# 980M/982M Wheel Loaders





980M	982M
Cat <sup>®</sup> C13 ACERT™	Cat C13 ACERT
317 kW (425 hp)	325 kW (436 hp)
288 kW (386 hp)	292 kW (392 hp)
4.2-12.2 m <sup>3</sup> (5.25-16.0 yd <sup>3</sup> )	4.6-12.0 m <sup>3</sup> (6.0-15.75 yd <sup>3</sup> )
30 090 kg (66,318 lb)*	35 563 kg (78,382 lb)**
	Cat <sup>®</sup> C13 ACERT™ 317 kW (425 hp) 288 kW (386 hp) 4.2-12.2 m³ (5.25-16.0 yd³)

\*For 5.4 m³ (7.1 yd³) general purpose buckets with BOCE. \*\*For 6.1 m³ (8.0 yd³) general purpose buckets with BOCE.

#### **RELIABLE, PRODUCTIVE AND FUEL EFFICIENT**

- 10% more fuel efficient than the industry leading K Series\*
- Up to 25% more fuel efficient than H Series\*
- Performance Series buckets are easy to load and improve material retention
- Work tools and couple ready (option) provide a wide range of work tools and allow the same work tool on different sizes of wheel loaders
- **Cat engine with ACERT Technology** which meets U.S. EPA Tier 4 Final and EU Stage IV emission standards and includes Cat Clean Emissions Module for continuous and efficient operation
- Advanced powershift transmission with a standard lock up clutch torque converter and lock-to-lock shifting delivers smooth shifts, fast acceleration and speed on grade
- Next generation axles with optional limited slip differentials to provide optimal traction in varying underfoot conditions for improved productivity
- Next generation load-sensing hydraulic system to provide optimal control of machine functions

#### **EASE OF OPERATION**

- Best-in-class operator environment for unmatched operator comfort and efficiency
- Advanced technology with Cat Connect to monitor, manage and enhance job site operations

#### **SERVICE ACCESS**

• Legacy one-piece hood, centralized service centers, windshield cleaning platform and harness tie-off to 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.



The new 980M and 982M Wheel Loaders have a U.S. EPA Tier 4 Final/EU Stage IV ACERT engine equipped with a combination of proven electronic, fuel, air and aftertreatment components. Applying proven technologies systematically and strategically lets us meet our customer's 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 operators. The reliability, durability, and versatility of both the 980M and 982M result in machines that are better built to meet your needs.

The new all-purpose 982M machine is a great 2-pass match for larger on-highway trucks, bank excavation and even face loading in well shot rock loading applications. The 982M has longer standard lift arms than the 980M making it a great rail car loader due to the higher hinge pin height. With a full range of bucket sizes and types, the 982M provides customers an exciting new option in this size class.

# **Reliable** Proven Components and Technology You Can Count On.



Every U.S. EPA Tier 4 Final/EU 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 Cat U.S. EPA Tier 4 Final/EU Stage IV 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 980M and 982M 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. The auxiliary third function 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<sup>™</sup> and the online VisionLink<sup>®</sup> application enable you to monitor real-time machine data and manage machines health. Your Cat dealer offers expert advice and S·O·S<sup>™</sup> Services to maintain equipment reliability and efficiency.

# **Cold Start Package**

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



#### **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:

- Improved Fluid Efficiency Up to 5% improvement over U.S. EPA Tier 4 Interim/EU Stage IIIB products (including Diesel Exhaust Fluid consumption).
- High Performance across a variety of applications.
- Enhanced 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 the operator without requiring interaction.
- Durable Designs with long life to overhaul.
- **Delivering Better Fuel Economy** with minimized maintenance costs while providing the same great power and response.

#### Transmission

The 980M and 982M power trains have been improved with the addition of a lock-up clutch torque converter standard. These new torque converters have been matched with the engine power and hydraulics to improve performance and fuel efficiency. These rugged planetary transmissions also have a new split-flow oil system which use new multi-viscosity oil to improve fuel economy.

#### 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 optional limited slip differentials will improve tractive ability in these applications thereby increasing productivity.

The axles have new external caliper disc parking brakes mounted to the input shaft of the front axles. Since they are external, they do not have the inefficiencies of enclosed wet parking brakes due to brake discs running in oil nor is there any oil to change reducing fuel and maintenance costs. External caliper parking brakes are easily accessible for inspection and service.

#### Hydraulics

The new ride control system now has two accumulators enabling it to be more effective over a greater payload range, increasing productivity and operator efficiency due to a better ride.

The implement pump continuously and automatically balance hydraulic loads with the machine performance desired by the operator.

# **Fuel Efficient** Engineered to Lower Your Operating Costs.



### **Engine and Emissions**

The Cat C13 ACERT engine is designed for maximum fuel efficiency and increased power density, while meeting U.S. EPA Tier 4 Final/EU Stage IV emission standards. This engine features innovative Cat electronics, fuel injection process, air-management systems, aftertreatment solution with Cat Selective Catalytic Reduction, and a fuel efficient regeneration system. The Cat Regeneration System automatically removes soot from the Diesel Particulate Filter without interrupting your machine's work cycle.

# **Efficient Systems and Components**

Innovative systems intelligently lower the average working engine speeds and reduce the overall system heat loads which result in significantly improved performance and fuel efficiency.

# Advanced Systems with Innovative Integration

The deep system integration of the new engine and emissions system, power train, hydraulic system and cooling system result in 10% lower fuel consumption on average compared to the 980K.

# **Economy Mode**

The productive economy mode automatically controls the engine torque and speed based on the machine's power train load and places engine speed and torque in the most efficient operating range. The result is improved fuel efficiency while delivering optimal performance.

#### **Next Generation Fuel Systems**

Cat injection timing precisely controls the fuel injection process through a series of carefully timed microbursts, providing more control of combustion for the cleanest, most efficient fuel burn. On 980M and 982M the High-Pressure Common Rail Fuel Systems boost performance and reduce soot for the C13 ACERT engine.

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

The Cat  $NO_X$  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  $NO_X$  emissions.

# **Aftertreatment Technologies**

To meet the additional 80% reduction in NO<sub>X</sub> emissions required by U.S. EPA Tier 4 Final/EU Stage IV emission standards, one new system, the Selective Catalytic Reduction (SCR), has been added to the already proven Cat U.S. EPA Tier 4 Interim/EU Stage IIIB aftertreatment solution.

# Easy to Operate Safe. Comfortable. Efficient.



Improving operator efficiency remains a key design goal for the 980M and 982M. Ensuring operators are safe, confident in the control of their machines, have a clean, comfortable and quiet operating environment with controls that are intuitive and low effort all contribute to lower operator fatigue and better performance.

### Cab Access

A switch has been added to the electronic service center which unlatches the door remotely (optional). The gas strut then swings the door open all while the operator is safely on the ground. The angle of the steps up to the cab has been increased to an optimal fifteen degrees enabling operators to walk up like stairs versus climbing more vertically like a ladder. Grab handles have been repositioned so a secure three points of contact can be maintained at all times.

# Visibility

Once in the cab, the new door securely seals against the new roll formed ROPS posts and the lower glass panel has been extended several inches to improve visibility to the left side of the machine. New larger convex mirrors improve visibility to the rear and integrated spot mirrors provide visibility close to both sides of the machine.

#### **Central Display**

The central display panel has a large text box, five 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 five large analog gauges the operator can easily identify if key systems are within normal operating range.



# **Touch Screen Display**

A new multipurpose color touch screen display dramatically simplifies the operator interface; with machine controls, rear vision camera and new fully integrated Cat Production Measurement system. Intuitive navigation with in-language text enables operators to modify certain machine operating parameters and monitor machine conditions literally at the touch of their fingers.

### **Control Panel**

Sealed against moisture and dirt, the centralized switch panel with LED's provides reliability and ready access to frequently required functions, even while wearing gloves. The ISO symbols located on each membrane switch are molded all the way through to ensure the image will not wear off over time.

The M Series maintains the "help" feature which explains the function of each membrane switch.

Focussing on operator efficiency, the control panel has been streamlined to include easy to reach highly utilized machine controls. The touch screen display enables the relocation of some expanded functions while eliminating the need for a second switch panel for further simplicity and easy machine operation.







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

Your operators will enjoy and quickly adopt the industry leading seat mounted EH joystick steering system, which provides precision control and dramatically decreases operator arm fatigue. For operators who prefer a steering wheel, an electro-hydraulic steering wheel is available as an option.

