Cat® 972M

Wheel Loader

The Cat® 972M Wheel Loader offers significant fuel savings while lowering long-term costs. This machine meets emission standards and is designed to improve fuel economy without interrupting performance. The reliability, durability, and versatility results in a machine that is better built to meet your needs.

Proven Reliability

- Cat C9.3 engine* offers increased power density with a combination of proven electronic fuel and air systems.
- Equipped with automatic Cat regeneration system, Cat clean emissions module (CEM) with Diesel Particulate Filter (DPF), and Diesel Exhaust Fluid (DEF) tank and pump (Tier 4 Final, Stage IV, and Stage V only).
- Features an electric fuel priming pump and a fuel/water separator.
- Thorough component design and machine validation processes result in unmatched reliability and uptime.

Durability

- Heavy-duty transmission and axles handle extreme applications.
- Automatic planetary powershift (4F/4R) transmission features durable, long-lasting components.
- Full-flow hydraulic filtration system with additional loop filtration improves hydraulic system strength and component life.
- Full hydraulic enclosed wet-disc with Integrated Braking System (IBS) and brake wear indicators add valued safety on the job.

Achieve Greater Productivity

- Increased engine power resulting in improved machine performance and response.
- Lock-up clutch transmission, matching the engine power to increase fuel efficiency while delivering optimal performance.
- Z-bar linkage provides high breakout force at ground level.
- Easy-to-load performance series buckets improve material retention and reduce dig times, significantly improving productivity and fuel efficiency.
- Manual/automatic differential locks increase traction and reduce tire scuffing compared to other traction aids, reducing your operating costs.
- Optional aggregate handler configuration offers higher payload capability for loose aggregate handling.**
- Automatic idle engine shutdown system significantly reduces idle time, overall operating hours, and fuel consumption.

Superior Fuel Efficiency

- Deep system integration results in lower fuel consumption.
- Significantly more fuel efficient than both the H and K Series loaders.
- Power dense engine burns less fuel by providing power and torque when needed.
- Standard productive economy mode delivers more fuel savings with minimal productivity impact.
- New split-flow oil system uses multi-viscosity oil to improve fuel economy.

Increase Productivity and Efficiency with Integrated Cat® Technologies

- Developed to monitor, manage, and enhance your job site operations.
- 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. Optional Advanced Productivity subscription provides comprehensive actionable information to help you manage and improve the productivity and profitability of your operations.
- Detect enhances awareness of the environment around working equipment and provides alerts to help keep people and assets safe on the job site.
- 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 allowing you to make timely, fact-based decisions that can boost job site efficiency and productivity.

***Optional configurations and equipment may vary from region to region and requires conformance to Caterpillar payload policy. Consult your dealer or Caterpillar representative for details.*

****Not legal for trade.*

*Two engine options are available:
Option 1 meets Brazil MAR-1, UN ECE R96 Stage IIIA, and China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
Option 2 meets U.S. EPA Tier 4 Final, either EU Stage V or EU Stage IV (Stage IV engines comply with the transition provisions of the EU nonroad emission regulation), Japan 2014, and Korea Tier 4 Final emission standards.

Safety Features

- Cab access with wide door, optional remote door opening, and stair-like steps add solid stability.
- Floor-to-ceiling windshield, large mirrors with integrated spot mirrors, and rear-vision camera provide industry leading all-around visibility.
- Computerized monitoring system includes several warning indicators.
- Rear vision camera enhances visibility behind the machine, helping you work safely and confidently.
- Optional rear object detection radar system warns you of an object in critical zone while going in reverse, enhancing job site safety.

Reduced Maintenance Time and Costs

- One-piece tilting hood makes cab access fast and easy.
- Electrical service centers enhance convenience and accessibility.
- Access to fuel fill and daily maintenance points means less servicing time is required.
- Extended service intervals including:
  - Engine oil and engine oil filter change interval up to 1000 hours (Tier 4 Final, Stage IV, and Stage V only)
  - Hydraulic filter change interval up to 1000 hours
  - Transmission oil change interval up to 2000 hours
- Optional integrated Cat autolube system provides full lube system monitoring and diagnostic test visibility.
- Remote flash support
- Longer tire life with on-the-go traction aids

Easy, Comfortable Operator Environment

- The next generation easily adjustable seat with updated styling and a revolutionary suspension system. It comes in three trim levels and can be equipped with a 4-point harness.
- Sound-suppression, seals, and damping cab mounts decrease noise and vibration for a quieter work environment.
- The seat-mounted electro-hydraulic joystick steering system provides precision control and dramatically reduces arm fatigue, resulting in excellent comfort and accuracy.
- Electrohydraulic (EH) controls, parking brake, and Single Axis Lever (SAL) lift and tilt function allow for better handling and control management.
- Smart ergonomic controls are easy to use, intuitive, and user-friendly.
- Touchscreen multi-function color display keeps operators focused.
- The next generation of ride control works as a shock absorber, improving ride quality over rough terrain.
- Inclined steps and convenient grab handles ease accessibilty to the operating space.
- Extended windows enhance visibility while convex and spot mirrors extend the driver's view on the sides and rear.

