

Cat® 988K

Wheel Loader

The Cat® 988K Wheel Loader helps you move more material in less time, at a lower cost per ton, for a faster return on your investment. This machine offers significant fuel savings with durability to achieve multiple life cycles.

Proven Reliability

- Cat C18 engine is built and tested to meet your most demanding applications.
- Achieves longer engine life and improved fuel efficiency with reduced rated speed.
- Cat torque converter with lock-up clutch eliminates torque converter losses and lowers system heat.
- Maximum responsiveness with Steering and Integrated Control (STIC™).
- Moves more material more efficiently with improved power and control.
- Durable construction withstands the toughest loading conditions and multiple life cycles.

Durability

- Best-in-class transmission for long life and consistent, smooth shifting; specifically designed for mining applications.
- Advanced Productivity Electronic Control Shifting (APECS) transmission controls for greater momentum on grades.
- Positive Flow Control (PFC) hydraulic system increases efficiency, bucket feel, and responsiveness with consistent performance.
- Advanced filtration system for extended performance and reliability of the hydraulic system.
- Impeller Clutch Torque Converter (ICTC) minimizes tire spin by allowing torque to adjust to underfoot conditions.

Achieve Greater Productivity

- Superior digging, higher bucket fill factors, reduced dig times.
- Improved visibility over the top of the linkage.
- Up to 10% more payload per pass, higher efficiency, and improved pass match.
- Operators can now check tire pressure during operation with any change sending a fault code to VisionLink®, preventing premature tire failure.
- In-truck loading applications.
- Convenient, responsive, electro-hydraulic controls increase operator productivity.
- Integrated steering and transmission controls.

Superior Fuel Efficiency

- Up to 20% less fuel consumption.
- Economy Mode for reduced rated engine speed and reduced fuel consumption.
- Flow sharing hydraulics for full flow at reduced engine rpm.
- Fully integrated electronic engine controls make your fuel go farther.
- Engine Idle Shutdown for less fuel used while idling.
- Increased hydraulic speed and faster cycle times for decreased idle, decreased fuel burn, and increased efficiency.

Three engine emission options are available:
1. Meets U.S. EPA Tier 4 Final, EU Stage V, and Japan 2014 emission standards.
2. Meets Brazil MAR-1 and China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
3. U.S. EPA Tier 2 and EU Stage II equivalent.

CAT®

Increase Productivity and Efficiency with Integrated Technologies

- Cat Technologies developed to monitor, manage, and enhance your jobsite operations.
- Cat Payload provides accurate weighing* of the materials you are loading and hauling. Payload data is displayed in real-time to improve productivity and reduce overloading.
- Cat Detect enhances awareness of the environment around working equipment and provides alerts to help keep people and assets safe on the jobsite.
- Product Link™ wirelessly connects you to your equipment, giving you access to essential information you need to know to run your business.
- Gain valuable insight into how your machine or fleet is performing.
- Optional Advanced Productivity subscription provides comprehensive actionable information to help you manage and improve the productivity and profitability of your operations.

Safety Features

- Achieve precise positioning for easy loading in tight areas with 43 degrees of steering articulation.
- Precise machine control by load-sensing hydraulic steering system.
- Reduced stairway angles and standard stairway lighting provide reduced risk of slips, trips and falls due to better visbility of the steps and stairway.
- Left- and right-hand stairs with 45-degree angle.
- Computerized monitoring system with warning indicators.
- Standard Cat Vision enhances visibility behind the machine, helping you work safely and confidently.
- Pressurized cabin with filtered air and reduced sound levels.

Reduced Maintenance Time and Costs

- 10% lower maintenance costs.
- Grouped service points provide easy access to critical daily service checks.
- Electro-hydraulic controls.
- Swing-out engine compartment service doors.
- Reduced waste with maintenance-free batteries.
- Ecology drains to prevent spilled contaminants and allow for easier service.
- Vehicle Information Management System (VIMS™) notifications to resolve problems before failure.
- Ground level access to transmission control valves.
- Longer life, rebuildability, and high resale value.

Easy, Comfortable Operator Environment

- Best-in-class operator comfort and ergonomics.
- Comfort Series III seats with extra thick, contoured cushions provide total comfort throughout the workday.
- Easy-to-reach levers and seat-mounted implement pod to reduce fatigue.
- Ergonomic switch placement and displays with large, backlit switches and LED indicators.
- Two-position rocker switch activates the electro hydraulic parking brake.
- Reduced vibrations from isolated cab mounts and seat air suspension.
- Automatic cab temperature controls.