# **Implement Controls (EH)**

Seat mounted single axis implement control levers provide your operator with precise control of the work tool, all while moving with the seat for maximum comfort. In-cab programmable kick-outs and automatic cylinder snubbing are easy to set on-the-go for tilt, lower and lift, ideal for repeatable cycles.

# **Ride Control**

The next generation ride control works as a shock absorber, improving ride quality and smoothness over rough terrain, increasing your operator confidence, comfort and efficiency, ensuring excellent material retention.

# **Versatile** Linkage and Guard Options to Meet Your Various Applications Needs.



# **Z-bar Linkage**

The proven Z-bar linkage delivers great digging efficiency, excellent performance and versatility.

The results are excellent visibility to the work tool, excellent penetration into the pile, high breakout forces, superior production capabilities.

# **High Lift Linkage**

The optional high lift linkage on 980M 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, counterweights and a scale system such as the Cat Production Measurement system.

To do so, the Cat aggregate packages require some prerequisites in terms of correct application, machine configuration and 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 Handler, for the 980M, offers integrated guards to preserve your machine from the harsh environment of a scrap or waste handling application. The machine guarding is purpose built to protect your machine's major components and systems to ensure durability and reliability.

# **Versatile** Do More Jobs with One Machine, Work Tool Options to Meet Your Needs.



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 systembased approach to balance bucket shape with the machine's linkage, weight, lift and tilt capacities. Operators 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 the operators 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 optimized design results in unsurpassed production capabilities.
- **Bucket Types** Performance Series Buckets are available for General Purpose, Material Handling, Rock, Heavy Duty Rock and Coal style buckets.

**Heavy Duty Quarry Rock Buckets** are designed for bank or face loading material where high impact/high abrasion is encountered. Buckets include thicker base edge, liner package and addition wear plates.

**Slag Buckets** are designed for use in steel mills and slag processing centers. They feature increased material thickness in critical structural components to provide maximum durability for hot or cold slag handling.

Waste Handling Buckets are designed to move large volumes of low-density waste in transfer stations, landfills and recycling yards. Large capacities give maximum production when loading conveyors, trucks or hoppers.

**Woodchip Buckets** are optimized for moving large volumes of wood chips in forestry and millyard settings. They feature a flat floor and straight edge designed to scoop the bucket full and help heap the load high.

# **Quick Couplers and Work Tool Attachments**

A Wheel Loader equipped with a quick coupler is a much more versatile machine. Buckets and work tools can be changed without leaving the cab – allowing the machine to quickly move from task to task.

Pallet Forks are available for material handling.

Millyard and Logging Forks are available for forestry applications.

**Specialty Work Tool Attachments** such as plows for snow removal are available for the 980M and 982M. Contact your local Cat dealer for more details on tools available for your application.



# **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 technologyequipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:



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



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



PRODUCTIVITY

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

Featured Cat Connect technologies include:

# **Cat Connect 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.









### **Cat Connect PAYLOAD Technologies**

PAYLOAD technologies enable accurate weight measurement of material being loaded or hauled. Payload information is shared with loader operators in real-time to improve productivity, reduce overloading and record both weights and number of loads per shift.

#### **Cat Production Measurement System**

Cat Production Measurement provides on-the-go payload weighing through the standard touch-screen display so operators can deliver exact loads with confidence and work more efficiently. Caterpillar designed, fully integrated, and factory-fit for high accuracy, reliability and ease of use. Stores up to 20 material types and 50 truck IDs and records detailed data to track productivity, including time/date, weights, cycles, and more. An optional in-cab printer provides the driver a printed receipt of truck payloads.

The operator can track production using the two trip counter screens on the display. Site supervisors can wirelessly access data using the VisionLink web portal to measure production and monitor efficiency.

# **Cat Connect DETECT Technologies**

DETECT technologies help keep people and equipment safe by enhancing operator awareness of the work area around the equipment, by integrating safety features and by monitoring and reporting unsafe conditions or equipment operation.

# **Rear Vision Camera**

The standard rear vision camera greatly enhances visibility behind the machine to help the operator work more safely and productively. A panoramic rear view is automatically displayed on the new multi-function monitor during reverse travel. As an option, a second display can be added, providing a dedicated full-time rear view of the job site.

# **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.

# **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.



Machine configuration, operator technique, and job site layout can impact fuel consumption by as much as 30 percent. 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:

- New M Series U.S. EPA Tier 4 Final/ EU Stage IV 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 and your operators. Machine requires Ultra Low Sulfur Diesel ULSD and DEF.
- Optional Limited Slip Differentials Increase traction, reduce tire scuffing compared to other traction aids, further reducing your operating costs.

- New External Caliper Disc Parking Brakes – Easily accessible for maintenance.
- Lock-up-Clutch Torque Converter and Shift Strategy – Reduced torque interruption increases driveline efficiency, conserving fuel. Auto 1-4 transmission mode keeps engine rpm low, reducing fuel consumption while delivering optimal machine performance.
- 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 in first gear and keep engine rpm low. 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.
- 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.

# **Serviceable** Easy to Maintain. Easy to Service.

# **Engine Access**

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**

The cooling system (1) is readily accessible for clean out and maintenance. With nine cooling fins per 25.4 mm (1.0 in) 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 and hydraulic service centers provide grouped ground level access to numerous features, enhancing safety and convenience for your operators and service technicians, while reducing service time.

The hydraulic service centers (2) are now virtually identical for the M Series product line. This new consistent layout makes it easier for service technicians who work on a variety of M Series models.

The electrical service center (3), located beneath the left platform, contains the maintenance free batteries, a fuse relay panel, main disconnect switch, ground level engine shutdown switch, hood tilt switch, and the jump start receptacle.

Hydraulic system components on the 980M and 982M 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 new thermal bypass valve has been added to improve hydraulic system warm-up.





3

# **Sustainable** Conserving Resources.

The 980M and 982M 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.

Engine – 980M		
Engine Model	Cat C13 AC	ERT
Maximum Gross Power (1,700 rpm)		
SAE J1995	317 kW	425 hp
Maximum Net Power (1,700 rpm)		
SAE J1349	288 kW	386 hp
Peak Gross Torque (1,200 rpm)		
SAE J1995	2206 N·m	1,627 lbf-ft
Maximum Net Torque (1,100 rpm)		
SAE J1349	2054 N·m	1,515 lbf-ft
Bore	130 mm	5.12 in
Stroke	157 mm	6.18 in
Displacement	12.5 L	763 in <sup>3</sup>

• Cat engine with ACERT Technology – meets U.S. EPA Tier 4 Final/ EU 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, alternator, air cleaner and aftertreatment.
- The gross power advertised is with the fan at maximum speed.

# Buckets - 980M

Bucket Capacities

#### Weight - 980M

Operating Weight

30 090 kg 66,318 lb

5.25-16.0 yd3

4.2-12.2 m<sup>3</sup>

• Weight based on a machine configuration with Michelin 29.5R25 XLDD1 L4 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, open differential axles (front/rear), secondary steering, sound suppression, and a 5.4 m<sup>3</sup> (7.1 yd<sup>3</sup>) general purpose bucket with BOCE.

#### **Operating Specifications – 980M**

Static Tipping Load – Full 40° Turn		
With Tire Deflection	19 565 kg	43,121 lb
No Tire Deflection	20 796 kg	45,834 lb
Breakout Force	224 kN	50,466 lb

• Full compliance to ISO (2007) 143971 Sections 1 thru 6, which requires 2% verification between calculations and testing.

#### Engine – 982M

Eligino Jozin		
Engine Model	Cat C13 ACERT	
Maximum Gross Power (1,700 rpm)		
SAE J1995	325 kW	436 hp
Maximum Net Power (1,700 rpm)		
SAE J1349	292 kW	392 hp
Peak Gross Torque (1,200 rpm)		
SAE J1995	2206 N·m	1,627 lbf-ft
Maximum Net Torque (1,100 rpm)		
SAE J1349	2058 N·m	1,518 lbf-ft
Bore	130 mm	5.12 in
Stroke	157 mm	6.18 in
Displacement	12.5 L	763 in <sup>3</sup>

• Cat engine with ACERT Technology – meets U.S. EPA Tier 4 Final/ EU 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, alternator, air cleaner and aftertreatment.
- The gross power advertised is with the fan at maximum speed.

