functions

EASE OF OPERATION

- **Best-in-class operator environment** for unmatched operator comfort and efficiency
- **Advanced technology with Cat Connect** monitors, manages and enhances job site operations

SERVICE ACCESS

- One-piece tilting hood, centralized service centers, windshield cleaning platform and harness tie-off provide the best in class service access

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*\*Fuel efficiency is measured in mass of material moved per volume of fuel burned. Average efficiency improvement as tested and analyzed for an average composite cycle and standard configuration with variations per comparable model with and without Economy Mode active. Factors influence result variation such as, but not limited to, machine configuration, operator technique, machine application, climate, etc.*

*\*\*Optional configuration and equipment may vary from region to region. Consult your Caterpillar representative for further details.*





**The 966M XE and 972M XE Wheel Loaders have a Stage IV ACERT engine equipped with a combination of proven electronic, fuel, air and aftertreatment components. Applying proven technologies systematically and strategically helps meet your high expectations for productivity and fuel efficiency. Deep system integration results in reduced emissions, improved performance and improved fuel economy without interrupting machine performance making it seamless to you.**

**The 966M XE and 972M XE Wheel Loader, with an advanced power train, has been designed to deliver superior performance and fuel efficiency while simplifying the operator's interface and operating technique. These machines excel at truck loading and the 972M XE is a great 3-pass match for large on-highway trucks. Aggregate Handler and other optional configurations are available.\*\***





# Reliable

Proven Components and Technology You Can Count On.

Every Stage IV ACERT engine is equipped with a combination of proven electronic, fuel, air and aftertreatment components.

## More Powerful, Reliable Engine Electronics

The electronics used in Stage IV ACERT engines are more powerful and robust than ever. Increased features and connection commonality improve the customer experience and increase quality and reliability. Over-foam wiring harness adds to reliability even in the most demanding applications.

## Hydraulics

The 966M XE and 972M XE hydraulic systems have significant design changes and customer value improvements. The main hydraulic valve is now a mono-block with an integrated ride control section. The mono-block design reduces weight, has forty percent fewer leak points and is common across all M Series models. Auxiliary third and fourth hydraulic functions can be easily added at the factory or in the field with the addition of a second remote valve.

## Equipment Monitoring

Cat Connect technologies and Cat dealer services take the guesswork out of equipment management. Product Link™ and the online VisionLink® application enable you to monitor real-time machine data and manage machines health. Your Cat dealer offers expert advice and S-O-S™ Services to maintain equipment reliability and efficiency.

## Cold Start Package

The optional cold start package provides dependable starts in extreme cold weather and high altitudes.



## Durable

Better Designed to Meet Your Needs.

### Frames

The robotically welded two-piece structural frame design provides strong and rigid structures that absorb all the forces associated to penetration, loading and twisting.

The M Series articulating hitch system, joining the front and rear frames, provides increased bearing force capacity.

### Axles

The M Series axles are designed to handle extreme applications resulting in reliable performance and durable life. The rear axle can oscillate to  $\pm 13$  degrees helping to ensure all four wheels stay on the ground providing stability even in the roughest terrain, for excellent stability and traction.



# Productive

## Work Smart and Move More.



The right technologies fine-tuned for the right applications result in:

- **Delivering Better Fuel Economy** with minimized maintenance costs while providing the same great power and response.
- **High Performance** across a variety of applications.
- **Unsurpassed Reliability** through commonality and simplicity of design.
- **Maximized Uptime and Reduced Cost** with world-class support from the Cat dealer network.
- **Minimized Impact of Emission Systems** – Designed to be transparent to you without requiring interaction.
- **Durable Designs** with long life to overhaul.

### Hydraulics

The dual accumulator ride-control system enables it to be more effective over a greater payload range, increasing productivity and your efficiency due to a better ride.

The next generation implement pump continuously and automatically balances hydraulic loads resulting in the machine performance you need. Engine response is improved as is performance at higher altitudes.

### Cat Continuously Variable Transmission

Power is transmitted through a variator unit (hydraulic pump and motor) as well as a parallel mechanical gear path (highest efficiency) in order to maximize the transmission efficiency over a wide range of operating conditions. The continuously variable gear ratio of the variator enables the ability to run the engine at a more efficient operating range independent of machine ground speed.

### Axles

In addition to aggregates, sand and gravel and batch plants, these models are commonly used in heavy construction applications where poor underfoot conditions make traction difficult slowing production and challenging job deadlines. The on-the-go disc-type differential locks will improve tractive ability in these applications thereby increasing productivity. These models come standard with front axle differential locks which are manually activated by a switch on the floor. Optional fully automatic front and rear axle differential locks operate by measuring differences in wheel speeds and require no operator intervention to activate. These disc-type differential locks reduce tire scuffing compared to other traction aids further reducing operating costs.

The 966M XE and 972M XE feature an external caliper disc parking brake mounted to the input shaft of the front axles eliminating the inefficiencies posed by wet parking brakes. Additionally, the external caliper parking brake is easily accessible for inspection and service; there is no oil to change reducing fuel and maintenance costs.

# Fuel Efficient

## Engineered to Lower Your Operating Costs.

### Advanced Systems with Innovative Integration

- The deep system integration of the engine and emissions system, power train, hydraulic system and cooling system intelligently lower the average working engine speeds and reduce the overall system heat loads which result in significantly increased performance and fuel efficiency.
- The torque converter is eliminated and rated engine speed lowered.
- The machine speed can be controlled independently of the engine speed and engine retarding energy is transferred to the fan and implement pumps.
- The 966M XE and 972M XE are the class leaders in fuel efficiency.



### Engine and Emissions

The Cat C9.3 ACERT engine is designed for maximum fuel efficiency and increased power density, while meeting Stage IV emission standards. This engine features innovative Cat electronics, fuel injection, air-management systems, aftertreatment solution with Cat Selective Catalytic Reduction, and a fuel efficient regeneration system.

### Next Generation Fuel Systems

Cat injection timing precisely controls fuel injection through a series of carefully timed microbursts, providing more control of combustion for the cleanest, most efficient fuel burn. On 966M XE and 972M XE, the high pressure common rail fuel system boosts performance and reduces soot for the C9.3 ACERT engine.

### Cat NO<sub>x</sub> Reduction System

The Cat NO<sub>x</sub> Reduction System (NRS) captures and cools a small quantity of exhaust gas, then routes it back into the combustion chamber where it drives down combustion temperatures and reduces NO<sub>x</sub> emissions.

### Aftertreatment Technologies

To meet the additional 80% reduction in NO<sub>x</sub> emissions required by Stage IV emission standards, the Selective Catalytic Reduction (SCR), has been added to the already proven Cat Stage IIIB aftertreatment solution.

# Easy to Operate

Safe. Comfortable. Efficient.



Improving your efficiency remains a key design goal for the 966M XE and 972M XE. By ensuring you are safe, confident in the control of your machine, have a clean, comfortable and quiet operating environment with controls that are intuitive and low effort, you will be less fatigued, more efficient and more productive.

## Cab Access

An optional remote switch can be installed in the electronic service center which unlatches the door allowing the gas strut to swing the door open. The angle of the steps up to the cab is at an optimal 15 degrees enabling you to walk up like stairs versus climbing more vertically like a ladder. Grab handles have been repositioned so you can maintain three points of contact at all times.

## Visibility

Once in the cab, the door securely seals against the roll-formed ROPS posts and the lower glass panel extends several inches down to improve visibility to the left side of the machine. Large convex mirrors improve visibility to the rear and integrated spot mirrors provide visibility close to both sides of the machine.

## Sound and Vibration

Viscous cab mounts connect the cab to the machine's frame, decreasing noise and vibration which means you will be able to be more efficient and productive all day long in a sustainable work environment.

## Central Display

The central display panel has a large text box, six analog gauges, and LED warning indicators. The large text box provides in-language information about machine operation, feature activation and system troubleshooting and calibration. With the six large analog gauges, you can easily identify if key systems are within normal operating range.

## Touch Screen Display and Control Panel

A multipurpose color touch screen display dramatically simplifies the operator interface; with machine controls, rear vision camera and new fully integrated Cat Production Measurement system.

Sealed against moisture and dirt, the centralized switch panel with LEDs provides reliability and ready access to frequently required functions, even while wearing gloves.

## Electro-Hydraulic (EH) Joystick Steering with Force Feedback (Speed Sensitive)

You will enjoy and quickly adapt to the seat-mounted EH joystick steering system, which provides precision control and dramatically decreases arm fatigue.

## Faster Learning with Novice Operators

It is easier to become effective with the Cat continuous variable transmission. There is no need to shift gears which enables you to focus on loading the bucket.







### Simpler Operator Interface

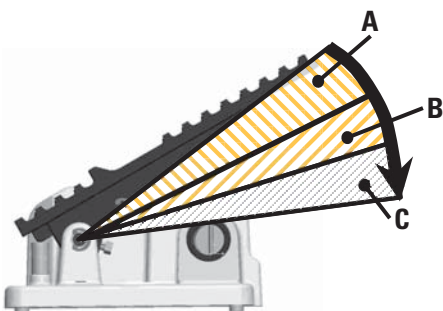
Reduced operator interface/operating mode complexity.

### Right Pedal Control – GO

The right pedal can be electronically set to provide the desired amount of propulsion without the need to keep the pedal depressed.

### Left Pedal Modulation – STOP

Provides smooth and continuous operation. Initial pedal travel acts as a modulated neutralizer, progressively reducing rimpull.



A – Modulated neutralizer  
B – Continuous integrated retarding  
C – Service brake application

### Maneuverability on Grade

Machine maneuvering on grade is made easy with smooth retarding and anti-rollback feature.

### Advanced Power Diagnostic

On-board diagnostic replaces single/double stall testing and offers additional information to help troubleshoot.

### Simplified Shifting Strategy

#### • Full Automatic Transmission

You can choose to put machine in 4F and go without need for further shifting.

#### • Programmable Virtual Gears

Provide familiar, conventional speed range limiting with added flexibility of selecting virtual gears in-between (0.5F, 0.6F, 0.7F...1F, etc...) for desired applications.

#### • Integrated Flexibility

Separate and settable forward and reverse maximum speed virtual gears make operating the machine simple.

#### • Smooth and Continuous Deceleration under Load without Manual Downshifting

Allows you to engage the pile from 2nd gear run out speeds without having to manually downshift. Intuitively changes from roading to dozing without any input from you.

### Simpler Directional Shift Operation

Offers smooth and efficient directional changes without the need to modulate brakes/throttle, or coast in neutral, resulting in increased tire life and operator comfort.

# Versatile

Linkage and Guard Options to Meet Your Various Applications Needs.



## Standard Z-bar Linkage

The proven Z-bar linkage combines digging efficiency with excellent visibility to the tool resulting in excellent penetration into the pile, high breakout forces and superior production capabilities.

## High Lift Linkage

The optional high lift linkage offers increased hinge pin height to load more easily in a variety of applications with any type of bucket or fork.

## Aggregate Handler

Aggregate packages are specialized offerings for specific loose aggregate rehandling applications, such as truck loading, hopper charging, stockpiling, and load and carry. Rehandling loose aggregate is less stressful to the machine, therefore payloads can be increased above other applications by installing larger buckets and counterweights.

To do so, the Cat aggregate packages require conformance to Caterpillar payload policy. Misapplication of Aggregate Handlers may result in significant reliability and durability risk.

## Industrial and Waste Handler

The Industrial and Waste packages offer integrated guards to preserve your machine from the harsh environment of a scrap or waste handling application.