**Not legal for trade.*

Standard and Optional Equipment

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

	Standard	Optional
ELECTRICAL		
Alarm, back-up	✓	
Alternator, single 150 amp	✓	
Converter, 10/15 amp, 24V to 12V	✓	
Lighting system (halogen, work lights, access and service platform lighting)	✓	
Starting and charging system, 24V	✓	
Starter emergency start receptacle	✓	
Starter lockout in bumper	✓	
Transmission lockout in bumper	✓	
OPERATOR ENVIRONMENT		
Air conditioner	✓	
Cab precleaner		✓
Cab, sound suppressed and pressurized, integrated rollover protective structure (ROPS/FOPS) radio ready for entertainment, includes antenna, speakers and converter (12-volt 5-amp) and power port	✓	
Cat Detect, object detection system		✓
Cat Vision, rear vision camera system	✓	
Heater, defroster	✓	
Horn, electric	✓	
LED warning strobe		✓
Light, directional	✓	
Lights, HID or LED		✓
Lunchbox, beverage holders	✓	
Mirrors, heated		✓
Mirrors, rearview (externally mounted)	✓	
Radio, AM/FM/CD/MP3 Bluetooth® with Satellite Sirius		✓
Radio, CB ready		✓
Rimpull Control System (RCS)	✓	
Seat, Cat Comfort Series III, heated and ventilated, air suspension, six-way adjustable	✓	
Seat belt minder	✓	
Seat belt, retractable, 76 mm (3 in) wide	✓	
STIC System	✓	
UV glass	✓	
Wet-arm wipers/washers (front and rear) – intermittent front and rear wipers	✓	
Window pull-down visor		✓
POWER TRAIN		
Antifreeze -50° C (-58° F)		✓
Brakes, oil-cooled, multi-disc, service/secondary	✓	
Case drain screens	✓	
Cat Production Measurement		✓

	Standard	Optional
POWER TRAIN (CONTINUED)		
Cat Production Measurement ready	✓	
Crankcase guard	✓	
Electro hydraulic parking brake	✓	
Engine block heater 120V or 240V		✓
Engine, C18 MEUI™ diesel, turbocharged/aftercooled	✓	
Engine oil change system, high speed, Wiggins		✓
Ground level engine shutoff	✓	
High ambient cooling – software		✓
Turbine precleaner, engine air intake	✓	
Radiator, Aluminum Modular Radiator (AMR)	✓	
Starting aid, ether, automatic	✓	
Throttle lock, electronic	✓	
Torque converter, Impeller Clutch (ICTC) with Lock Up Clutch (LUC), Rimpull Control System	✓	
Transmission, planetary powershift, 4F/3R electronic control	✓	
Manual switch and automatic fuel priming	✓	
ADDITIONAL EQUIPMENT		
Aggregate handler		✓
Automatic bucket lift kickout/positioner	✓	
Base machine price includes a rim allowance	✓	
Block Handler		✓
Cat Clean Emission Module (CEM)	✓	
Cold weather starting (extra starter plus two batteries)		✓
Doors, service access (locking)	✓	
Ecology drains for engine, radiator, hydraulic tank	✓	
Fast fill fuel system (Shaw-Aero)		✓
Front and rear roading fenders		✓
Hitch, drawbar with pin	✓	
Hydraulic, steering and brake filtration/screening system	✓	
Hydraulically driven demand fan	✓	
Load and carry counterweight		✓
Millyard		✓
Oil sampling valves	✓	
Premixed 50% concentration of extended life coolant with freeze protection to -34° C (-29° F)	✓	
Rear access to cab and service platform	✓	
Steel Mill		✓
Steering, load sensing	✓	
Tire Pressure Monitoring System		✓
Toe kicks	✓	
Vandalism protection caplocks	✓	

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Technical Specifications

Engine

Engine Model	C18	
Rated Speed	1,700 rpm	
Peak Power Speed	1,500 rpm	
Engine – ISO 14396:2002	432 kW	580 hp
Gross – SAE J1995:2014	439 kW	588 hp
Net Power – SAE J1349:2011	401 kW	541 hp
Bore	145 mm	5.7 in
Stroke	183 mm	7.2 in
Displacement	18.1 L	1,105 in^3
Peak Torque @ 1,200 rpm	3023 N·m	2,230 lb-ft
Torque Rise	58%	

Three engine emission options are available:
1. Meets U.S. EPA Tier 4 Final, EU Stage V, and Japan 2014 emission standards.
2. Meets Brazil MAR-1 and China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
3. U.S. EPA Tier 2 and EU Stage II equivalent.