#### Buckets - 982M

Bucket Capacities

4.6-12.0 m<sup>3</sup> 6.0-15.75 yd<sup>3</sup>

#### Weight – 982M

- Operating Weight
- 35 563 kg 78,382 lb
- Weight based on a machine configuration with Bridgestone 875/ 65R29 VLTS L4 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, open differential axles (front/rear), secondary steering, sound suppression, and a 6.1 m<sup>3</sup> (8.0 yd<sup>3</sup>) general purpose bucket with BOCE.

#### **Operating Specifications – 982M**

Static Tipping Load – Full 40° Turn		
With Tire Deflection	21 080 kg	46,462 lb
No Tire Deflection	22 393 kg	49,354 lb
Breakout Force	260 kN	58,531 lb

• Full compliance to ISO (2007) 143971 Sections 1 thru 6, which requires 2% verification between calculations and testing.

# Transmission – 980M

Forward 1	6.9 km/h	4.3 mph
Forward 2	13.3 km/h	8.3 mph
Forward 3	23.5 km/h	14.6 mph
Forward 4	40.0 km/h	24.9 mph
Reverse 1	7.8 km/h	4.8 mph
Reverse 2	15.2 km/h	9.4 mph
Reverse 3	26.9 km/h	16.7 mph
Reverse 4	40.0 km/h	24.9 mph

• Maximum travel speed in standard vehicle with empty bucket and standard L4 tires with 933 mm (37 in) roll radius.

#### Hydraulic System – 980M

Implement Pump Type	Variable Disp	olacement
	Piston	
Implement System		
Maximum Pump Output (2,250 rpm)	445 L/min	118 gal/min
Maximum Operating Pressure	34 300 kPa	4,975 psi
Optional 3rd Function	240 L/min	63 gal/min
Maximum Flow		
Optional 3rd Function	25 300 kPa	3,408 psi
Maximum Pressure		
Hydraulic Cycle Time with Rated Paylo	oad:	
Raise from Carry Position	5.3 Seconds	
Dump, at Maximum Raise	1.7 Seconds	
Lower, Empty, Float Down	3.1 Seconds	
Total	10.1 Seconds	

### Brakes – 980M

Brakes

Brakes meet ISO 3450 standards

#### **Axles – 980M**

Front	Fixed
Rear	Oscillating ±13 degrees
Maximum Single-Wheel Rise and Fall	549 mm 1.8 ft

# Transmission – 982M

Forward 1	6.2 km/h	3.9 mph
Forward 2	11.9 km/h	7.4 mph
Forward 3	21.1 km/h	13.1 mph
Forward 4	37.5 km/h	23.3 mph
Reverse 1	7.0 km/h	4.3 mph
Reverse 2	13.6 km/h	8.5 mph
Reverse 3	24.1 km/h	15.0 mph
Reverse 4	40.0 km/h	24.9 mph

• Maximum travel speed in standard vehicle with empty bucket and standard L4 tires with 914 mm (36 in) roll radius.

### Hydraulic System – 982M

Implement Pump Type	Variable Disr	lacomont
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	Piston	
Implement System		
Maximum Pump Output (2,250 rpm)	445 L/min	118 gal/min
Maximum Operating Pressure	34 300 kPa	4,975 psi
Optional 3 <sup>rd</sup> Function	240 L/min	63 gal/min
Maximum Flow		
Optional 3 <sup>rd</sup> Function	23 500 kPa	3,408 psi
Maximum Pressure		
Hydraulic Cycle Time with Rated Paylo	oad:	
Raise from Carry Position	5.3 Seconds	
Dump, at Maximum Raise	1.7 Seconds	
Lower, Empty, Float Down	3.1 Seconds	
Total	10.1 Seconds	
Brakes – 982M		
Brakes	Brakes meet l standards	(SO 3450

#### **Axles – 982M**

Front	Fixed
Rear	Oscillating ±13 degrees
Maximum Single-Wheel Rise and Fall	571 mm 1.87 ft

#### Cab – 980M

**ROPS/FOPS** 

ROPS/FOPS meet ISO 3471 and ISO 3449 Level II standards

#### Sound – 980M

• 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)	72 dB(A)*
Exterior Sound Power Level (ISO 6395:2008)	112 dB(A)
Exterior Sound Power Level (SAE J88:2013)	78 dB(A)**

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

\*\*For a standard machine configuration, measured according to the procedures specified. The measurement was conducted under the following conditions: distance of 15 m (49.2 ft), moving forward in second gear ratio with the cooling fan speed set at maximum value.

#### Service Refill Capacities – 980M

441 L	116.5 gal
21 L	5.5 gal
53 L	14.0 gal
37 L	9.8 gal
90 L	23.8 gal
84 L	22.2 gal
84 L	22.2 gal
	21 L 53 L 37 L 90 L 84 L

#### Cab – 982M

**ROPS/FOPS** 

ROPS/FOPS meet ISO 3471 and ISO 3449 Level II standards

#### Sound – 982M

• 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.

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

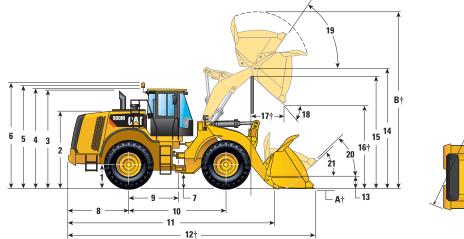
\*\*For a standard machine configuration, measured according to the procedures specified. The measurement was conducted under the following conditions: distance of 15 m (49.2 ft), moving forward in second gear ratio with the cooling fan speed set at maximum value.

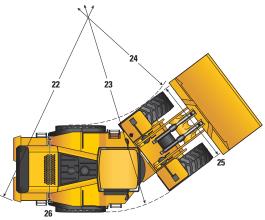
#### Service Refill Capacities – 982M

Fuel Tank	441 L	116.5 gal
DEF Tank	21 L	5.5 gal
Cooling System	53 L	14.0 gal
Crankcase	37 L	9.8 gal
Transmission	90 L	23.8 gal
Differentials and Final Drives – Front	84 L	22.2 gal
Differentials and Final Drives – Rear	84 L	22.2 gal
Hydraulic Tank	180 L	48 gal

#### **980M Dimensions**

All dimensions are approximate.





	Standa	rd Lift	High Lift			
1 Height to Axle Centerline	892 mm	2'11"	892 mm	2'11"		
2 Height to Top of Hood	3110 mm	10'2"	3110 mm	10'2"		
<b>3</b> Height to Top of Exhaust Pipe	3746 mm	12'3"	3746 mm	12'3"		
4 Height to Top of ROPS	3813 mm	12'6"	3813 mm	12'6"		
5 Height to Top of Product Link Antenna	3891 mm	12'9"	3891 mm	12'9"		
6 Height to Top of Warning Beacon	4112 mm	13'6"	4112 mm	13'6"		
7 Ground Clearance	453 mm	1'6"	453 mm	1'6"		
8 Center Line of Rear Axle to Edge of Counterweight	2469 mm	8'1"	2469 mm	8'1"		
<b>9</b> Center Line of Rear Axle to Hitch	1900 mm	6'3"	1900 mm	6'3"		
10 Wheelbase	3800 mm	12'6"	3800 mm	12'6"		
<b>11</b> Overall Length (without bucket)	7964 mm	26'2"	8164 mm	26'10"		
<b>12</b> Shipping Length (with bucket level on ground)*†	9493 mm	31'2"	9694 mm	31'10"		
13 Hinge Pin Height at Carry Height	621 mm	621 mm 2'0"		2'3"		
14 Hinge Pin Height at Maximum Lift	4539 mm	14'11"	4760 mm	15'7"		
15 Lift Arm Clearance at Maximum Lift	3795 mm	3795 mm 12'5"		13'1"		
<b>16</b> Dump Clearance at Maximum Lift and 45° Discharge*†	3273 mm	10'8"	3493 mm	11'5"		
<b>17</b> Reach at Maximum Lift and 45° Discharge*†	1481 mm	4'10"	1484 mm	4'10"		
<b>18</b> Dump Angle at Maximum Lift and Dump (on stops)*	52 deg	grees	55 deg	grees		
<b>19</b> Rack Back at Maximum Lift*	61 deg	grees	61 degrees			
20 Rack Back at Carry Height*	48 deg	grees	48 degrees			
21 Rack Back at Ground*	40 deg	grees	39 degrees			
<b>22</b> Clearance Circle (dia) to Counterweight	6850 mm	22'6"	6850 mm	22'6"		
<b>23</b> Clearance Circle (dia) to Outside of Tires	7403 mm	24'4"	7403 mm	24'4"		
24 Clearance Circle (dia) to Inside of Tires	4126 mm	13'7"	4126 mm	13'7"		
<b>25</b> Width Over Tires – Maximum (unloaded)	3265 mm	10'9"	3265 mm	10'9"		
Width Over Tires – Maximum (loaded)	3296 mm	10'10"	3296 mm	10'10"		
26 Tread Width	2440 mm	8'0"	2440 mm	8'0"		