## Forestry Arrangement

The 966M Forestry package includes a heavy duty linkage, a larger tilt cylinder and a heavier counterweight to safely handle the larger loads met in logging and millyard applications.



# Versatile

## Do More Jobs with One Machine, Fusion Quick Coupler and Various Work Tools.

An extensive range of work tools and bucket styles are available to customize these machines for your operation. Work tools are available either with pin-on or quick coupler interface.

### Performance Series Buckets

- **Load Easy, Fuel Efficient, Carry More** – Performance Series Buckets utilize a system-based approach to balance bucket shape with the machine's linkage, weight, lift and tilt capacities. You benefit from reduced dig times and better material retention; ultimately translating into significant productivity and fuel efficiency improvements.
- **Lower Operating Costs** – Performance Series Buckets feature a longer floor that easily digs through the pile and provides excellent visibility for you to see when the bucket is full. Less time digging in the pile results in lower fuel consumption and improved tire life. A unique spill guard protects the cab and linkage components from material overflow.
- **Higher Productivity** – Performance Series Buckets achieve higher fill factors – ranging from 100% to 115% depending on the machine application and material type. The buckets feature a curved side profile to maximize material retention. The optimized design results in unsurpassed production capabilities.

## Fusion Quick Coupler

### Improved Machine Performance

Fusion is the patented wheel loader coupler system from Caterpillar. The Fusion Coupler System provides performance virtually identical to pin-on – with all the flexibility of a quick coupler system. The Fusion Coupler sits back, close in to the loader arms – minimizing offset and increasing the machine's performance.

### No Loss of Performance

Fusion is designed to integrate the work tool and the machine by pulling the coupler and tool closer in to the loader. As a result, the center of gravity is moved inward, towards the machine. This translates to increased lifting ability when compared to machines equipped with other coupler systems.

### Unsurpassed Durability

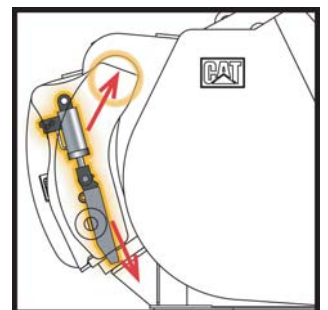
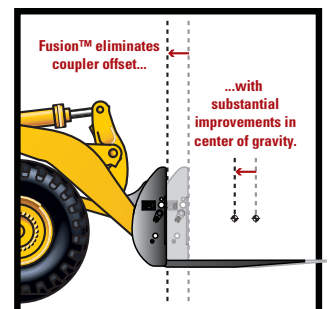
An advanced wedging mechanism creates a tight, rattle-free fit. This patented lock up system eliminates play and wear – resulting in a long service life.

### Increased Visibility

An open coupler frame design clears sight lines from the seat, making it easier than ever before to engage and disengage attachments with certainty.

### Common Interface Compatibility

The Fusion Coupler System not only allows one machine to use a range of work tools, but also allows one work tool to be picked up by machines of many different sizes.





# Integrated Technologies

## Monitor, Manage, and Enhance Job Site Operations.

Cat Connect makes smart use of technology and services to improve your job site efficiency. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect services are also available from your dealership including:



**Equipment Management** – increase uptime and reduce operating costs.



**Productivity** – monitor production and manage job site efficiency.



**Safety** – enhance job site awareness to keep your people and equipment safe.

Featured Cat Connect technologies include:



### LINK Technologies

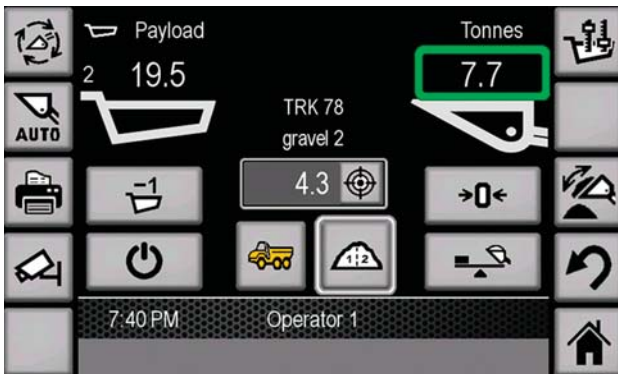
LINK technologies wirelessly connect you to your equipment giving you access to essential information you need to know to run your business. Link data can give you valuable insight into how your machine or fleet is performing so you can make timely, fact-based decisions that can boost job site efficiency and productivity.

#### Product Link/VisionLink

- Product Link is deeply integrated into your machine to take the guesswork out of equipment management.
- Easy access to timely information like machine location, hours, fuel usage, idle time and event codes via the online VisionLink user interface can help you effectively manage your fleet and lower operating cost.

Consult your local dealer on the services available.





## PAYLOAD Technologies

PAYLOAD technologies provide accurate weighing of materials being loaded and hauled. Payload data is displayed for loader operators in real-time to improve productivity, reduce overloading, and recorded to track material movement by shift.

### Cat Production Measurement 2.0 (Optional)

- Brings payload weighing to the cab, enabling you to weigh loads “on-the-go” during loading operations.
- Integrated Cat multi-function touchscreen display with graphical user interface is easy to understand and adds no clutter to the cab.
- Easy calibration procedure requires no special tools and reduces operational complexity.
- Low Lift Weigh and Tip-off features enable faster loading of trucks to their maximum capacity.
- VisionLink common back-office interface provides you a quick summary of loader operations, including payload productivity and efficiency.
- Optional Advanced Productivity subscription provides comprehensive actionable information to help you manage and improve the productivity and profitability of your operations.



## DETECT Technologies

DETECT technologies enhance operator awareness of the environment around working equipment and provide alerts to help keep people and assets safe.

### Rear Vision Camera

- Integrated into standard display, enhances visibility behind the machine helping you work confidently.
- Optional second display can be added to provide a dedicated rear view of the job site.

### Rear Object Detection (Optional)

- Integrated into touchscreen display, the radar system warns you of an object in critical zone while going in reverse.
- Increased awareness of the working environment enhances site safety.

# Owning Costs

## Proven Best Investment.

### Customer Support Agreements

A Customer Support Agreement (CSA) is an arrangement between you and your Cat dealer that helps you lower your total cost per ton. CSAs are flexible, allowing them to be tailored to your business needs. They can range from simple Preventive Maintenance Kits to elaborate Total Cost Performance Guarantees. Having a CSA with your Cat dealer enables more time for you to do what you do best – run your business.

### Monitoring Systems

Monitoring product health is key to optimizing the life of an investment into a Cat Wheel Loader.

- **Cat Product Link** – Cat Product Link allows remote monitoring of equipment to improve overall fleet management effectiveness. Product Link is deeply integrated into machine systems. Events and diagnostic codes, as well as hours, fuel, idle time and other detailed information are transmitted to a secure web based application, VisionLink. VisionLink includes powerful tools to convey information to users and dealers, including mapping, working and idle time, fuel level and more.

- **S-O-S Services** – Helps manage component life and decrease machine downtime, increasing productivity and efficiency. Regular fluid sampling can help track what is going on inside your machine. Wear-related problems are predictable and easily repairable. Maintenance can be done to accommodate your schedule, resulting in increased uptime and flexibility in maintenance repairs before failure.

### Cat Autolube System

The optional, fully integrated Cat Autolube system provides full system monitoring and diagnostic test visibility by being integrated into the machine, display and VisionLink. Easy access to the refill pump and grease zerks means simple, fast servicing.

### Parts Availability

Caterpillar provides an unsurpassed level of personalized service to help you work more cost effectively and efficiently. By utilizing a worldwide parts network Cat dealers help minimize machine downtime and save money by delivering replacement parts within 24 hours.

### Resale Value

Owning quality equipment is an important factor in maintaining resale value. Caterpillar is not only known for machines that are better built, but provides product and dealer support to maintain the reliability and durability of your machine.







# Operating Costs

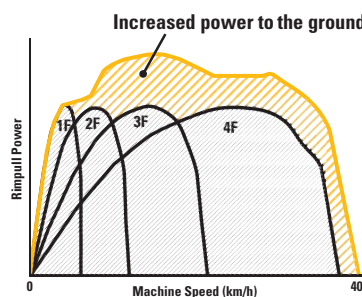
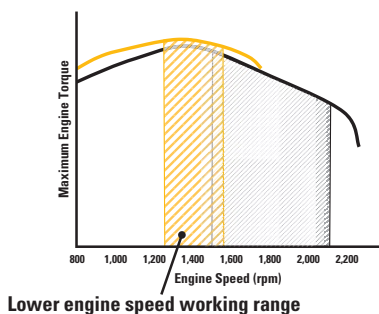
## Save Time and Money by Working Smart.

Data from customer machines show Cat wheel loaders are the most fuel efficient machines in the industry. Several features contribute to this excellent fuel efficiency:

- **Stage IV ACERT Engine, Hydraulics, Transmission and Ride Control** – Deep system integration results in reduced emissions, more productivity, lower fuel consumption, without interrupting machine performance – making it seamless to you.
- **Advanced Power Train** – With the integrated Cat continuously variable transmission, the machine is well balanced and easier to operate at extremely low engine speeds providing increased productivity while burning less fuel.
- **Manual/Automatic Differential Locks** – Increase traction, reduce tire scuffing compared to other traction aids, further reducing your operating costs.
- **External Caliper Disc Parking Brakes** – Easily accessible for maintenance.
- **Machine Configuration** – Select the correct linkage, guarding, work tool and tire type based on machine application. Radial tires are preferred; ensure proper inflation pressures. Heavier tires burn more fuel.
- **Performance Series Buckets** – Deliver faster fill times and better material retention, ultimately reducing cycle times while improving productivity and fuel efficiency.

### Enabling Application Efficiency

- **Loading Bucket** – Load at low engine speed. Raise and tilt bucket smoother, with Caterpillar's multi-function capability, and do not use a "pumping" motion. Avoid lift lever detent and use of transmission neutralizer. Use programmable kick-outs and automatic cylinder snubbing during repeated cycles.
- **Loading Truck or Hopper** – Do not raise the work tool any higher than necessary. Keep engine rpm low and unload in controlled manner. When slowing down the machine, use the lift command to recover the retarding energy.
- **Idle** – Set the parking brake to engage Engine Idle Management System to conserve fuel.
- **Job Site Layout** – Spot loading targets in the right position. Avoid traveling more than twice the machine length during short cycle loading. Reduce transport distance for load and carry cycles by optimizing job site layout.



— advanced power train  
— conventional power train

# Serviceable

Easy to Maintain. Easy to Service.

## Engine Access ①

The Cat sloped “one-piece” tilting hood provides industry-leading access to the engine. Its design has further been improved on all M Series wheel loaders to provide the best-in-class service access to engine, oil levels and coolant sight gauge.

## Cooling System ②

The cooling system is readily accessible for clean out and maintenance. With six cooling fins per 25.4 mm and a perforated grill, most airborne debris entering the system passes through the cooler cores. The hydraulic and A/C cooler cores swing out providing easy access to both sides for cleaning. An access panel on the left side of the cooling package swings down to provide access to the back side of the engine coolant and Air-to-Air After Cooler (ATAAC). An optional variable pitch fan can automatically purge the cooler cores by periodically reversing the airflow when needed.