Purpose Built Specialty Configurations

- Industrial and waste models feature guarding and reinforcement necessary for work in transfer stations, recycling depots, scrap yards, and demolition sites.
- The steel mill package is designed for the challenging work environment of steel mills and slag handling applications, incorporating an added level of safety.
- A corrosion resistance configuration is designed for corrosive environments such as fertilizer plants, chemical industries, agriculture, salt water ports, and others.

Standard and Optional Equipment

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

	Standard	Optional
OPERATOR ENVIRONMENT		
Cab, pressurized, sound suppression	✓	
Door, remote opening system		✓
Seat, cloth, air suspension	✓	
Seat, suede/cloth, air suspension, heated		✓
Seat, leather/cloth, air suspension, heated/cooled		✓
Touchscreen display	✓	
EH controls, joystick, parking brake	✓	
Radio, AM/FM, Bluetooth®, CD/USB/MP3/ Sirius XM, CB ready		✓
Visibility: Mirrors, rear vision camera	✓	
Air conditioner, heater, defroster (auto temp, fan)	✓	
Windows, front, heavy duty, or full guards		✓
CAT CONNECT TECHNOLOGIES		
Link: Product Link™	✓	
Link: VIMS™		✓
Detect: Rear vision camera	✓	
Detect: Cat rear object detection		✓
Machine Security System		✓
Printer, Aggregate Autodig, Cat Production Measurement 2.0		✓
POWER TRAIN		
Cat C9.3 engine, meets emission standards	✓	
Emissions: CEM, DPF, DEF (Tier 4 Final/ Stage IV/Stage V)	✓	
Fuel priming pump, fuel/water separator	✓	
Radiator, high debris, wide fin spacing		✓
Fan, variable pitch fan, auto/manual control		✓
Torque converter, lock up clutch	✓	
Precleaner, engine air intake	✓	
Brakes, full hydraulic, Integrated Braking System, wear indicators	✓	
Axles, manual differential locks, ecology drains	✓	
Axles, automatic locks, oil cooler, temperature seals, guards		✓

	Standard	Optional
HYDRAULICS		
Hydraulic system, steering, load sensing	✓	
Ride control, 2V	✓	
3rd and 4th function w/ride control		✓
Oil sampling valves, hoses, Cat XT™	✓	
ELECTRICAL		
Starter, electric, heavy duty	✓	
Starting and charging system, 24V	✓	
Lights: Halogen, 4 work lights, 2 roading lights, 2 rear vision lights	✓	
Lights: Additional 4 halogen work lights OR replace full lighting with LED packages		✓
Cold start, 120V or 240V		✓
MONITORING SYSTEM		
Gauges: Speedometer, temperature, fuel level, DEF level	✓	
Indicators: Regeneration, temperature, pressure, battery, oil, DEF	✓	
ADDITIONAL EQUIPMENT		
Cat Autolube System		✓
Fenders, roading		✓
Guard, power train		✓
Oil change, high speed engine		✓
Precleaner, turbine		✓
Precleaner, trash		✓
Wheel chocks		✓
LINKAGE		
High Lift		✓
Quick Coupler Ready		✓
Linkage, Z-bar, cast crosstube/tilt lever	✓	
Kickout, lift and tilt, automatic	✓	
OTHER OPTIONAL CONFIGURATIONS		
Aggregate handler		✓
Corrosion resistance		✓
Industrial and waste handler		✓
Steel mill		✓

Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area.

For additional information, refer to the technical specifications brochures for the 972M model available at www.cat.com or your Cat dealer.

Cat® 972M Wheel Loader

Technical Specifications

Engine – 972M (Tier 3/Stage IIIA Equivalent)

Engine Model	Cat C9.3	
Maximum Power @ 1,800 rpm – SAE J1995	246 kW	330 hp
Maximum Power @ 1,800 rpm – ISO 14396	242 kW	325 hp
Maximum Net Power @ 1,700 rpm – SAE J1349	222 kW	298 hp
Maximum Net Power @ 1,700 rpm – ISO 9249	222 kW	298 hp
Peak Gross Torque (1,200 rpm) – SAE J1995	1728 N·m	1,275 lbf-ft
Peak Gross Torque (1,200 rpm) – ISO 14396	1710 N·m	1,261 lbf-ft
Maximum Net Torque (1,000 rpm)	1632 N·m	1,204 lbf-ft
Displacement	9.3 L	568 in^3

Engine – 972M (Tier 4 Final/Stage V)