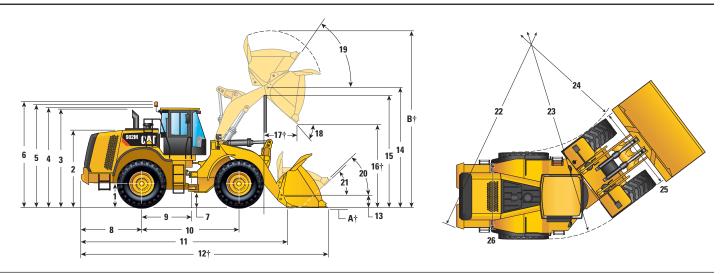
\*With 5.4 m<sup>3</sup> (7.1 yd<sup>3</sup>) general purpose pin on bucket with BOCE (see Operating Specifications for other buckets).

†Dimensions are listed in Operating Specifications charts.

All height and tire related dimensions are with Michelin 29.5R25 XLDD1 L4 radial tires (see Tire Option Chart for other tires). "Width Over Tires" dimensions are over the bulge and include growth.

# 982M Dimensions

All dimensions are approximate.



2'10" 10'1" 12'2" 12'5" 12'8" 13'5" 1'5" 8'11"
12'2" 12'5" 12'8" 13'5" 1'5" 8'11"
12'5" 12'5" 13'5" 1'5" 8'11"
12'8" 13'5" 1'5" 8'11"
13'5" 1'5" 8'11"
1'5" 8'11"
8'11"
6'3"
12'6"
28'2"
33'5"
2'7"
15'7"
12'8"
11'0"
5'1"
egrees
egrees
egrees
egrees
22'11"
24'8"
13'5"
11'4"
11'6"

\*With 6.1 m<sup>3</sup> (8.0 yd<sup>3</sup>) general purpose pin on bucket with BOCE (see Operating Specifications for other buckets).

†Dimensions are listed in Operating Specifications charts.

All height and tire related dimensions are with Bridgestone 875/65R29 VLTS L4 radial tires (see Tire Option Chart for other tires). "Width Over Tires" dimensions are over the bulge and include growth.

# 980M Tire Option Chart (Compared to Michelin XLDD1 L4)

Tire Brand	Michelin	Michelin	Michelin	Bridgestone	Bridgestone	Bridgestone
Tire Size	29.5R25	29.5R25	29.5R25	29.5R25	29.5R25	29.5R25
Tread Type	L–3	L–5	L5	L–3	L-4	L5
Tread Pattern	XHA2	XLDD2	XMINE D2	VMT	VSNT	VSDL
Width over Tires – Maximum (empty)*	3273 mm	3268 mm	3280 mm	3256 mm	3242 mm	3251 mm
	10'9"	10'9"	10'10"	10'9"	10'8"	10'8"
Width over Tires – Maximum (loaded)*	3292 mm	3297 mm	3295 mm	3284 mm	3265 mm	3273 mm
	10'10"	10'10"	10'10"	10'10"	10'9"	10'9"
Change in Vertical Dimensions	-33 mm	-6 mm	9 mm	-21 mm	4 mm	23 mm
(average of front and rear)	-1.3"	-0.2"	0.3"	-0.8"	0.2"	0.9"
Change in Horizontal Reach	23 mm	3 mm	3 mm	21 mm	1 mm	-10 mm
	0.9"	0.1"	0.1"	0.8"	0.0"	-0.4"
Change in Clearance Circle to Outside of Tires	-2 mm	0 mm	-1 mm	-6 mm	-16 mm	-11 mm
	-0.1"	0.0"	0.0"	-0.2"	-0.6"	-0.5"
Change in Clearance Circle to Inside of Tires	2 mm	0 mm	1 mm	6 mm	16 mm	11 mm
	0.1"	0.0"	0.0"	0.2"	0.6"	0.5"
Change in Operating Weight (without Ballast)	-544 kg	364 kg	688 kg	-356 kg	156 kg	864 kg
	-1,199 lb	802 lb	1,517 lb	-785 lb	344 lb	1,905 lb

\*Width over tire bulge and includes tire growth.

# **Changes Specific to the 980M**

Tire Brand	Michelin	Michelin	Michelin	Bridgestone	Bridgestone	Bridgestone
Tire Size	29.5R25	29.5R25	29.5R25	29.5R25	29.5R25	29.5R25
Tread Type	L–3	L–5	L5	L–3	L4	L5
Tread Pattern	XHA2	XLDD2	XMINE D2	VMT	VSNT	VSDL
Change in Static Tipping Load – Straight	-411 kg -905 lb	275 kg 606 lb	519 kg 1,145 lb	-269 kg -593 lb	118 kg 260 lb	652 kg 1,438 lb
Change in Static Tipping Load – Articulated	-357 kg -788 lb	239 kg 527 lb	452 kg 997 lb	-234 kg -516 lb	102 kg 226 lb	568 kg 1,251 lb

# 982M Tire Option Chart (Compared to Bridgestone 875/65R29 VLTS L4)

Tire Brand	Michelin	Bridgestone
Tire Size	875/65R29	875/65R29
Tread Type	L-3	L-3
Tread Pattern	XHA2	VTS
Width over Tires – Maximum (empty)*	3457 mm 11'5"	3463 mm 11'5"
Width over Tires – Maximum (loaded)*	3493 mm 11'6"	3499 mm 11'6"
Change in Vertical Dimensions (average of front and rear)	5 mm 0.2"	-3 mm -0.1"
Change in Horizontal Reach	-1 mm 0.0"	2 mm 0.1"
Change in Clearance Circle to Outside of Tires	9 mm 0.3"	12 mm 0.5"
Change in Clearance Circle to Inside of Tires	-9 mm -0.3"	-12 mm -0.5"
Change in Operating Weight (without Ballast)	-356 kg -785 lb	16 kg 35 lb

\*Width over tire bulge and includes tire growth.

# **Changes Specific to the 982M**

Tire Brand	Michelin	Bridgestone		
Tire Size	875/65R29	875/65R29		
Tread Type	L-3	L-3		
Tread Pattern	XHA2	VTS		
Change in Static Tipping Load – Straight	-236 kg -520 lb	11 kg 23 lb		
Change in Static Tipping Load – Articulated	-206 kg -454 lb	9 kg 20 lb		

# 980M 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 new 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		Fill Factor (%)*	Material Density
Earth/Clay		115	1.5-1.7
Sand and Gravel		115	1.5-1.7
Aggregate:	25-76 mm (1 to 3 in)	110	1.6-1.7
	19 mm (0.75 in) and smaller	105	1.8
Rock:	76 mm (3 in) and larger	100	1.6

\*As a % of ISO rated capacity.