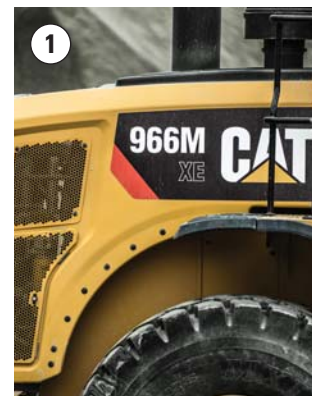
## Service Centers

The electrical ③ and hydraulic ④ service centers provide grouped access to numerous features, enhancing safety and convenience for you and your service technicians, while reducing service time.

The electrical service center, located beneath the left platform, contains the maintenance free batteries, a fuse relay panel, main disconnect switch, secondary engine shutdown switch, hood tilt switch, and the jump start receptacle.

The hydraulic service centers are now virtually identical for the M Series product line. This consistent layout makes it easier for service technicians who work on a variety of M Series models.

Hydraulic system components on the 966M XE and 972M XE are protected by full flow and kidney-loop filtration. A filter in the hydraulic tank return line filters all of the oil returning to the tank. There is also a case drain screen for additional protection and finally, a separate kidney-loop filter with a finer micron rating continuously filters smaller particles out of the system. This multilevel design ensures the hydraulic oil is clean and thoroughly protects the rest of the hydraulic system from contamination. A thermal bypass valve has been added to improve hydraulic system warm-up.





# Sustainable Conserving Resources.

The 966M XE and 972M XE are designed to compliment your business plan, reduce emissions and minimize the consumption of natural resources.

- Improved fuel efficiency – less fuel consumed results in lower emissions.
- Machines are built with a 97% recyclability rate (ISO 16714) to conserve valuable natural resources and further enhance machine end of life value.
- Improved operator efficiency through enhanced visibility and reduced noise levels.
- Link technologies enable you to collect and analyze equipment and job site data so you can maximize productivity and reduce costs.
- Major components are rebuildable, eliminating waste and saving money by giving the machine and/or major components a second life – and even a third life.



## Customer Support Unmatched Support Makes the Difference.



### Renowned Cat Dealer Support

- Your Cat dealer is ready to help you every step of the way. From new or used machine sales, to rental or rebuild options, your Cat dealer can provide an optimal solution to your business needs.
- Unsurpassed worldwide parts availability, trained technicians and customer support agreements maximize your machine uptime.
- Financing options are offered to meet a variety of customer needs.

# 966M XE/972M XE Wheel Loaders Specifications

## Engine – 966M XE

Engine Model	Cat C9.3 ACERT
Maximum Net Power (1,600 rpm)	
ISO 9249	222 kW (302 hp metric)
Peak Gross Torque (1,200 rpm)	
ISO 14396	1708 N·m
Maximum Net Torque (1,200 rpm)	
ISO 9249	1618 N·m
Bore	115 mm
Stroke	149 mm
Displacement	9.3 L

- Cat engine with ACERT Technology meets Stage IV emission standards.
- The power ratings apply at the stated speed when tested under the reference conditions for the specified standards.
- The net power advertised is the power available at the flywheel when the engine is equipped with fan running up to maximum speed, alternator, air cleaner and aftertreatment.

## Buckets – 966M XE

Bucket Capacities	2.5-9.2 m <sup>3</sup>
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## Weight – 966M XE

Operating Weight	23 220 kg
<ul style="list-style-type: none"> <li>• Weight based on a machine configuration with Michelin 26.5R25 XHA2 L3 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering, sound suppression and a 4.2 m<sup>3</sup> general purpose bucket with BOCE.</li> </ul>	

## Operating Specifications – 966M XE

Static Tipping Load – Full 37° Turn	
With Tire Deflection	14 668 kg
No Tire Deflection	15 822 kg
Breakout Force	173 kN

- For a machine configuration as defined under “Weight.”
- Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

## Engine – 972M XE

Engine Model	Cat C9.3 ACERT
Maximum Net Power (1,600 rpm)	
ISO 9249	232 kW (315 hp metric)
Peak Gross Torque (1,200 rpm)	
ISO 14396	1708 N·m
Maximum Net Torque (1,200 rpm)	
ISO 9249	1618 N·m
Bore	115 mm
Stroke	149 mm
Displacement	9.3 L

- Cat engine with ACERT Technology meets Stage IV emission standards.
- The power ratings apply at the stated speed when tested under the reference conditions for the specified standards.
- The net power advertised is the power available at the flywheel when the engine is equipped with fan running up to maximum speed, alternator, air cleaner and aftertreatment.

## Buckets – 972M XE

Bucket Capacities	2.9-9.9 m <sup>3</sup>
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## Weight – 972M XE

Operating Weight	24 897 kg
<ul style="list-style-type: none"> <li>• Weight based on a machine configuration with Michelin 26.5R25 XHA2 L3 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering, sound suppression and a 4.8 m<sup>3</sup> general purpose bucket with BOCE.</li> </ul>	

## Operating Specifications – 972M XE

Static Tipping Load – Full 37° Turn	
With Tire Deflection	16 164 kg
No Tire Deflection	17 421 kg
Breakout Force	196 kN

- For a machine configuration as defined under “Weight.”
- Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.



# 966M XE/972M XE Wheel Loaders Specifications

## Brakes

Brakes	Brakes meet ISO 3450:2011 standards
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## Transmission Virtual Gears

Forward 1	6.7 km/h
Forward 2	12.6 km/h
Forward 3	22.1 km/h
Forward 4	39.5 km/h
Reverse 1	6.7 km/h
Reverse 2	12.6 km/h
Reverse 3	28.0 km/h

- Maximum travel speed in standard vehicle with empty bucket and standard L3 tires with 826 mm roll radius.

## Hydraulic System

Implement Pump Type	Variable Displacement Piston	
Implement System		
Maximum Pump Output (1,600 rpm*)	385 L/min	
Maximum Operating Pressure	31 000 kPa	
Maximum Flow – Optional 3 <sup>rd</sup> /4 <sup>th</sup> Function	240 L/min	
Maximum Pressure – Optional 3 <sup>rd</sup> /4 <sup>th</sup> Function	21 780 kPa	
Hydraulic Cycle Time with Rated Payload	<b>966M</b>	<b>972M</b>
Raise from Carry Position	6.1 Sec.	6.1 Sec.
Dump, at Maximum Raise	1.4 Sec.	1.5 Sec.
Lower, Empty, Float Down	2.6 Sec.	3.4 Sec.
Total	10.1 Sec.	11.0 Sec.

\*Engine speed.

## Axles

Front	Fixed
Rear	Oscillating $\pm 13$ degrees
Maximum Single-Wheel Rise and Fall	502 mm

## Cab

ROPS/FOPS	ROPS/FOPS meet ISO 3471:2008 and ISO 3449:2005 Level II standards
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## Sound

The sound values indicated below are for specific operating conditions only. Machine and operator sound levels will vary at different engine and/or cooling fan speeds. Hearing protection may be needed when the machine is operated with a cabin that is not properly maintained, or when the doors and/or windows are open for extended periods or in a noisy environment.

Operator Sound Pressure Level (ISO 6396:2008)	67 dB(A)*
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Exterior Sound Power Level (ISO 6395:2008)	105 L <sub>WA</sub> *
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European Union Directive “2000/14/EC” as amended by “2005/88/EC”

\*For a standard machine configuration, measured according to the procedures specified with the cooling fan speed set at 70% of maximum value.

## Service Refill Capacities

Fuel Tank	302 L
DEF Tank*	16.8 L
Cooling System	71.6 L
Crankcase	24.5 L
Transmission	63 L
Differentials and Final Drives – Front	57 L
Differentials and Final Drives – Rear	57 L
Hydraulic Tank	125 L

\*DEF must meet the requirements outlined in ISO 22241-1.

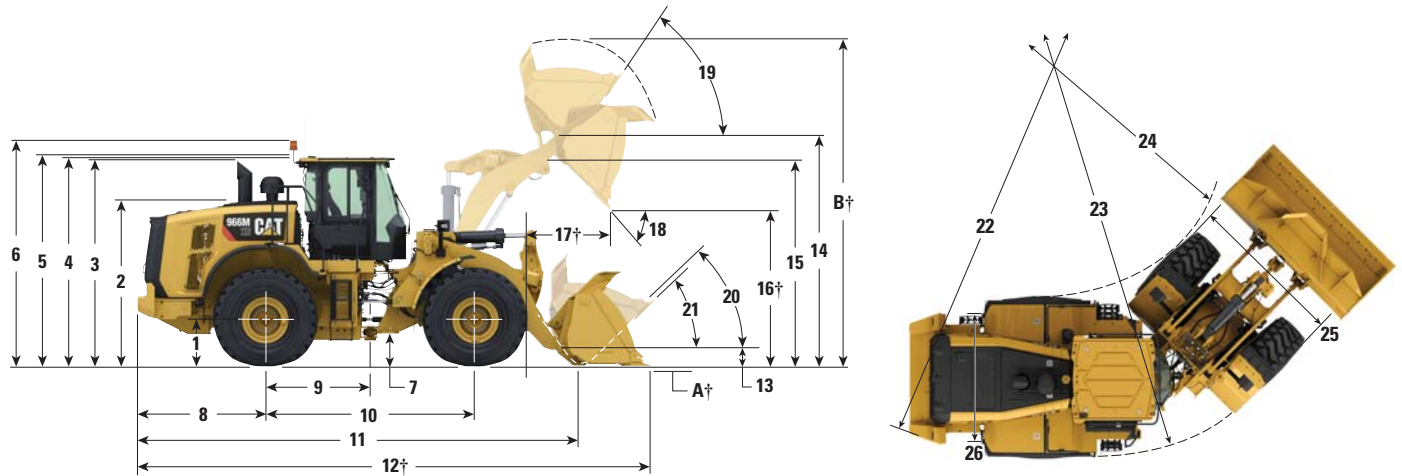
## Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.6 kg of refrigerant with has a CO<sub>2</sub> equivalent 2.288 metric tonne.

# 966M XE/972M XE Wheel Loaders Specifications

## 966M XE/972M XE Dimensions

All dimensions are approximate.



	966M XE Standard Lift	966M XE High Lift	972M XE Standard Lift	972M XE High Lift
1 Height to Axle Centerline	799 mm	799 mm	799 mm	799 mm
2 Height to Top of Hood	2818 mm	2818 mm	2818 mm	2818 mm
3 Height to Top of Exhaust Pipe	3522 mm	3522 mm	3522 mm	3522 mm
4 Height to Top of ROPS	3587 mm	3587 mm	3587 mm	3587 mm
5 Height to Top of Product Link Antenna	3636 mm	3636 mm	3636 mm	3636 mm
6 Height to Top of Warning Beacon	3859 mm	3859 mm	3859 mm	3859 mm
7 Ground Clearance	434 mm	434 mm	434 mm	434 mm
8 Center Line of Rear Axle to Edge of Counterweight	2180 mm	2500 mm	2500 mm	2500 mm
9 Center Line of Rear Axle to Hitch	1775 mm	1775 mm	1775 mm	1775 mm
10 Wheelbase	3550 mm	3550 mm	3550 mm	3550 mm
11 Overall Length (without bucket)	7289 mm	8109 mm	7774 mm	8109 mm
12 Shipping Length (with bucket level on ground)*†	8750 mm	9570 mm	9315 mm	9650 mm
13 Hinge Pin Height at Carry Height	630 mm	778 mm	680 mm	778 mm
14 Hinge Pin Height at Max Lift	4235 mm	4793 mm	4458 mm	4793 mm
15 Lift Arm Clearance at Max Lift	3643 mm	4140 mm	3843 mm	4140 mm
16 Dump Clearance at Max Lift and 45° Discharge*†	2991 mm	3549 mm	3154 mm	3490 mm
17 Reach at Max Lift and 45° Discharge*†	1353 mm	1328 mm	1357 mm	1380 mm
18 Dump Angle at Max Lift and Dump (on stops)*	49 degrees	48 degrees	48 degrees	48 degrees
19 Rack Back at Max Lift*	62 degrees	71 degrees	56 degrees	71 degrees
20 Rack Back at Carry Height*	50 degrees	49 degrees	50 degrees	49 degrees
21 Rack Back at Ground*	42 degrees	39 degrees	41 degrees	39 degrees
22 Turning Radius to Counterweight	6804 mm	6804 mm	6804 mm	6804 mm
23 Turning Radius to Outside of Tires	6761 mm	6761 mm	6761 mm	6761 mm
24 Turning Radius to Inside of Tires	3853 mm	3853 mm	3853 mm	3853 mm
25 Max Width over Tires (unloaded)	2991 mm	2991 mm	2991 mm	2991 mm
Max Width over Tires (loaded)	3009 mm	3009 mm	3009 mm	3009 mm
26 Tread Width	2230 mm	2230 mm	2230 mm	2230 mm

\*966M XE Standard and High Lift are with 4.2 m³ general purpose pin-on bucket with BOCE (see Operating Specifications for other buckets).