Engine Model	Cat C9.3	
Maximum Power @ 1,800 rpm – SAE J1995	251 kW	337 hp
Maximum Power @ 1,800 rpm – ISO 14396	247 kW	331 hp
Maximum Net Power @ 1,700 rpm – SAE J1349	223 kW	299 hp
Maximum Net Power @ 1,700 rpm – ISO 9249	223 kW	299 hp
Peak Gross Torque (1,200 rpm) – SAE J1995	1728 N·m	1,275 lbf-ft
Peak Gross Torque (1,200 rpm) – ISO 14396	1710 N·m	1,261 lbf-ft
Maximum Net Torque (1,000 rpm)	1654 N·m	1,220 lbf-ft
Displacement	9.3 L	568 in^3

- 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 which has a CO_2 equivalent of 2.288 metric tonnes.

Weights

Operating Weight	24 900 kg	54,871 lb

- 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^3 (5.5 yd^3) general purpose bucket with BOCE

Transmission

Speed	km/h	mph	Speed	km/h	mph
Forward 1	6.7	4.2	Reverse 1	7.6	4.7
Forward 2	13.1	8.1	Reverse 2	15.0	9.3
Forward 3	23.2	14.4	Reverse 3	26.5	16.5
Forward 4	39.5	24.5	Reverse 4	39.5	24.5

- Maximum travel speed in standard vehicle with empty bucket and standard L3 tires with 826 mm (32.5 in) roll radius.

Sound

With Cooling Fan Speed at Maximum Value:	
Operator Sound Pressure Level (ISO 6396:2008)	70 dB(A)
Exterior Sound Power Level (ISO 6395:2008)	109 dB(A)
Exterior Sound Pressure Level (SAE J88:2013)	76 dB(A)*

*Distance of 15 m (49.2 ft), moving forward in second gear ratio.

With Cooling Fan Speed at 70% of Maximum Value:**	
Operator Sound Pressure Level (ISO 6396:2008)	69 dB(A)
Exterior Sound Power Level	108 L_{WA}***

**For machines in European Union countries and in countries that adopt the "EU Directives."

***European Union Directive "2000/14/EC" as amended by "2005/88/EC."

Bucket Capacities

Bucket Range	3.20-9.94 m^3	4.19-13.0 yd^3

Operating Specifications

Static Tipping Load – Full 37° Turn – with Tire Deflection	16 164 kg	35,626 lb
Static Tipping Load – Full 37° Turn – No Tire Deflection	17 421 kg	38,396 lb
Breakout Force	196 kN	44,075 lbf

- 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.

Service Refill Capacities

Fuel Tank	302 L	79.8 gal
DEF tank	16.8 L	4.4 gal
Cooling System	71.6 L	18.9 gal
Crankcase	24.5 L	6.5 gal
Transmission	58.5 L	15.5 gal
Differentials and Final Drives – Front	57 L	15.1 gal
Differentials and Final Drives – Rear	57 L	15.1 gal
Hydraulic Tank	125 L	33 gal

Hydraulic System

Implement Pump Type	Variable Displacement Piston	
Implement System:		
Maximum Pump Output (2,200 rpm)	360 L/min	95 gal/min
Maximum Operating Pressure	31 000 kPa	4,496 psi
Hydraulic Cycle Time – Total	10.7 Seconds	

Dimensions

	Standard Lift		High Lift	
Height to Top of Hood	2818 mm	9'3"	2818 mm	9'3"
Height to Top of Exhaust Pipe	3522 mm	11'7"	3522 mm	11'7"
Height to Top of ROPS	3587 mm	11'9"	3587 mm	11'9"
Ground Clearance	434 mm	1'5"	434 mm	1'5"
Center Line of Rear Axle to Edge of Counterweight	2500 mm	8'2"	2500 mm	8'2"
Center Line of Rear Axle to Hitch	1775 mm	5'10"	1775 mm	5'10"
Wheelbase	3550 mm	11'8"	3550 mm	11'8"
Overall Length (without bucket)	7774 mm	25'7"	8109 mm	26'7"
Hinge Pin Height at Maximum Lift	4458 mm	14'8"	4793 mm	15'9"
Hinge Pin Height at Carry	680 mm	2'3"	778 mm	2'7"
Lift Arm Clearance at Maximum Lift	3843 mm	12'7"	4140 mm	13'7"
Rack Back at Maximum Lift	56 degrees		71 degrees	
Rack Back at Carry Height	50 degrees		49 degrees	
Rack Back at Ground	41 degrees		39 degrees	
Maximum Width over Tires	3009 mm	9'10"	3009 mm	9'10"
Tread Width	2230 mm	7'4"	2230 mm	7'4"

- All dimensions are approximate and based on L3 XHA2 tires.

オフロード法２０１４年基準適合

AEXQ2429-01 (10-2019)
2019 Product Update