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

r	/lateria	al Density	kg/m³	70	0 8	00 9	DO 10	100 11	00 1	200 13	800 1	400 15	500 10	600 1	700 1	800 1	900 2	000 2	100 2	200	2300	2400	2500
age		General Purpose	5.40 m³ (7.06 yd³)									6.21	 m³ (8.12 	yd³)			5.40 m <sup>3</sup> (	  7.06 yd³) 					
Standard Linkage	Pin On	Rock	4.40 m³ (5.75 γd³)									5.0	 6 m³ (6.6: 	2 yd³)				4.40 n	 1 <sup>3</sup> (5.75 yc 	  3) 			
Star		Coal	8.20 m³ (10.73 yd³)			9.43 m <sup>3</sup>	(12.33 yo	  3)		 8.20 m³ (1 	  0.73 yd³) 												
		General Purpose	5.70 m³ (7.46 yd³)									6.56	 m³ (8.58 	yd³)			5.70 m <sup>3</sup>	 (7.46 yd <sup>3</sup> 	)				
Aggregate Handler	Pin On	Furpose	6.00 m³ (7.85 yd³)								6.90	m³ (9.025	yd³)			 6.00 m <sup>3</sup>   	 (7.85 yd³) 						
Aggregat	Pir	Material Handling	5.70 m³ (7.46 yd³)									6.56 m <sup>3</sup>	 (8.58 yd³) 			5.7	 70 m³ (7.4) 	 6 yd³) 					
		Coal	8.20 m³ (10.73 yd³)			9	.43 m³ (1)	 2.33 yd³) 		8.	 20 m³ (10 	l.73 yd³)											
r	/lateria	al Density	lb/yd³	1,1	80 1,3	348 1,5	517 <u>1</u> ,	685 1,	854 2	2,022 2,	,191 2,	,359 2,5	528 2,	696 2	,865 3	,033 3,	,202 3,	370 3	,539 3,	707	3,876	4,044	4,213
		Fill Factors 05% 100% 95%																					

Note: All buckets are showing Bolt-On Edges.

### 980M Operating Specifications with Buckets

Linkage Bucket Type			Standard Linkage General Purpose – Pin On			Standard Linkage Rock – Pin On***		
Capacity – Rated	m <sup>3</sup>	5.40	5.40	5.00	4.40	4.40	4.30	8.20
	yd <sup>3</sup>	7.06	7.06	6.54	5.75	5.75	5.62	10.73
Capacity – 110%	m <sup>3</sup>	5.94	5.94	5.50	4.84	4.84	4.73	9.02
	yd <sup>3</sup>	7.77	7.77	7.19	6.33	6.33	6.19	11.80
Width	mm	3447	3535	3535	3504	3504	3504	3638
	ft/in	11'3"	11'7"	11'7"	11'5"	11'5"	11'5"	11'11"
16† Dump Clearance at Maximum Lift	mm	3273	3107	3107	3101	3101	3101	2917
and 45° Discharge	ft/in	10'8"	10'2"	10'2"	10'2"	10'2"	10'2"	9'6"
<b>17</b> <sup>†</sup> Reach at Maximum Lift and 45° Discharge	mm	1481	1618	1618	1769	1769	1769	1625
· · · · · · · · · · · · · · · · · · ·	ft/in	4'10"	5'3"	5'3"	5'9"	5'9"	5'9"	5'3"
Reach at Level Lift Arm and Bucket Level	mm	2965	3177	3177	3285	3285	3285	3336
	ft/in	9'8"	10'5"	10'5"	10'9"	10'9"	10'9"	10'11"
A† Digging Depth	mm	103	103	68	106	106	71	108
	in	4"	4"	2.6"	4.1"	4.1"	2.8"	4.2"
12† Overall Length	mm	9493	9734	9734	9828	9828	9828	9867
·	ft/in	31'2"	32'0"	32'0"	32'3"	32'3"	32'3"	32'5"
<b>B</b> <sup>†</sup> Overall Height with Bucket at Maximum Lift	mm	6421	6421	6421	6184	6184	6184	6536
	ft/in	21'1"	21'1"	21'1"	20'4"	20'4"	20'4"	21'6"
Loader Clearance Circle with Bucket	mm	15 223	15 451	15 451	15 469	15 469	15 469	15 609
at Carry Position	ft/in	50'0"	50'9"	50'9"	50'10"	50'9"	50'9"	51'3"
Static Tipping Load, Straight (ISO)*	kg	22 639	22 453	22 897	22 987	23 033	23 504	21 615
	lb	49,897	49,488	50,466	50,664	50,766	51,803	47,639
Static Tipping Load, Straight (Rigid Tire)*	kg	24 023	23 835	24 297	24 375	24 431	24 912	23 054
	lb	52,946	52,533	53,551	53,722	53,848	54,907	50,811
Static Tipping Load, Articulated (ISO)*	kg	19 565	19 379	19 795	19 851	19 875	20 337	18 575
	lb	43,121	42,712	43,629	43,752	43,806	44,822	40,941
Static Tipping Load, Articulated (Rigid Tire)*	kg	20 796	20 608	21 040	21 083	21 117	21 587	19 864
·	lb	45,834	45,421	46,373	46,467	46,542	47,578	43,781
Breakout Force(§)	kN	224	222	239	210	210	227	175
	lbf	50,466	49,926	53,816	47,384	47,195	51,049	39,467
Operating Weight*	kg	30 090	30 228	30 053	30 612	30 687	30 392	30 677
	lb	66,318	66,623	66,236	67,469	67,634	66,984	67,612

\* Static tipping loads and operating weights shown are based on a machine configuration with Michelin 29.5R25 XLDD1 L4 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, limited slip differentials, power train guard, secondary steering and sound suppression.

† Illustration shown with Dimension charts.

\*\*\* Rock bucket specifications are given on Michelin 29.5R25 XLDD2 L5 Radial tires.

(§) Measured 102 mm (4") behind tip of cutting edge with bucket hinge pin as pivot point 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.

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

(Rigid Tire) Compliance to ISO 14397-1 (2007) Sections 1 thru 5.

# 980M Operating Specifications with Buckets

Linkage		
Bucket Type		
Edge Type		High Lift Delta
Capacity – Rated	m <sup>3</sup>	—
	yd <sup>3</sup>	
Capacity – 110%	m <sup>3</sup>	—
	yd <sup>3</sup>	—
Width	mm	_
	ft/in	
6† Dump Clearance at Maximum Lift and 45° Discharge	mm	221
	ft/in	0'8"
7† Reach at Maximum Lift and 45° Discharge	mm	
	ft/in	
Reach at Level Lift Arm and Bucket Level	mm	160
	ft/in	0'6"
A† Digging Depth	mm	_
	in	
2† Overall Length	mm	201
	ft/in	0'7"
<b>B</b> <sup>†</sup> Overall Height with Bucket at Maximum Lift	mm	221
	ft/in	0'8"
Loader Clearance Circle with Bucket at Carry Position	mm	1009
	ft/in	3'3"
Static Tipping Load, Straight (ISO)*	kg	(2002)
	lb	(4,413)
Static Tipping Load, Straight (Rigid Tire)*	kg	(2212)
	lb	(4,875)
Static Tipping Load, Articulated (ISO)*	kg	(1365)
	lb	(3,008)
Static Tipping Load, Articulated (Rigid Tire)*	kg	(1547)
	lb	(3,410)
Breakout Force(§)	kN	19
	lbf	4,190
Operating Weight*	kg	115
	lb	253

\* Static tipping loads and operating weights shown are based on a machine configuration with Michelin 29.5R25 XLDD1 L4 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, limited slip differentials, power train guard, secondary steering and sound suppression.

† Illustration shown with Dimension charts.

(§) Measured 102 mm (4") behind tip of cutting edge with bucket hinge pin as pivot point in accordance with SAE J732C.

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# 980M Operating Specifications with Buckets – Aggregate Handler

Package			egate ller**	Aggregate Handler**	Aggregate Handler**	
Bucket Type		General Purpose – Pin On		Material Handler – Pin On	Coal – Pin On	
Edge Type		Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	
Capacity – Rated	m <sup>3</sup>	5.70	6.00	5.70	8.20	
	yd <sup>3</sup>	7.46	7.85	7.46	10.73	
Capacity – 110%	m <sup>3</sup>	6.27	6.60	6.27	9.02	
	yd <sup>3</sup>	8.20	8.63	8.20	11.80	
Width	mm	3447	3447	3447	3638	
	ft/in	11'3"	11'3"	11'3"	11'11"	
16† Dump Clearance at Maximum Lift	mm	3204	3187	3105	2917	
and 45° Discharge	ft/in	10'6"	10'5"	10'2"	9'6"	
17† Reach at Maximum Lift and 45° Discharge	mm	1529	1550	1444	1625	
	ft/in	5'0"	5'1"	4'8"	5'3"	
Reach at Level Lift Arm and Bucket Level	mm	3049	3077	3074	3336	
	ft/in	10'0''	10'1"	10'1"	10'11"	
A <sup>†</sup> Digging Depth	mm	103	103	103	108	
	in	4"	4"	4"	4.2"	
12† Overall Length	mm	9638	9666	9663	9928	
	ft/in	31'8"	31'9"	31'9"	32'7"	
<b>B</b> <sup>†</sup> Overall Height with Bucket at Maximum Lift	mm	6243	6269	6242	6536	
	ft/in	20'6"	20'7"	20'6"	21'6"	
Loader Clearance Circle with Bucket	mm	15 270	15 285	15 284	15 609	
at Carry Position	ft/in	50'2"	50'2"	50'2"	51'3"	
Static Tipping Load, Straight (ISO)*	kg	23 972	23 827	23 447	23 180	
	1b	52,835	52,515	51,677	51,088	
Static Tipping Load, Straight (Rigid Tire)*	kg	25 481	25 339	24 909	24 750	
	1b	56,161	55,847	54,901	54,550	
Static Tipping Load, Articulated (ISO)*	kg	20 630	20 491	20 163	19 857	
· · ·	lb	45,470	45,162	44,440	43,765	
Static Tipping Load, Articulated (Rigid Tire)*	kg	21 997	21 860	21 488	21 286	
	lb	48,482	48,180	47,360	46,914	
Breakout Force (§)	kN	211	207	208	175	
	lbf	47,618	46,676	46,782	39,467	
Operating Weight*	kg	30 822	30 918	30 947	31 326	
	lb	67,931	68,143	68,207	69,042	