972M XE Standard and High Lift are with 4.8 m³ general purpose pin-on bucket with BOCE (see Operating Specifications for other buckets).

†Dimensions are listed in Operating Specification charts.

All height and tire related dimensions are with Michelin 26.5R25 XHA2 L3 tires (see Dimension changes – Tires Chart for other tires).



# 966M XE/972M XE Wheel Loaders Specifications

## Dimension Changes – Tires

Tire Brand	Michelin	Michelin	Michelin	Bridgestone	Bridgestone
Tire Size	26.5R25	26.5R25	26.5R25	26.5R25	26.5R25
Tread Type	L-4	L-5	L-5	L-3	L-4
Tread Pattern	XLDD1	XLDD2	XMINED2	VJT	VSNT
Width over Tires – Maximum (empty)*	2987 mm	2986 mm	2970 mm	2982 mm	2973 mm
Width over Tires – Maximum (loaded)*	3019 mm	3015 mm	2998 mm	3016 mm	2993 mm
Change in Vertical Dimensions (average of front and rear)	44 mm	39 mm	53 mm	15 mm	25 mm
Change in Horizontal Reach	–36 mm	–34 mm	–32 mm	–3 mm	–24 mm
Change in Clearance Circle (radius) to Outside of Tires	5 mm	1 mm	–7 mm	3 mm	–8 mm
Change in Clearance Circle (radius) to Inside of Tires	–5 mm	–1 mm	7 mm	–3 mm	8 mm
Change in Operating Weight (without Ballast)	420 kg	716 kg	1068 kg	164 kg	624 kg

## Changes Specific to the 966M XE

Change in Static Tipping Load – Straight	303 kg	517 kg	771 kg	118 kg	451 kg
Change in Static Tipping Load – Articulated	271 kg	461 kg	688 kg	106 kg	402 kg

## Changes Specific to the 972M XE

Change in Static Tipping Load – Straight	283 kg	482 kg	719 kg	110 kg	420 kg
Change in Static Tipping Load – Articulated	252 kg	429 kg	640 kg	98 kg	374 kg

## Dimension Changes – Tires

Tire Brand	Bridgestone	Bridgestone	Flexport	Flexport
Tire Size	26.5R25	775/65R29	70×14×28 (26.5×25)	70×14×28 (26.5×25)
Tread Type	L-5	L-3	—	—
Tread Pattern	VSDL	VTS	OTR	SMOOTH
Width over Tires – Maximum (empty)*	2874 mm	3080 mm	2955 mm	2896 mm
Width over Tires – Maximum (loaded)*	2900 mm	3101 mm	2972 mm	2915 mm
Change in Vertical Dimensions (average of front and rear)	50 mm	17 mm	59 mm	52 mm
Change in Horizontal Reach	–29 mm	–5 mm	–23 mm	–13 mm
Change in Clearance Circle (radius) to Outside of Tires	–54 mm	46 mm	–19 mm	–47 mm
Change in Clearance Circle (radius) to Inside of Tires	54 mm	–46 mm	19 mm	47 mm
Change in Operating Weight (without Ballast)	1136 kg	856 kg	3287 kg	3764 kg

## Changes Specific to the 966M XE

Change in Static Tipping Load – Straight	821 kg	618 kg	2375 kg	2719 kg
Change in Static Tipping Load – Articulated	732 kg	551 kg	2118 kg	2425 kg

## Changes Specific to the 972M XE

Change in Static Tipping Load – Straight	764 kg	576 kg	2212 kg	2533 kg
Change in Static Tipping Load – Articulated	680 kg	513 kg	1969 kg	2255 kg

\*Width over bulge and includes tire growth.

**Note:** Changes compared to:

- 966M XE with Michelin 26.5R25 XHA2 L3 radial tires.
- 972M XE with Michelin 26.5R25 XHA2 L3 radial tires.

# 966M XE/972M XE Wheel Loaders Specifications

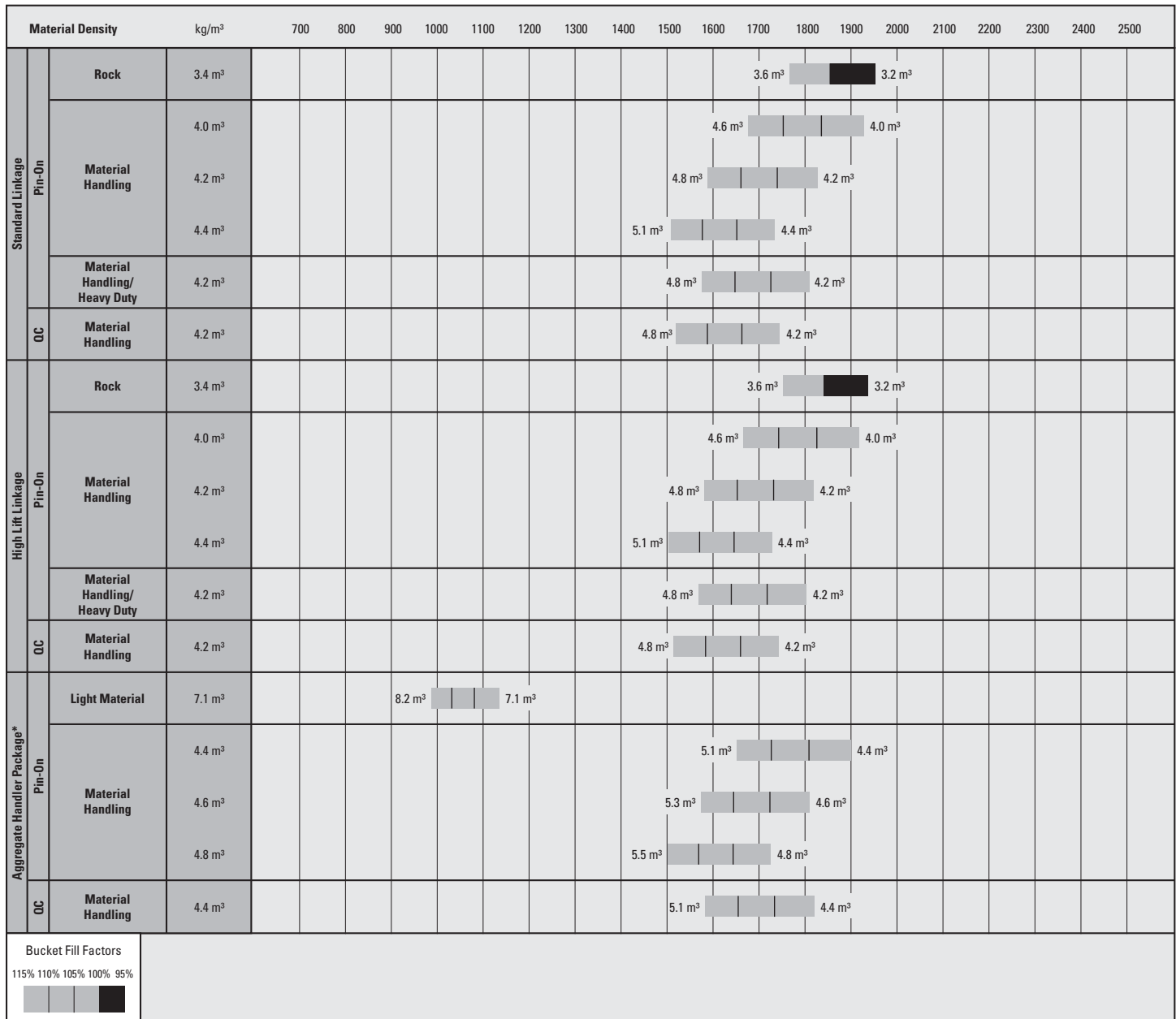
## 966M XE Bucket Fill Factors and Selection Chart

The bucket size must be chosen based on the density of the material and on the expected fill factor. The Cat Performance Series Buckets with longer floor, larger bucket opening, increased repository angle, rounded side boards and integrated spill guard, demonstrate fill factors significantly higher than previous generation or non Cat buckets. The actual volume handled by the machine is thus often larger than the rated capacity.

Loose Material		Material Density	Fill Factor (%)*
Earth/Clay		1500-1700 kg/m <sup>3</sup>	115
Sand and Gravel		1500-1700 kg/m <sup>3</sup>	115
Aggregate:	25-76 mm	1600-1700 kg/m <sup>3</sup>	110
	19 mm and smaller	1800 kg/m <sup>3</sup>	105
Rock:	76 mm and larger	1600 kg/m <sup>3</sup>	100

\*As a % of ISO rated capacity.

**Note:** Fill Factors achieved will also depend on whether the product is washed or not washed.



**Note:** All buckets are showing Bolt-On Edges.

QC = Quick Coupler

\*Not for use with L5 Tires, Teeth or Teeth and Segments.



# 966M XE/972M XE Wheel Loaders Specifications

## 966M XE Operating Specifications with Buckets

Machine		Standard Linkage						High Lift Linkage Change**
Pin/Quick Coupler		Pin-On				Fusion QC	Universal QC	
Bucket Type		Material Handling		Material Handling Heavy Duty		Material Handling	Material Handling	
Edge Type		Bolt-On Cutting Edges	Teeth and Segments	Bolt-On Cutting Edges	FMT	Bolt-On Cutting Edges	Bolt-On Cutting Edges	
Capacity – Rated	m <sup>3</sup>	4.20	4.20	4.20	4.20	4.20	4.20	—
Capacity – Rated at 110% Fill Factor	m <sup>3</sup>	4.62	4.62	4.62	4.62	4.62	3.80	—
Width	mm	3220	3271	3220	3201	3220	3220	—
<b>16†</b> Dump Clearance at Maximum Lift and 45° Discharge	mm	2949	2787	2949	3001	2899	2787	559
<b>17†</b> Reach at Maximum Lift and 45° Discharge	mm	1245	1372	1245	1236	1296	1498	–25
Reach at Level Lift Arm and Bucket Level	mm	2774	2978	2774	2731	2845	3067	404
<b>A†</b> Digging Depth	mm	124	124	124	94	124	60	–25
<b>12†</b> Shipping Length (with Bucket)	mm	8721	8946	8721	8653	8792	8961	825
<b>B†</b> Overall Height with Bucket at Maximum Lift	mm	5901	5901	5901	5940	5943	6134	559
Loader Clearance Circle Radius with Bucket at Carry Position	mm	7504	7589	7504	7473	7519	7561	242
Static Tipping Load, Straight (With Tire Deflection)*	kg	16 580	16 398	16 465	16 155	15 919	14 950	55
Static Tipping Load, Straight (No Tire Deflection)*	kg	17 731	17 546	17 615	17 312	17 052	16 058	–32
Static Tipping Load, Articulated (With Tire Deflection)*	kg	14 605	14 421	14 489	14 162	13 969	13 078	–128
Static Tipping Load, Articulated (No Tire Deflection)*	kg	15 740	15 555	15 623	15 307	15 091	14 177	–187
Breakout Force***	kN	177	175	176	180	167	141	–15
Operating Weight*	kg	23 217	23 355	23 336	23 706	23 678	23 889	1612

\*Static tipping loads and operating weights are based on a machine configuration with Michelin 26.5R25 XHA2 L3 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering and sound suppression.