Operating Specifications

Operating Weight	51 062 kg	112,574 lb
Rated Payload – Quarry Face	11.3 tonnes	12.5 tons
Rated Payload – Loose Material	14.5 tonnes	16 tons
Bucket Capacity Range	4.7-13 m^3	6.2-17 yd^3
Cat Truck Match – Standard	770-772	
Cat Truck Match – High Lift	773-775	

Transmission

Transmission Type: Cat planetary power shift

Speed	km/h	mph	Speed	km/h	mph
Forward 1	6.5	4.0	Direct Drive Forward 1	Lock-up disabled	
Forward 2	11.6	7.2	Direct Drive Forward 2	12.5	7.8
Forward 3	20.4	12.7	Direct Drive Forward 3	22.3	13.9
Forward 4	34.7	21.6	Direct Drive Forward 4	39.3	24.4
Reverse 1	7.5	4.7	Direct Drive Reverse 1	8.0	5.0
Reverse 2	13.3	8.3	Direct Drive Reverse 2	14.3	8.9
Reverse 3	23.2	14.4	Direct Drive Reverse 3	25.5	15.8

• Travel speeds based on 35/65-R33 tires.

Hydraulic System – Lift/Tilt

Lift/Tilt System – Circuit	EH – Positive Flow Control, Flow Sharing
Lift/Tilt System	Variable Displacement Piston
Relief Valve Setting – Lift/Tilt	32 800 kPa 4,757 psi

Hydraulic Cycle Time (1,400-1,860 rpm)

Rackback	4.5 Seconds
Raise	8.0 Seconds
Dump	2.2 Seconds
Lower Float Down	3.5 Seconds
Total Hydraulic Cycle Time (empty bucket)	18.2 Seconds

Hydraulic System – Steering

Steering System – Circuit	Pilot, load sensing
Steering System – Pump	Piston, variable displacement
Relief Valve Setting – Steering	30 000 kPa 4,351 psi
Total Steering Angle	86°
Steering Cycle Time (high idle)	3.4 Seconds
Steering Cycle Time (low idle)	5.6 Seconds
Steering	ISO 5010:2007

Service Refill Capacities

Fuel Tank	712 L	188 gal
Diesel Exhaust Fluid Tank (for Tier 4 Final/Stage V only)	33 L	8.7 gal

• All non-road Tier 4 Final/Stage V diesel engines are required to use:
– Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less.
For Tier 4 engines: Cat engines are compatible with the following renewable, alternative, and bio-fuels* with lower greenhouse gas emission impact:
Up to B20 biodiesel (FAME) **
Up to 100% HVO and GTL renewable fuels
* Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.
**B30, where mandated can be used. For use of higher blends, up to B100, consult your Cat dealer.
For pre-Tier 4 engines: Cat engines are compatible with the following renewable, alternative, and bio-fuels* with lower greenhouse gas emission impact:
Up to B20 biodiesel (FAME) **
Up to 100% HVO and GTL renewable fuels
* Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.
** Engines with aftertreatment devices can use up to B20. Engines with no aftertreatment devices can use higher blends, up to B100.
– Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specifications are required.
– Only use DEF that meets ISO 22241-1 standards.

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.8 kg of refrigerant which has a CO_2 equivalent of 2.574 metric tonnes.

Sound Performance – Tier 4 Final/Stage V

	Standard	Suppression
Operator Sound Level (ISO 6396:2008)	72 dB(A)	72 dB(A)
Machine Sound Level (ISO 6395:2008)	111 dB(A)	109 dB(A)

Sound Performance – Tier 2/Stage II Equivalent, Tier 3/Stage IIIA Equivalent

	Standard	Suppression
Operator Sound Level (ISO 6396:2008)	73 dB(A)	72 dB(A)
Machine Sound Level (ISO 6395:2008)	112 dB(A)	110 dB(A)

- The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at 70 percent of the maximum engine cooling fan speed.
- Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors or windows are open for extended periods or in a noisy environment.
- The machine sound power level was measured according to the test procedures and conditions specified in ISO 6395:2008. The measurement was conducted at 70 percent of the maximum engine cooling fan speed..

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