\* Static tipping loads and operating weights shown are based on a machine configuration with Michelin 29.5R25 XLDD1 L4 radial tires, full fluids, operator, aggregate counterweight, cold start, roading fenders, Product Link, limited slip differentials, power train guard, secondary steering and sound suppression. If a rock bucket is added, those values are with Michelin 26.5R25 XLDD2 L5 tires.

\*\* Aggregate Handler configuration is not compatible with teeth and segments, tips, rock buckets, high lift, L5 tires.

† Illustration shown with Dimension charts.

(§) Measured 102 mm (4") behind tip of cutting edge with bucket hinge pin as pivot point 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.

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

(Rigid Tire) Compliance to ISO 14397-1 (2007) Sections 1 thru 5.

# 982M 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 new 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		Fill Factor (%)*	Material Density
Earth/Clay		115	1.5-1.7
Sand and Gravel		115	1.5-1.7
Aggregate:	25-76 mm (1 to 3 in)	110	1.6-1.7
	19 mm (0.75 in) and smaller	105	1.8
Rock:	76 mm (3 in) and larger	100	1.6

\*As a % of ISO rated capacity.

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

M	laterial Density	kg/m³	600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400
	General	6.10 m³ (7.98 yd³)	7.02 m <sup>3</sup> (9.182 yd <sup>3</sup> ) 6.10 m <sup>3</sup> (7.98 yd <sup>3</sup> )
age	Purpose	6.40 m³ (8.37 yd³)	7.36 m <sup>3</sup> (9.627 yd <sup>3</sup> ) 6.40 m <sup>3</sup> (8.37 yd <sup>3</sup> )
Standard Linkage	Heavy Duty Rock	5.40 m³ (7.06 yd³)	6.21 m <sup>3</sup> (8.122 yd <sup>3</sup> )
Sta	Woodchip	12.00 m³ (15.70 yd³)	13.80 m <sup>3</sup> (18.05 yd <sup>3</sup> ) 12.00 m <sup>3</sup> (15.70 yd <sup>3</sup> )
	Coal	8.80 m³ (11.51 yd³)	10.12 m <sup>3</sup> (13.24 yd <sup>3</sup> ) 8.80 m <sup>3</sup> (11.51 yd <sup>3</sup> )
		6.40 m³ (8.37 yd³)	7.36 m <sup>3</sup> (9.627 yd <sup>3</sup> )
		7.00 m³ (9.16 yd³)	8.05 m <sup>3</sup> (10.53 yd <sup>3</sup> )
	General Purpose	7.50 m³ (9.81 yd³)	8.63 m <sup>3</sup> (11.29 yd <sup>3</sup> )
dler		8.20 m³ (10.73 yd³)	9.43 m <sup>3</sup> (12.33 yd <sup>3</sup> ) 8.20 m <sup>3</sup> (10.73 yd <sup>3</sup> )
Aggregate Handler	General Purpose – Heavy Duty	7.50 m³ (9.81 yd³)	8.63 m <sup>3</sup> (11.29 yd <sup>3</sup> ) 7.50 m <sup>3</sup> (9.81 yd <sup>3</sup> )
Aggi	Material Handler –	6.40 m³ (8.37 yd³)	7.36 m <sup>3</sup> (9.627 yd <sup>3</sup> )
	Heavy Duty	7.00 m³ (9.16 yd³)	8.05 m <sup>3</sup> (10.53 yd <sup>3</sup> ) 7.00 m <sup>3</sup> (9.16 yd <sup>3</sup> )
	Woodchip	12.00 m³ (15.70 yd³)	13.80 m <sup>3</sup> (18.05 yd <sup>3</sup> ) 12.00 m <sup>3</sup> (15.70 yd <sup>3</sup> )
	Coal	8.80 m³ (11.51 yd³)	10.12 m <sup>3</sup> (13.24 yd <sup>3</sup> )
м	laterial Density	lb/yd³	1,011 1,180 1,348 1,517 1,685 1,854 2,022 2,191 2,359 2,528 2,696 2,865 3,033 3,202 3,370 3,539 3,707 3,876 4,044
	110% 105% 100% 95%		

Note: All buckets are showing Bolt-On Edges.

# 982M Operating Specifications with Buckets

Linkage	S	tandard Linkag	je	Standard Linkage			
Bucket Type	(	General Purpos	e	General Purpose			
Edge Type		Bolt-On Cutting Edges	Teeth and Segments	Tips	Bolt-On Cutting Edges	Teeth and Segments	Tips
Capacity – Rated	m <sup>3</sup>	6.10	6.10	5.70	6.40	6.40	6.10
	yd <sup>3</sup>	7.98	7.98	7.46	8.37	8.37	7.98
Capacity – 110%	m <sup>3</sup>	6.71	6.71	6.27	7.04	7.04	6.71
	yd <sup>3</sup>	8.78	8.78	8.20	9.21	9.21	8.78
Width	mm	3602	3665	3665	3602	3665	3665
	ft/in	11'9"	12'0"	12'0"	11'9"	12'0"	12'0"
16† Dump Clearance at Maximum Lift	mm	3365	3197	3197	3327	3159	3159
and 45° Discharge	ft/in	11'0"	10'5"	10'5"	10'11"	10'4"	10'4"
17† Reach at Maximum Lift and 45° Discharge	mm	1569	1703	1703	1602	1735	1735
	ft/in	5'1"	5'7"	5'7"	5'3"	5'8"	5'8"
Reach at Level Lift Arm and Bucket Level	mm	3257	3468	3468	3307	3518	3518
	ft/in	10'8"	11'4"	11'4"	10'10"	11'6"	11'6"
A† Digging Depth	mm	116	116	81	116	116	81
	in	4.5"	4.5"	3.2"	4.5"	4.5"	3.2"
12† Overall Length	mm	10 178	10 412	10 412	10 228	10 462	10 462
	ft/in	33'5"	34'2"	34'2"	33'7"	34'4"	34'4"
<b>B</b> <sup>†</sup> Overall Height with Bucket at Maximum Lift	mm	6592	6592	6592	6642	6642	6642
	ft/in	21'8"	21'8"	21'8"	21'10"	21'10"	21'10"
Loader Clearance Circle with Bucket	mm	15 770	15 986	15 986	15 801	16 018	16 018
at Carry Position	ft/in	51'9"	52'6"	52'6"	51'11"	52'7"	52'7"
Static Tipping Load, Straight (ISO)*	kg	24 791	24 692	25 112	24 620	24 521	24 952
	lb	54,640	54,422	55,347	54,264	54,045	54,994
Static Tipping Load, Straight (Rigid Tire)*	kg	26 101	26 001	26 439	25 938	25 838	26 285
	lb	57,527	57,308	58,272	57,169	56,948	57,933
Static Tipping Load, Articulated (ISO)*	kg	21 080	20 981	21 370	20 918	20 819	21 217
	lb	46,462	46,243	47,100	46,105	45,885	46,763
Static Tipping Load, Articulated (Rigid Tire)*	kg	22 393	22 293	22 699	22 239	22 138	22 552
	lb	49,354	49,135	50,029	49,015	48,794	49,706
Breakout Force (§)	kN	260	259	278	251	251	269
	lbf	58,531	58,375	62,671	56,572	56,417	60,459
Operating Weight*	kg	35 563	35 636	35 476	35 655	35 727	35 567
	lb	78,382	78,542	78,189	78,583	78,742	78,389

\* Static tipping loads and operating weights shown are based on a machine configuration with Bridgestone 875/65R29 VLTS L4 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, limited slip differentials, power train guard, secondary steering and sound suppression.