\*\*Maximum values.

\*\*\*Measured 102 mm behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C.

Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers, including SAE Standard J732C governing loader ratings.

(With Tire Deflection) Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

(No Tire Deflection) Compliance to ISO 14397-1:2007 Sections 1 thru 5.

†Illustration shown with Dimension charts.

FMT = Flush Mounted Teeth

QC = Quick Coupler

Additional buckets are available and offerings vary by region. Consult your local Cat dealer for further details.

# 966M XE/972M XE Wheel Loaders Specifications

## 966M XE Operating Specifications with Buckets

Machine		Standard Linkage						High Lift Linkage Change**
Pin/Quick Coupler		Pin-On						
Bucket Type		Material Handling (Roading)		Material Handling		Rock (V-Edge)		
Edge Type		Bolt-On Cutting Edges	FMT	Bolt-On Cutting Edges	Teeth and Segments	Bolt-On Cutting Edges	Teeth and Segments	
Capacity – Rated	m³	4.20	4.20	4.40	4.40	3.40	3.40	—
Capacity – Rated at 110% Fill Factor	m³	3.70	3.56	4.84	4.84	3.74	3.74	—
Width	mm	2995	3000	3220	3271	3252	3252	—
16† Dump Clearance at Maximum Lift and 45° Discharge	mm	2969	3020	2921	2758	3124	3026	559
17† Reach at Maximum Lift and 45° Discharge	mm	1406	1393	1274	1401	1419	1541	–25
Reach at Level Lift Arm and Bucket Level	mm	2854	2811	2814	3018	2783	2939	405
A† Digging Depth	mm	124	94	124	124	68	68	–25
12† Shipping Length (with Bucket)	mm	8801	8733	8761	8986	8715	8876	829
B† Overall Height with Bucket at Maximum Lift	mm	5939	5939	5931	5931	5845	5845	559
Loader Clearance Circle Radius with Bucket at Carry Position	mm	7421	7401	7514	7600	7529	7572	242/235
Static Tipping Load, Straight (With Tire Deflection)*	kg	16 858	16 957	16 501	16 318	17 075	17 006	–62/58
Static Tipping Load, Straight (No Tire Deflection)*	kg	18 022	18 129	17 657	17 471	18 262	18 191	–145/–7
Static Tipping Load, Articulated (With Tire Deflection)*	kg	14 889	14 979	14 527	14 343	15 033	14 963	–220/–111
Static Tipping Load, Articulated (No Tire Deflection)*	kg	16 034	16 132	15 668	15 481	16 204	16 133	–288/–163
Breakout Force***	kN	168	173	171	170	186	185	–15
Operating Weight*	kg	22 848	22 833	23 270	23 408	24 007	24 059	1612

\*Static tipping loads and operating weights are based on a machine configuration with Michelin 26.5R25 XHA2 L3 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering and sound suppression.

\*\*Maximum values (Rock/Other Buckets).

\*\*\*Measured 102 mm behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C.

Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers, including SAE Standard J732C governing loader ratings.

(With Tire Deflection) Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

(No Tire Deflection) Compliance to ISO 14397-1:2007 Sections 1 thru 5.

†Illustration shown with Dimension charts.

FMT = Flush Mounted Teeth

Additional buckets are available and offerings vary by region. Consult your local Cat dealer for further details.



# 966M XE/972M XE Wheel Loaders Specifications

## 966M XE Operating Specifications with Buckets – Aggregate Handler

Machine		Aggregate Handler***					
Pin/Quick Coupler		Pin-On				Fusion QC	Universal QC
Bucket Type		Material Handling			Light Material	Material Handling	Material Handling
Edge Type		Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges
Capacity – Rated	m <sup>3</sup>	4.40	4.60	4.80	7.10	4.40	4.40
Capacity – Rated at 110% Fill Factor	m <sup>3</sup>	4.84	5.06	5.28	7.81	4.84	4.00
Width	mm	3220	3220	3220	3447	3220	3220
<b>16†</b> Dump Clearance at Maximum Lift and 45° Discharge	mm	2921	2893	2865	2625	2872	2841
<b>17†</b> Reach at Maximum Lift and 45° Discharge	mm	1274	1302	1330	1548	1323	1622
Reach at Level Lift Arm and Bucket Level	mm	2814	2854	2894	3217	2884	3104
<b>A†</b> Digging Depth	mm	124	124	124	140	124	60
<b>12†</b> Shipping Length (with Bucket)	mm	8809	8849	8889	9224	8879	9046
<b>B†</b> Overall Height with Bucket at Maximum Lift	mm	5931	5982	6023	6071	5973	6183
Loader Clearance Circle Radius with Bucket at Carry Position	mm	7514	7524	7534	7728	7529	7571
Static Tipping Load, Straight (With Tire Deflection)*	kg	18 077	18 013	17 938	17 508	17 397	16 505
Static Tipping Load, Straight (No Tire Deflection)*	kg	19 386	19 329	19 260	18 881	18 687	17 789
Static Tipping Load, Articulated (With Tire Deflection)*	kg	15 861	15 799	15 726	15 301	15 209	14 390
Static Tipping Load, Articulated (No Tire Deflection)*	kg	17 158	17 103	17 036	16 663	16 492	15 670
Breakout Force**	kN	171	166	161	129	162	138
Operating Weight*	kg	23 965	24 000	24 046	24 223	24 427	24 592

\*Static tipping loads and operating weights are based on a machine configuration with Michelin 26.5R25 XHA2 L3 radial tires, full fluids, operator, aggregate counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering and sound suppression. If a rock bucket is added, those values are with Michelin 26.5R25 XLDD2 L5 tires.

\*\*Measured 102 mm behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C.

\*\*\*Aggregate Handler Configurations are NOT compatible with L5 Tires, Teeth, Teeth and Segments, and Spade Nose Rock Bucket.

Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers, including SAE Standard J732C governing loader ratings.

(With Tire Deflection) Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

(No Tire Deflection) Compliance to ISO 14397-1:2007 Sections 1 thru 5.

†Illustration shown with Dimension charts.

QC = Quick Coupler

Additional buckets are available and offerings vary by region. Consult your local Cat dealer for further details.

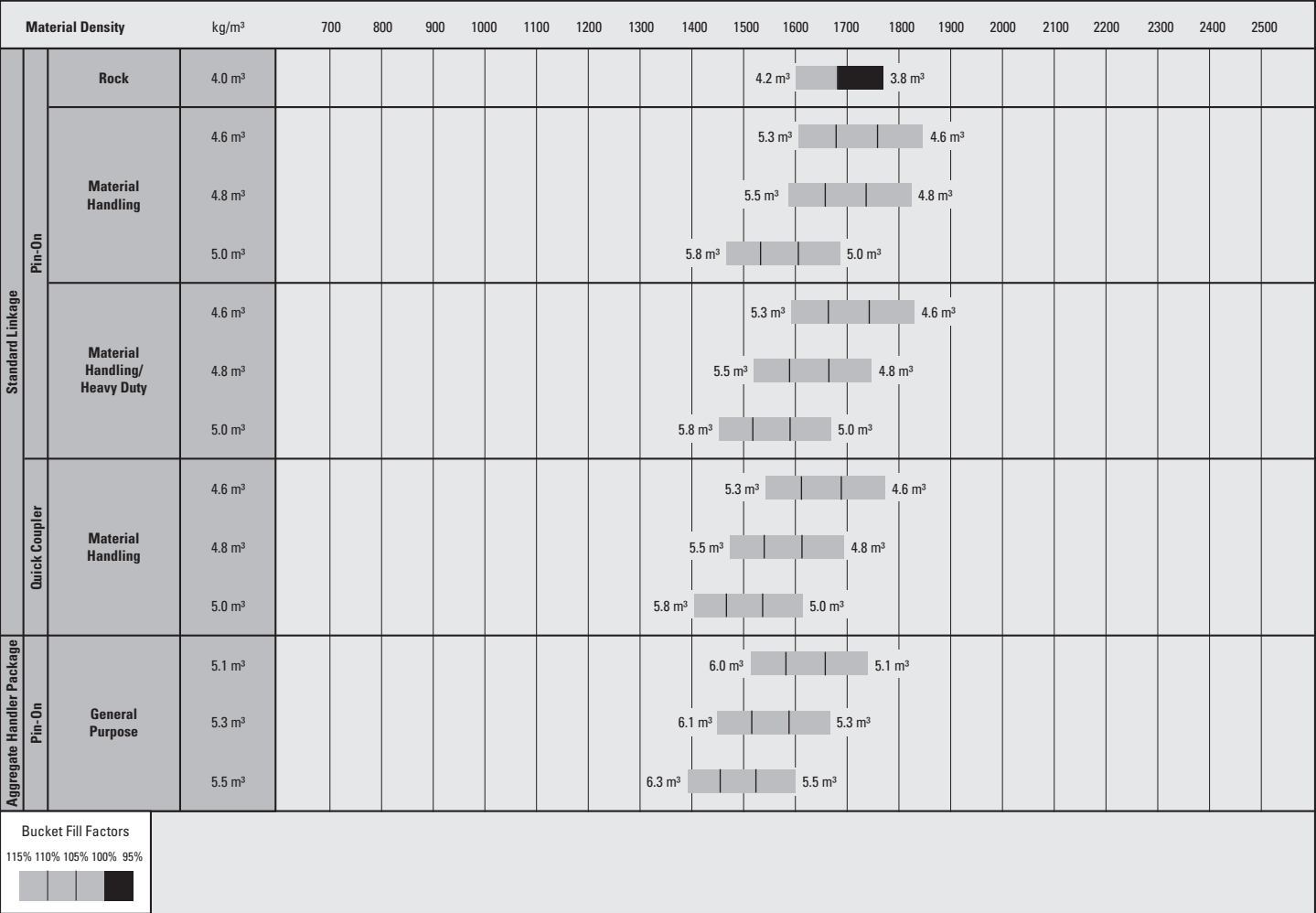
# 966M XE/972M XE Wheel Loaders Specifications

## 972M XE Bucket Fill Factors and Selection Chart

The bucket size must be chosen based on the density of the material and on the expected fill factor. The Cat Performance Series Buckets with longer floor, larger bucket opening, increased repository angle, rounded side boards and integrated spill guard, demonstrate fill factors significantly higher than previous generation or non Cat buckets. The actual volume handled by the machine is thus often larger than the rated capacity.