† Illustration shown with Dimension charts.

(§) Measured 102 mm (4") behind tip of cutting edge with bucket hinge pin as pivot point 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.

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

(Rigid Tire) Compliance to ISO 14397-1 (2007) Sections 1 thru 5.

# 982M Operating Specifications with Buckets

Linkage		s	tandard Linkage	)	Standard Linkage	Standard Linkage
Bucket Type		ŀ	leavy Duty Rock	Woodchip	Coal	
Edge Type		Bolt-On Cutting Edges	Teeth and Segments	Tips	Bolt-On Cutting Edges	Bolt-On Cutting Edges
Capacity – Rated	m <sup>3</sup>	5.40	5.40	5.10	12.00	8.80
	yd <sup>3</sup>	7.06	7.06	6.67	15.70	11.51
Capacity – 110%	m <sup>3</sup>	5.94	5.94	5.61	13.20	9.68
	yd <sup>3</sup>	7.77	7.77	7.34	17.26	12.66
Width	mm	3648	3648	3648	4174	3639
	ft/in	11'11"	11'11"	11'11"	13'8"	11'11"
16† Dump Clearance at Maximum Lift	mm	3253	3136	3136	3022	3017
and 45° Discharge	ft/in	10'8"	10'3"	10'3"	9'10"	9'10"
17 <sup>†</sup> Reach at Maximum Lift and 45° Discharge	mm	1794	1915	1915	1738	1743
	ft/in	5'10"	6'3"	6'3"	5'8"	5'8"
Reach at Level Lift Arm and Bucket Level	mm	3489	3657	3657	3638	3645
	ft/in	11'5"	11'11"	11'11"	11'11"	11'11"
A <sup>†</sup> Digging Depth	mm	107	107	72	119	119
	in	4.2"	4.2"	2.8"	4.7"	4.7"
12† Overall Length	mm	10 410	10 586	10 586	10 561	10 568
	ft/in	34'2"	34'9"	34'9"	34'8"	34'9"
<b>B</b> <sup>†</sup> Overall Height with Bucket at Maximum Lift	mm	6540	6540	6540	7059	6962
	ft/in	21'6"	21'6"	21'6"	23'2"	22'11"
Loader Clearance Circle with Bucket	mm	15 955	16 073	16 073	16 516	16 049
at Carry Position	ft/in	52'5"	52'9"	52'9"	54'3"	52'8"
Static Tipping Load, Straight (ISO)*	kg	23 940	23 809	24 303	23 472	23 229
	lb	52,764	52,475	53,565	51,734	51,198
Static Tipping Load, Straight (Rigid Tire)*	kg	25 241	25 108	25 614	24 881	24 545
	lb	55,631	55,339	56,454	54,838	54,098
Static Tipping Load, Articulated (ISO)*	kg	20 193	20 062	20 537	19 784	19 630
	lb	44,505	44,217	45,264	43,605	43,264
Static Tipping Load, Articulated (Rigid Tire)*	kg	21 497	21 364	21 851	21 191	20 949
	lb	47,380	47,088	48,160	46,706	46,172
Breakout Force(§)	kN	233	232	249	203	203
	lbf	52,456	52,261	56,145	45,653	45,761
Operating Weight*	kg	36 601	36 694	36 420	36 512	36 233
	lb	80,669	80,874	80,270	80,473	79,858

\* Static tipping loads and operating weights shown are based on a machine configuration with Bridgestone 875/65R29 VLTS L4 radial tires, full fluids, operator, standard counterweight, cold start, roading fenders, Product Link, limited slip differentials, power train guard, secondary steering and sound suppression.

† Illustration shown with Dimension charts.

(§) Measured 102 mm (4") behind tip of cutting edge with bucket hinge pin as pivot point 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.

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

(Rigid Tire) Compliance to ISO 14397-1 (2007) Sections 1 thru 5.

# 982M Operating Specifications with Buckets – Aggregate Handler

Package		Aggregate Handler**				
Bucket Type			General Purpose – Heavy Duty			
Edge Type	Bolt-On Cutting Edges	Bolt-On Bolt-On Cutting Edges Cutting Edges		Bolt-On Cutting Edges	Bolt-On Cutting Edges	
Capacity – Rated	m <sup>3</sup>	6.40	7.00	7.50	8.20	7.50
	yd <sup>3</sup>	8.37	9.16	9.81	10.73	9.81
Capacity – 110%	m <sup>3</sup>	7.04	7.70	8.25	9.02	8.25
	yd <sup>3</sup>	9.21	10.07	10.79	11.80	10.79
Width	mm	3602	3602	3602	3602	3602
	ft/in	11'9"	11'9"	11'9"	11'9"	11'9"
16† Dump Clearance at Maximum Lift	mm	3327	3277	3227	3154	3236
and 45° Discharge	ft/in	10'11"	10'9"	10'7"	10'4"	10'7"
<b>17</b> <sup>†</sup> Reach at Maximum Lift and 45° Discharge	mm	1602	1644	1689	1755	1697
	ft/in	5'3"	5'4"	5'6"	5'9"	5'6"
Reach at Level Lift Arm and Bucket Level	mm	3307	3374	3442	3542	3442
	ft/in	10'10"	11'0"	11'3"	11'7"	11'3"
A† Digging Depth	mm	116	116	116	116	104
	in	4.5"	4.5"	4.5"	4.5"	4.1"
12† Overall Length	mm	10 335	10 402	10 470	10 570	10 462
	ft/in	33'11"	34'2"	34'5"	34'9"	34'4"
<b>B</b> <sup>†</sup> Overall Height with Bucket at Maximum Lift	mm	6642	6709	6776	6870	6779
	ft/in	21'10"	22'1"	22'3"	22'7"	22'3"
Loader Clearance Circle with Bucket	mm	15 801	15 842	15 885	15 948	15 876
at Carry Position	ft/in	51'11"	52'0"	52'2"	52'4"	52'2"
Static Tipping Load, Straight (ISO)*	kg	26 038	25 761	25 552	25 217	24 863
	lb	57,389	56,779	56,316	55,578	54,799
Static Tipping Load, Straight (Rigid Tire)*	kg	27 454	27 186	26 985	26 661	26 293
	lb	60,510	59,918	59,475	58,762	57,949
Static Tipping Load, Articulated (ISO)*	kg	22 083	21 816	21 618	21 299	20 924
	lb	48,672	48,084	47,647	46,944	46,116
Static Tipping Load, Articulated (Rigid Tire)*	kg	23 507	23 249	23 058	22 751	22 361
	lb	51,809	51,240	50,821	50,144	49,283
Breakout Force(§)	kN	251	240	230	216	227
	lbf	56,572	54,068	51,768	48,643	51,178
Operating Weight*	kg	36 302	36 483	36 589	36 774	37 265
	lb	80,009	80,408	80,641	81,049	82,131

\* Static tipping loads and operating weights shown are based on a machine configuration with Bridgestone 875/65R29 VLTS L4 radial tires, full fluids, operator, aggregate counterweight, cold start, roading fenders, Product Link, limited slip differentials, power train guard, secondary steering and sound suppression.

\*\* Aggregate Handler configuration is not compatible with teeth and segments, tips, rock buckets, high lift, L5 tires.

† Illustration shown with Dimension charts.

(§) Measured 102 mm (4") behind tip of cutting edge with bucket hinge pin as pivot point 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.

(ISO) Full compliance to ISO 14397-1 (2007) Sections 1 thru 6, which requires 2% verification between calculations and testing. (Rigid Tire) Compliance to ISO 14397-1 (2007) Sections 1 thru 5.

# 982M Operating Specifications with Buckets – Aggregate Handler

Package		egate ller**	Aggregate Handler**	Aggregate Handler** Coal	
Bucket Type	Material Handli	ng – Heavy Duty	Woodchip		
Edge Type		Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges
Capacity – Rated	m <sup>3</sup>	6.40	7.00	12.00	8.80
	yd <sup>3</sup>	8.37	9.16	15.70	11.51
Capacity – 110%	m <sup>3</sup>	7.04	7.70	13.20	9.68
	yd <sup>3</sup>	9.21	10.07	17.26	12.66
Width	mm	3602	3602	4174	3639
	ft/in	11'9"	11'9"	13'8"	11'11"
<b>6</b> <sup>+</sup> Dump Clearance at Maximum Lift	mm	3264	3200	3022	3017
and 45° Discharge	ft/in	10'8"	10'6"	9'10"	9'10"
<b>7</b> <sup>†</sup> Reach at Maximum Lift and 45° Discharge	mm	1518	1581	1738	1743
	ft/in	4'11"	5'2"	5'8"	5'8"
Reach at Level Lift Arm and Bucket Level	mm	3311	3401	3638	3645
	ft/in	10'10"	11'1"	11'11"	11'11"
A <sup>+</sup> Digging Depth	mm	104	104	119	119
	in	4.1"	4.1"	4.7"	4.7"
<b>2</b> <sup>†</sup> Overall Length	mm	10 331	10 421	10 668	10 675
	ft/in	33'11"	34'3"	35'0"	35'1"
<b>B</b> <sup>†</sup> Overall Height with Bucket at Maximum Lift	mm	6622	6709	7059	6962
	ft/in	21'9"	22'1"	23'2"	22'11"
Loader Clearance Circle with Bucket	mm	15 794	15 850	16 516	16 049
at Carry Position	ft/in	51'10"	52'0"	54'3"	52'8"
Static Tipping Load, Straight (ISO)*	kg	24 813	24 471	24 878	24 604
	lb	54,689	53,935	54,831	54,228
Static Tipping Load, Straight (Rigid Tire)*	kg	26 181	25 850	26 392	26 018
	lb	57,704	56,973	58,170	57,344
Static Tipping Load, Articulated (ISO)*	kg	20 907	20 578	20 937	20 758
	lb	46,079	45,354	46,145	45,751
Static Tipping Load, Articulated (Rigid Tire)*	kg	22 285	21 966	22 456	22 181
	lb	49,116	48,414	49,493	48,888
Breakout Force(§)	kN	247	232	203	203
	1bf	55,612	52,320	45,653	45,761
Operating Weight*	kg	37 148	37 355	37 159	36 880
	lb	81,873	82,330	81,899	81,284

\* Static tipping loads and operating weights shown are based on a machine configuration with Bridgestone 875/65R29 VLTS L4 radial tires, full fluids, operator, aggregate counterweight, cold start, roading fenders, Product Link, limited slip differentials, power train guard, secondary steering and sound suppression.

\*\* Aggregate Handler configuration is not compatible with teeth and segments, tips, rock buckets, high lift, L5 tires.

† Illustration shown with Dimension charts.

(§) Measured 102 mm (4") behind tip of cutting edge with bucket hinge pin as pivot point 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.

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

(Rigid Tire) Compliance to ISO 14397-1 (2007) Sections 1 thru 5.

### **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 (7 in) color LCD touch-screen display for rear vision camera image display (reverse travel activated) and machine status, setting and health parameters
- Electro-hydraulic controls, SAL (single axis lever) lift and tilt function
- Steering, electro-hydraulic 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)
- Electro-hydraulic 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
- 3 receptacles, 12V
- Seat, Cat Comfort (cloth) air suspension
- Seat belt, 51 mm (2 in) 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

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- 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 (4), maintenance free 1,000 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)
- Alarm, back-up
- Alternator, 145-amp brushed
- Main disconnect switch
- Receptacle start (cables not included)

#### **CAT CONNECT TECHNOLOGIES**

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

#### **POWER TRAIN**

- Engine, Cat C13 with U.S. Tier 4 Final/ EU Stage IV rating
- Cat Clean Emissions Module (CEM) with Diesel Particulate Filter (DPF) and remote Diesel Emissions Fluid (DEF ISO #ISO 22241-1) tank and pump
- Fuel priming pump (electric)
- Fuel/water separator
- Precleaner, engine air intake
- Economy mode (selectable)
- Transmission, automatic planetary power shift (4F/4R)
- Torque converter, locking clutch with free wheel stator
- Switch, transmission neutralizer lockout
- Axles, open differential, front and rear
- Heavy duty transmission (982 only)

- Axles, ecology drains
- Brakes, full hydraulic enclosed wet-disc with Integrated Braking System (IBS)
- Brake wear indicators
- Parking brake, disc and caliper
- Fan, radiator, electronically controlled, hydraulically driven, temperature sensing, on demand

#### LINKAGE

- Linkage, Z-bar, cast crosstube/tilt levers
- Kickout, lift and tilt, automatic (adjustable in cab)

#### 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  $-34^{\circ}$  C (-29° F)

#### **OTHER STANDARD EQUIPMENT**

- Hood, non-metallic power tilting with rear clamshell
- Service centers (electrical and hydraulic)
- Platform, window washing
- Auto idle shutdown

• Ether aid ready

• Fuel cooler

Toolbox

• Grease zerks

• Grill, airborne debris

• Fenders, steel front with mud-flap/ rear with extension

• Filters: fuel, engine air, engine oil,

hydraulic oil, transmission

• Hitch, drawbar with pin

and transmission oil level

• Vandalism protection caplocks

• Precleaner rain cap

• Ecology drains for engine, transmission, and hydraulics

• Sight gauges: engine coolant, hydraulic oil,

# 980M/982M Optional Equipment

### **Optional Equipment**

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

#### **OPERATOR ENVIRONMENT**

- Door, remote opening system
- Cover, HVAC metallic
- $\bullet$  EH controls, SAL  $3^{rd}$  function
- EH controls, joystick lift and tilt
- Additional integrated roller switch for 3<sup>rd</sup> function
- Filter, carbon fresh air
- Mirrors, heated rearview external with integrated spot mirrors
- Precleaner, HVAC
- Precleaner, HVAC (RESPA)
- Radio, AM/FM/USB/MP3 Bluetooth
- Radio, AM/FM/CD/USB/MP3 Bluetooth
- Radio, AM/FM/CD/USB/MP3 Bluetooth with Satellite Sirius and XM
- Radio, CB ready
- Seat, heated air suspension
- Seat belt, 76 mm (3 in) retractable, with indicator
- Steering, EH wheel with directional FNR shifter and gear selector
- -Additional FNR with implement controls
- Roof, metallic
- Steering, secondary
- Sun visor, rear
- · Windows, rubber mounted
- · Windows, with front guard
- Windows, with heavy duty front guard
- Windows, with full guards front, rear and sides

#### **ELECTRICAL AND LIGHTING**

- Four additional halogen cab mounted work lights or;
- Four additional HID cab mounted work lights
- LED front signal and rear roading lights

#### STARTERS, BATTERIES, AND ALTERNATORS

- Cold start 120V
- Cold start 240V

#### CAT CONNECT TECHNOLOGIES

- Link technologies: VIMS<sup>™</sup>
- Payload technologies:
- Aggregate Autodig
- Cat Production Measurement
- Printer, Cat Production Measurement
- Detect technologies: dedicated display for rear vision camera, full-time activation
- Machine Security System

#### **POWER TRAIN**

- Axles
- Differentials
- Limited slip, front or rear
- -Axle oil cooler
- -Extreme temperature seals
- -Seal guards
- Heavy duty transmission (980 only)
- Fan, VPF (variable pitch fan), automatic and manual control
- Radiator, high debris with wider fin spacing

#### LINKAGE

- High lift (980 only)
- Logger (980 only)
- · Quick coupler ready

#### **WORK TOOLS**

- Performance Series buckets
- Forks, palletForks, logging

#### HYDRAULICS

- 3<sup>rd</sup> function with Ride Control
- -Standard linkage
- -High lift linkage
- Logger linkage

#### FLUIDS

• Premixed extended life coolant with freeze protection to -50° C (-58° F)

#### **OTHER OPTIONAL EQUIPMENT**

- Fenders, roading
- Guard, power train
- Oil change, high speed engine
- Fuel tank, fast fill
- Precleaner, turbine
- Precleaner, trash

#### **OTHER OPTIONAL CONFIGURATIONS**

- Aggregate Handler
- Industrial and Waste Handler (980 only)
- Logger (980 only)
- Steel Mill (980 only)

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