Loose Material		Material Density	Fill Factor (%)*
Earth/Clay		1500-1700 kg/m <sup>3</sup>	115
Sand and Gravel		1500-1700 kg/m <sup>3</sup>	115
Aggregate:	25-76 mm	1600-1700 kg/m <sup>3</sup>	110
	19 mm and smaller	1800 kg/m <sup>3</sup>	105
Rock:	76 mm and larger	1600 kg/m <sup>3</sup>	100

\*As a % of ISO rated capacity.  
**Note:** Fill Factors achieved will also depend on whether the product is washed or not washed.



**Note:** All buckets are showing Bolt-On Edges.



# 966M XE/972M XE Wheel Loaders Specifications

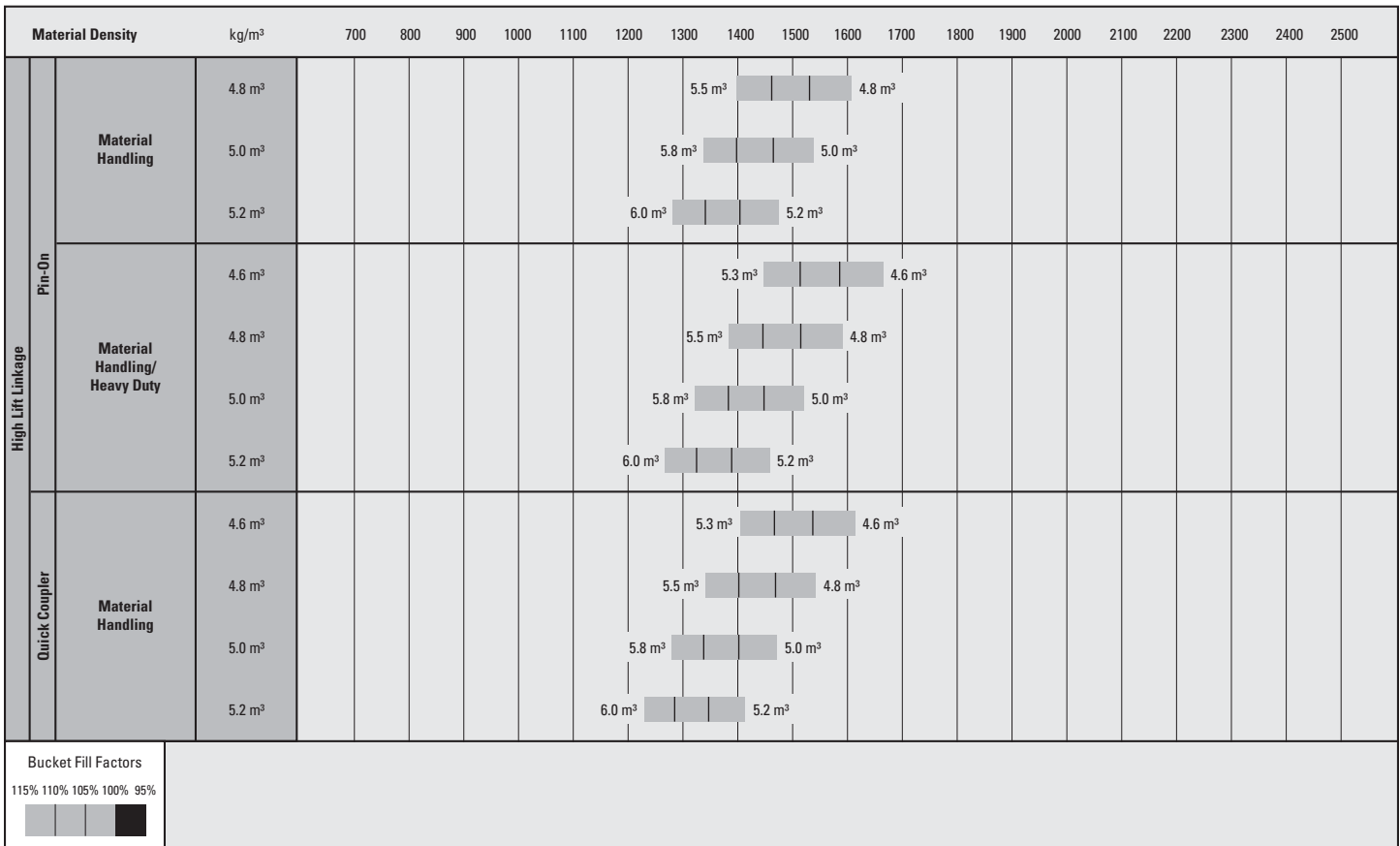
## 972M XE Bucket Fill Factors and Selection Chart

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Loose Material		Material Density	Fill Factor (%)*
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Sand and Gravel		1500-1700 kg/m <sup>3</sup>	115
Aggregate:	25-76 mm	1600-1700 kg/m <sup>3</sup>	110
	19 mm and smaller	1800 kg/m <sup>3</sup>	105
Rock:	76 mm and larger	1600 kg/m <sup>3</sup>	100

\*As a % of ISO rated capacity.

**Note:** Fill Factors achieved will also depend on whether the product is washed or not washed.



**Note:** All buckets are showing Bolt-On Edges.

# 966M XE/972M XE Wheel Loaders Specifications

## 972M XE Operating Specifications with Buckets

Machine		Standard Linkage						High Lift Linkage Change**
Pin/Quick Coupler		Pin-On				Fusion QC	Universal QC	
Bucket Type		Material Handling				Material Handling	Material Handling	
Edge Type		Bolt-On Cutting Edges	Teeth and Segments	Bolt-On Cutting Edges	Teeth and Segments	Bolt-On Cutting Edges	Bolt-On Cutting Edges	
Capacity – Rated	m <sup>3</sup>	4.80	4.80	5.00	5.00	4.60	4.60	—
Capacity – Rated at 110% Fill Factor	m <sup>3</sup>	5.28	5.28	5.50	5.50	5.06	5.06	—
Width	mm	3220	3271	3220	3271	3220	3220	—
<b>16†</b> Dump Clearance at Maximum Lift and 45° Discharge	mm	3099	2936	3070	2908	3069	2954	336
<b>17†</b> Reach at Maximum Lift and 45° Discharge	mm	1272	1399	1300	1427	1301	1507	23
Reach at Level Lift Arm and Bucket Level	mm	3009	3214	3049	3254	3050	3277	274
<b>A†</b> Digging Depth	mm	103	103	103	103	103	39	–5
<b>12†</b> Shipping Length (with Bucket)	mm	9310	9534	9350	9574	9351	9529	338
<b>B†</b> Overall Height with Bucket at Maximum Lift	mm	6193	6193	6223	6223	6199	6439	336
Loader Clearance Circle Radius with Bucket at Carry Position	mm	7607	7696	7618	7707	7616	7666	169
Static Tipping Load, Straight (With Tire Deflection)*	kg	18 380	18 196	18 306	18 121	17 763	16 413	–1598
Static Tipping Load, Straight (No Tire Deflection)*	kg	19 613	19 425	19 545	19 357	18 970	17 566	–1763
Static Tipping Load, Articulated (With Tire Deflection)*	kg	16 050	15 864	15 977	15 790	15 463	14 230	–1429
Static Tipping Load, Articulated (No Tire Deflection)*	kg	17 288	17 101	17 222	17 034	16 679	15 398	–1608
Breakout Force***	kN	196	195	191	189	191	160	–7
Operating Weight*	kg	24 977	25 114	25 026	25 164	25 409	25 690	85

\*Static tipping loads and operating weights are based on a machine configuration with Michelin 26.5R25 XHA2 L3 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering and sound suppression.

\*\*Maximum values.

\*\*\*Measured 102 mm behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C.

Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers, including SAE Standard J732C governing loader ratings.

(With Tire Deflection) Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

(No Tire Deflection) Compliance to ISO 14397-1:2007 Sections 1 thru 5.

†Illustration shown with Dimension charts.

QC = Quick Coupler

Additional buckets are available and offerings vary by region. Consult your local Cat dealer for further details.



# 966M XE/972M XE Wheel Loaders Specifications

## 972M XE Operating Specifications with Buckets

Machine		Standard Linkage					High Lift Linkage Change**
Pin/Quick Coupler		Pin-On					
Bucket Type		Material Handling Heavy Duty				Rock (V-Edge)	
Edge Type		Bolt-On Cutting Edges	FMT	Bolt-On Cutting Edges	FMT	Teeth and Segments	
Capacity – Rated	m³	4.80	4.80	5.00	4.97	4.00	—
Capacity – Rated at 110% Fill Factor	m³	5.28	5.28	5.50	5.47	4.40	—
Width	mm	3220	3294	3220	3294	3350	—
16† Dump Clearance at Maximum Lift and 45° Discharge	mm	3099	2933	3070	2911	3160	336
17† Reach at Maximum Lift and 45° Discharge	mm	1272	1476	1300	1497	1547	23
Reach at Level Lift Arm and Bucket Level	mm	3009	3271	3049	3301	3171	274
A† Digging Depth	mm	103	78	103	78	50	–5
12† Shipping Length (with Bucket)	mm	9310	9551	9350	9581	9472	338
B† Overall Height with Bucket at Maximum Lift	mm	6193	6234	6234	6265	6057	335
Loader Clearance Circle Radius with Bucket at Carry Position	mm	7607	7703	7618	7711	7726	170
Static Tipping Load, Straight (With Tire Deflection)*	kg	18 233	17 921	18 151	17 857	18 317	–1583
Static Tipping Load, Straight (No Tire Deflection)*	kg	19 464	19 161	19 388	19 101	19 562	–1747
Static Tipping Load, Articulated (With Tire Deflection)*	kg	15 901	15 570	15 820	15 507	15 920	–1416
Static Tipping Load, Articulated (No Tire Deflection)*	kg	17 139	16 820	17 065	16 761	17 177	–1593
Breakout Force***	kN	196	200	190	195	193	–7
Operating Weight*	kg	25 121	25 506	25 176	25 550	26 189	85

\*Static tipping loads and operating weights are based on a machine configuration with Michelin 26.5R25 XHA2 L3 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering and sound suppression.

\*\*Maximum values.

\*\*\*Measured 102 mm behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C.

Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers, including SAE Standard J732C governing loader ratings.

(With Tire Deflection) Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

(No Tire Deflection) Compliance to ISO 14397-1:2007 Sections 1 thru 5.

†Illustration shown with Dimension charts.

FMT = Flush Mounted Teeth

Additional buckets are available and offerings vary by region. Consult your local Cat dealer for further details.

# 966M XE/972M XE Wheel Loaders Specifications

## 972M XE Operating Specifications with Buckets – Aggregate Handler

Machine		Aggregate Handler***		
Pin/Quick Coupler		Pin-On		
Bucket Type		Material Handling		
Edge Type		Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges
Capacity – Rated	m <sup>3</sup>	5.00	5.20	5.40
Capacity – Rated at 110% Fill Factor	m <sup>3</sup>	5.50	5.70	5.90
Width	mm	3230	3230	3230
<b>16†</b> Dump Clearance at Maximum Lift and 45° Discharge	mm	3092	3049	3021
<b>17†</b> Reach at Maximum Lift and 45° Discharge	mm	1272	1314	1343
Reach at Level Lift Arm and Bucket Level	mm	3014	3074	3114
<b>A†</b> Digging Depth	mm	108	108	108
<b>12†</b> Shipping Length (with Bucket)	mm	9005	9065	9105
<b>B†</b> Overall Height with Bucket at Maximum Lift	mm	6234	6265	6306
Loader Clearance Circle Radius with Bucket at Carry Position	mm	7615	7631	7642
Static Tipping Load, Straight (With Tire Deflection)*	kg	19 368	19 309	19 227
Static Tipping Load, Straight (No Tire Deflection)*	kg	20 712	20 659	20 583
Static Tipping Load, Articulated (With Tire Deflection)*	kg	16 857	16 799	16 718
Static Tipping Load, Articulated (No Tire Deflection)*	kg	18 214	18 161	18 087
Breakout Force**	kN	191	186	181
Operating Weight*	kg	25 715	25 755	25 809

\*Static tipping loads and operating weights are based on a machine configuration with Michelin 26.5R25 XHA2 L3 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering and sound suppression.

\*\*Measure 102 mm behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C. Specifications and ratings confirm to all applicable standards recommended by the Society of Automotive Engineers, including SAE Standard J732C governing loader ratings.

\*\*\*Aggregate Handler Configurations are NOT compatible with L5 Tires, Teeth, Teeth and Segments, and Spade Nose Rock Bucket.

(With Tire Deflection) Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

(No Tire Deflection) Compliance to ISO 14397-1:2007 Sections 1 thru 5.

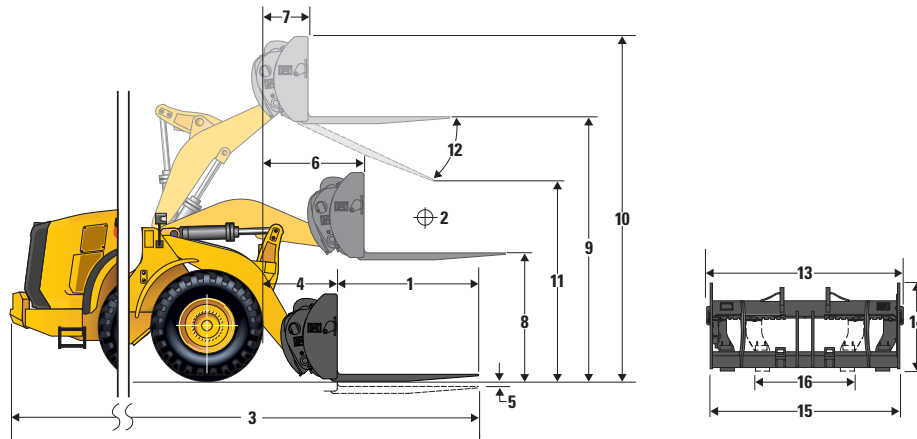
†Illustration shown with Dimension charts.

Additional buckets are available and offerings vary by region. Consult your local Cat dealer for further details.



# 966M XE/972M XE Wheel Loaders Specifications

## 966M XE/972M XE Operating Specifications with Pallet Fork



Machine		966M XE	972M XE
		Standard Counterweight	Standard Counterweight
Interface		Fusion QC	Fusion QC
1 Tine Length	mm	1829	1829
2 Load Center	mm	915	915
3 Maximum Overall Length	mm	9531	10 012
4 Reach with Forks at Ground Level	mm	1106	1267
5 Ground to Top of Tine at Minimum Height and Fork Level	mm	-11	10
6 Reach with Arms Horizontal and Forks Level	mm	1704	1834
7 Reach with Fork at Maximum Height	mm	836	788
8 Ground to Top of Tine with Arms Horizontal and Fork Level	mm	1955	1956
9 Ground to Top of Tine at Maximum Height and Fork Level	mm	4039	4262
10 Overall Height of Fork at Full Lift (Top of Carriage to Ground)	mm	5079	5302
11 Clearance at Full Lift and Maximum Dump	mm	2292	2516
12 Maximum Discharge Angle from Horizontal	degrees	51	51
13 Overall Carriage Width	mm	2528	2528
14 Overall Carriage Height	mm	1130	1130
15 Outside Tine Width (Maximum Spread)	mm	2178	2178
16 Outside Tine Width (Minimum Spread)	mm	576	576
Tine Width (Single Tine)	mm	180.0	180.0
Tine Thickness	mm	90.0	90.0
Tine Capacity	kg	14 800	14 800
Static Tipping Load – Straight (Forks Level)*	kg	11 345	13 012
Static Tipping Load – Articulated (Forks Level)*	kg	10 013	11 401
Rated Load (SAE J1197 – 50% FTSTL)**	kg	5007	5701
Rated Load (CEN EN 474-3 Rough Terrain – 60% FTSTL)**	kg	6008	6841
Rated Load (CEN EN 474-3 Firm and Level Ground – 80% FTSTL)**	kg	7807	9121
Operating Weight*	kg	22 683	24 378

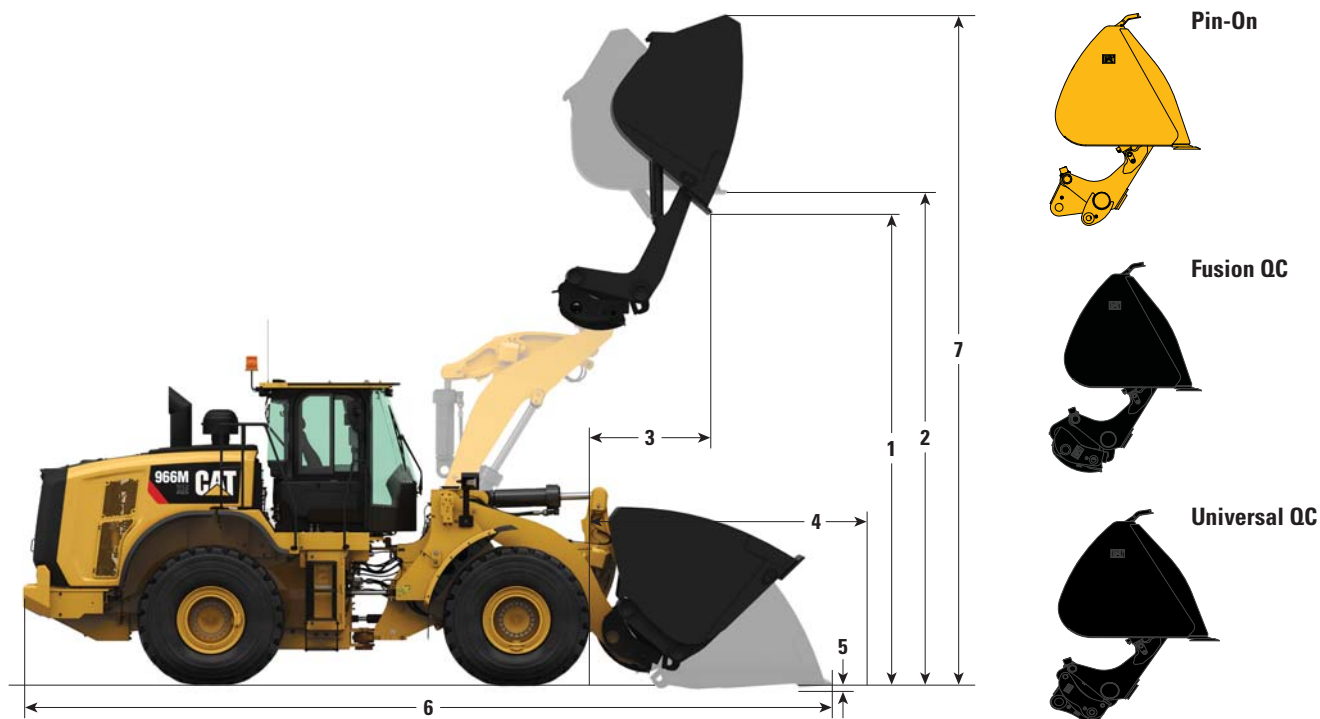
\*Static tipping loads and operating weights are based on L3 Michelin XHA tires, air conditioning, ride control, power train guard, full fluids, fuel tank, coolant, lubricants, and operator.

\*\*The rated operating load for a loader equipped with a pallet fork is determined by: SAE J1197: 50% of full turn static tipping load or hydraulic limit. CEN EN 474-3: 60% of full turn static tipping load on rough terrain or hydraulic limit. CEN EN 474-3: 80% of full turn static tipping load on firm and level ground or hydraulic limit. SAE – Society of Automotive Engineers. CEN – European Committee for Standardization. Refer to the Forks Product Bulletins for capacity load charts.

Additional forks are available and offerings vary by region. Consult your local Cat dealer for further details.

# 966M XE/972M XE Wheel Loaders Specifications

## 966M XE Operating Specifications with High Dump Buckets



Machine		966M XE Aggregate Handler		
Interface		Pin-On	Fusion QC	Universal QC
Edge Type		Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges
Capacity – Rated	m <sup>3</sup>	11.10	11.10	11.10
Capacity – Rated at 110% Fill Factor	m <sup>3</sup>	12.20	12.20	12.20
Width	mm	3656	3656	3656
Nominal Material Density – 110% Fill Factor	kg/m <sup>3</sup>	630	610	570
1 Dump Clearance at Maximum Lift, Maximum Rack, Bucket Rolled out to 45° Discharge	mm	4680	4698	4861
2 Clearance at Maximum Lift, Maximum Rack, Bucket Rolled out to Level	mm	5348	5366	5529
3 Reach at Maximum Lift, Maximum Rack, Bucket Rolled out to 45° Discharge	mm	1885	1894	1982
4 Reach at Level Lift Arm and Bucket Level	mm	3828	3848	4033
5 Digging Depth	mm	94	94	94
6 Overall Length	mm	9823	9843	10 028
7 Overall Height with Bucket at Maximum Height and Maximum Rack	mm	7483	7500	7663
Clearance Circle (Radius) with Bucket at Carry Position	mm	8023	7994	8049
Static Tipping Load, Straight (With Tire Deflection)*	kg	15 420	14 969	14 157
Static Tipping Load, Straight (No Tire Deflection)*	kg	16 762	16 300	15 441
Static Tipping Load, Articulated (With Tire Deflection)*	kg	13 288	12 845	12 106
Static Tipping Load, Articulated (No Tire Deflection)*	kg	14 645	14 191	13 407
Breakout Force	kN	93	92	82
Operating Weight*	kg	25 442	25 926	26 085

\*Static tipping loads and operating weights are based on a machine configuration with Michelin 23.5R25 XHA2 L3 radial tires, full fluids, operator, auxiliary counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering and sound suppression.

(With Tire Deflection) Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

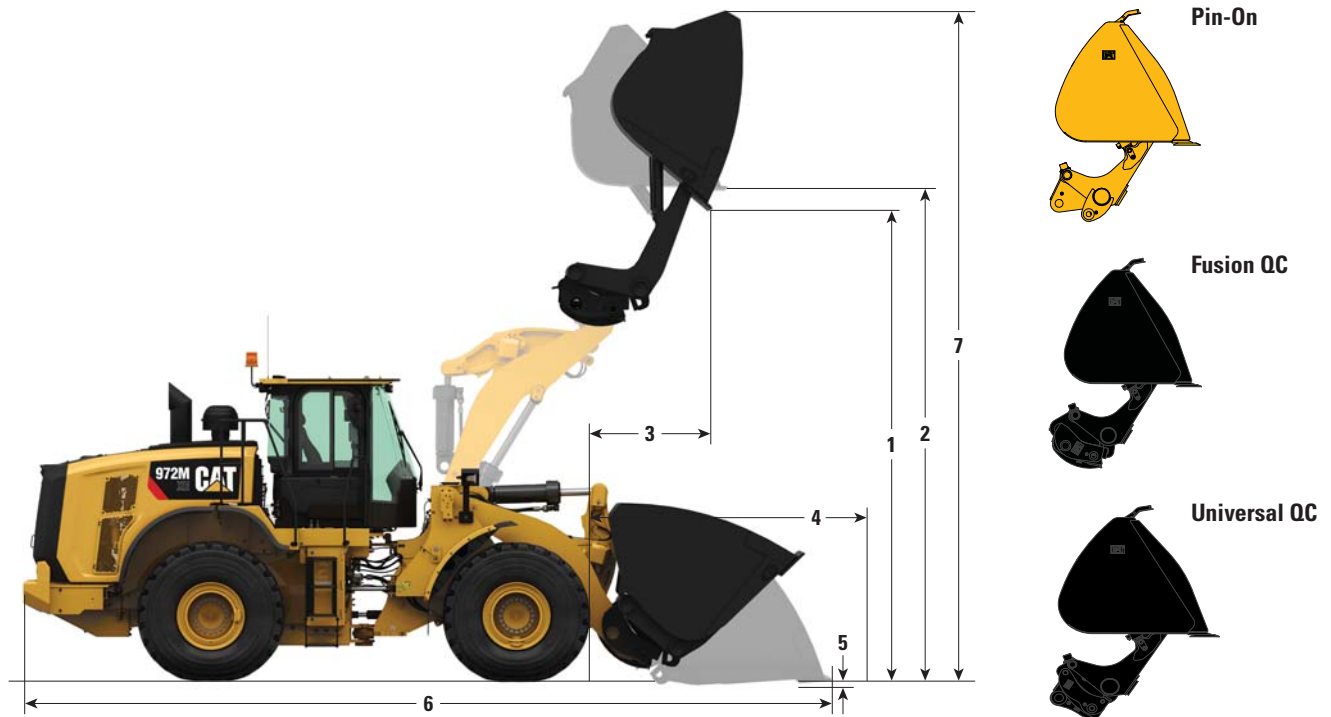
(No Tire Deflection) Compliance to ISO 14397-1:2007 Sections 1 thru 5.

Additional high dump buckets are available and offerings vary by region. Consult your local Cat dealer for further details.



# 966M XE/972M XE Wheel Loaders Specifications

## 972M XE Operating Specifications with High Dump Buckets



Machine		972M XE Aggregate Handler		
Interface		Pin-On	Fusion QC	Universal QC
Edge Type		Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges
Capacity – Rated	m <sup>3</sup>	11.10	11.10	11.10
Capacity – Rated at 110% Fill Factor	m <sup>3</sup>	12.20	12.20	12.20
Width	mm	3656	3656	3656
Nominal Material Density – 110% Fill Factor	kg/m <sup>3</sup>	670	650	610
1 Dump Clearance at Maximum Lift, Maximum Rack, Bucket Rolled out to 45° Discharge	mm	4795	4811	4965
2 Clearance at Maximum Lift, Maximum Rack, Bucket Rolled out to Level	mm	5477	5494	5647
3 Reach at Maximum Lift, Maximum Rack, Bucket Rolled out to 45° Discharge	mm	1936	1947	2051
4 Reach at Level Lift Arm and Bucket Level	mm	3958	3978	4163
5 Digging Depth	mm	73	73	73
6 Overall Length	mm	9945	9965	10 150
7 Overall Height with Bucket at Maximum Height and Maximum Rack	mm	7614	7631	7784
Clearance Circle (Radius) with Bucket at Carry Position	mm	8112	8083	8141
Static Tipping Load, Straight (With Tire Deflection)*	kg	16 513	16 065	15 214
Static Tipping Load, Straight (No Tire Deflection)*	kg	17 877	17 415	16 513
Static Tipping Load, Articulated (With Tire Deflection)*	kg	14 153	13 710	12 938
Static Tipping Load, Articulated (No Tire Deflection)*	kg	15 544	15 092	14 273
Breakout Force	kN	114	113	102
Operating Weight*	kg	27 026	27 510	27 669

\*Static tipping loads and operating weights are based on a machine configuration with Michelin 23.5R25 XHA2 L3 radial tires, full fluids, operator, auxiliary counterweight, cold start, roading fenders, Product Link, manual diff lock/open axles (front/rear), power train guard, secondary steering and sound suppression.

(With Tire Deflection) Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

(No Tire Deflection) Compliance to ISO 14397-1:2007 Sections 1 thru 5.

Additional high dump buckets are available and offerings vary by region. Consult your local Cat dealer for further details.

## Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

### OPERATOR ENVIRONMENT

- Cab, pressurized and sound suppressed (ROPS/FOPS)
- Viscous mounts
- Multi-function 18 cm color touchscreen display for rear vision camera, clock and machine parameters
- EH controls, SAL (single axis lever) lift and tilt function
- Steering, EH joystick, speed sensing with force feedback
- Radio ready (entertainment) includes antenna, speakers and converter (12V, 10-amp)
- Air conditioner, heater, and defroster (auto temp and fan)
- EH parking brake
- Beverage holders (2) with storage compartment for cell phone/MP3 player
- Bucket/work tool function lockout
- Coat hook (2)
- Cab air filter
- Ergonomic cab access ladders and handrails
- Horn, electric
- Light, two dome (cab)
- Mirrors, rearview external with integrated spot mirrors
- Post mounted membrane 16 switch keypad
- 2 receptacles, 12V
- Seat, Cat Comfort (cloth) air suspension
- Seat belt, 51 mm retractable, with indicator
- Sun visor, front
- Wet-arm wipers/washers front and rear, intermittent front wiper
- Window, sliding (left and right sides)
- Cab tie-off

### COMPUTERIZED MONITORING SYSTEM

- With following gauges:
  - Speedometer/tachometer
  - Digital gear range indicator
  - Diesel Exhaust Fluid (DEF) level
  - Temperature: engine coolant, hydraulic oil, transmission oil
  - Fuel level

- With following warning indicators:
  - Regeneration
  - Temperature: axle oil, engine intake manifold
  - Pressure: engine oil, fuel pressure hi/low, primary steering oil, service brake oil
  - Battery voltage hi/low
  - Engine air filter restriction
  - Hydraulic oil filter restriction
  - Hydraulic oil low
  - Parking brake
  - DEF low level
  - Transmission filter bypass

### ELECTRICAL AND LIGHTING

- Batteries (2), maintenance free 1,400 CCA
- Ignition key; start/stop switch
- Starter, electric, heavy duty
- Starting and charging system (24V)
- Lighting system:
  - Four halogen work lights (cab mounted)
  - Two halogen roading lights (with signals)
  - Two halogen rear vision lights (hood mounted)
  - Two rear LED position/stop/turn
- Alarm, back-up
- Alternator, 145-amp brushed
- Main disconnect switch
- Emergency engine shutdown switch
- Receptacle start (cables not included)
- Secondary steering
- Speed limiter, adjustable

### CAT CONNECT TECHNOLOGIES

- Link technologies: Product Link
- Detect technologies: rear vision camera

### POWER TRAIN

- Engine, Cat 9.3 ACERT meets Stage IV emission standards
- Cat Clean Emissions Module (CEM) with Diesel Exhaust Fluid (DEF) tank and pump
- Fuel priming pump (electric)
- Fuel/water separator
- Precleaner, engine air intake
- Cat continuously variable transmission
- Axles, manually actuated differential lock front axle, open differential rear axle
- Axles, ecology drains

- Brakes, full hydraulic enclosed wet-disc with modulated neutralizer and integrated retarding
- Brake wear indicators
- Parking brake, disc and caliper
- Right pedal lock, maximum rimpull control and machine speed limit in the cab
- Fan, radiator, on demand

### LINKAGE

- Linkage, Z-bar, cast crosstube/tilt lever
- Kickout, lift and tilt, automatic

### HYDRAULICS

- Hydraulic system, load sensing
- Steering, load sensing
- Ride control, 2V
- Remote diagnostic pressure taps
- Hoses, Cat XT™
- Couplings, Cat O-ring face seal
- Hydraulic oil cooler (swing out)
- Oil sampling valves

### FLUIDS

- Premixed extended life coolant with freeze protection to -34° C

### OTHER STANDARD EQUIPMENT

- Hood, non-metallic power tilting
- Service centers (electrical and hydraulic)
- Platform, window washing
- Auto idle shutdown
- Fenders, steel front with mud-flap/rear with extension
- Ecology drains for engine, transmission, and hydraulics
- Ether aid ready
- Grill, airborne debris
- Filters: fuel, engine air, engine oil, hydraulic oil, transmission
- Fuel cooler
- Grease zerks
- Hitch, drawbar with pin
- Precleaner rain cap
- Sight gauges: engine coolant, hydraulic oil, and transmission oil level
- Toolbox
- Vandalism protection caplocks

## Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

### OPERATOR ENVIRONMENT

- Door, remote opening system
- Cover, HVAC metallic
- EH controls, SAL 3<sup>rd</sup> function
  - Additional roller switch for 4<sup>th</sup> function
- EH controls, joystick lift and tilt
  - Additional integrated roller switches for 3<sup>rd</sup> and 4<sup>th</sup> functions
- Filter, carbon fresh air
- Mirrors, heated rearview external with integrated spot mirrors
- Precleaner, HVAC
- Precleaner, HVAC (RESPA)
- Radio, AM/FM/CD/USB/MP3 Bluetooth®
- Seat, heated, air suspension
- Seat belt, 4 point harness, with indicator
- Seat, deluxe with leather inserts and headrest, heated and ventilated, air-suspended, adjustable lumbar support
- Roof, metallic
- Sun visor, rear
- Windows, rubber mounted
- Windows, with front guard
- Windows, with heavy duty front guard
- Windows, with full guards front, rear and sides
- Cat seat cover, removable

### ELECTRICAL AND LIGHTING

- Four additional halogen cab mounted work lights or;
- Two additional auxiliary front HI LED and two additional auxiliary rear LED cab mounted work lights, two LED work lights in the radiator grill, LED front turn signals, replacement of the standard four halogen cab mounted work lights with four LED work lights, LED roading lights
- Speed limiter – 20 km/h
- External seat belt indicator light
- Reversing strobes

### STARTERS, BATTERIES, AND ALTERNATORS

- Cold start – 240V

### CAT CONNECT TECHNOLOGIES

- Link technologies:
  - VIMS™
- Payload technologies:
  - Cat Production Measurement 2.0 (CPM)
  - Printer, Cat Production Measurement
  - Aggregate Autodig
- Advanced Productivity subscription
- Detect technologies:
  - Cat Rear Object Detection
- Machine Security System

### POWER TRAIN

- Axles
  - Automatic front/rear differential locks
  - Axle oil cooler
  - Extreme temperature seals
  - Seal guards
- Fan, VPF (variable pitch fan), automatic and manual control
- Radiator, high debris with wider fin spacing

### LINKAGE

- High lift
- Forestry (966M XE only)
- Extended capacity (972M XE only)
- Quick coupler ready

### WORK TOOLS

- Performance Series buckets
- Fusion quick coupler
- Forks, pallet
- Forks, logging

### HYDRAULICS

- 3<sup>rd</sup> function with Ride Control
- 4<sup>th</sup> function with Ride Control

### FLUIDS

- Premixed extended life coolant with freeze protection to –50° C
- Bio-degradable oil, Cat HYDO™

### OTHER OPTIONAL EQUIPMENT

- Cat Autolube System
- Fenders, roading
- Guard, power train
- Guard, rear radiator grill
- Oil change, high speed engine
- Precleaner, turbine
- Precleaner, trash
- Wheel chocks

### OTHER OPTIONAL CONFIGURATIONS

- Aggregate Handler
- Industrial and Waste Handler
- Forestry (966M XE only)
- Steel Mill (972M XE only)



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(Europe)

