

Medium Wheel Loaders



Waste Handler Arrangements



Engine	950M	966M	966M XE
Engine Model	Cat® C7.1 ACERT™	Cat C9.3 ACERT	Cat C9.3 ACERT
Maximum Power – SAE J1995			
U.S. EPA Tier 4 Final	187 kW (250 hp)	232 kW (311 hp)	222 kW* (298 hp)*

*Maximum Net Power – SAE J1349/ISO 9249

In the harsh and demanding environment of a waste handling application, you need a wheel loader that can meet your daily challenges while being safe, productive and reliable.

Your challenges can be many with the high demands of inbound and outbound tonnages, feed line production rates, slick floors, limited maneuvering space, and working around inbound haul vehicles with limited visibility.

Machine Guarding

Standard and optional guarding help to protect your machine from the harsh environment of a waste handling application. The machine guarding is purpose-built to protect your machine's major components and systems ensuring durability and reliability.

Versatility

A variety of pin-on and coupler attachments are available for challenging waste handling applications. Cat Work Tools are durable, reliable and designed for performance and efficiency with your Cat Wheel Loader.

Safety

Because Caterpillar values your safety, M Series wheel loaders meet or exceed safety standards in waste handling applications and include features such as a rearview camera, reverse lighting, standard anchorage points, and back-up alarm.

Contents

Waste Guarding 3
Durable 6
Productive 7
Fuel Efficient 7
Easy to Operate 8
Serviceable 10
Versatile 11
Integrated Technologies 12
Owning Costs 14
Customer Support 14
Specifications 15
Standard Equipment 24
Optional Equipment 25
Notes 26



In the harsh waste handling environment, your operation requires a wheel loader to process material as efficiently and safely as possible with minimal downtime. From purpose-built machine guarding that protects major components and systems to safety features such as tie off points and a standard rear vision camera to convenient service points and fully integrated hydraulic and power train components, Cat waste handlers can help you be safe, efficient and productive.

Waste Guarding

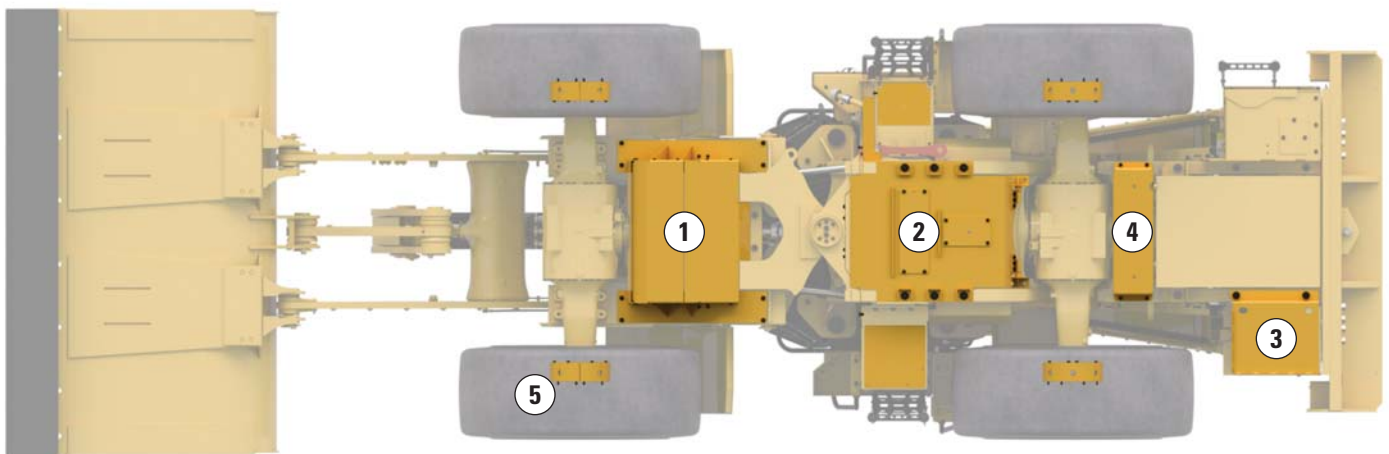
Protecting Your Investment

Standard Industry-Specific Guarding and Attachments

Protecting your wheel loader investment in the harsh environment of waste handling applications is critical to your success. That's why in addition to the standard Waste Arrangement, additional industry-specific attachments are available to protect your machine depending on site and application requirements.

Factory-installed waste guarding protects your machine while providing you with the reliable and efficient machine you need to get the job done.

- ① **Front Frame Guard** bolts to the front frame to protect the caliper parking brake and prevent material from accumulating in the front frame, protecting the drive shaft.
- ② **Hinged Power Train Guard** bolts to the rear frame to protect the transmission from contact with debris and prevents material ingress around the transmission. The guard is hinged to make servicing easier. An electric actuator is available (966M) to provide easy removal of accumulated debris.
- ③ **Rear Box Guard** encloses the right side rear platform box, preventing material from accumulating and damage to the structure.
- ④ **Crank Case Guard** protects the fuel tank from damage and prevents debris packing in the rear frame.
- ⑤ **Axle Seal Guards** bolt to the axle shafts and protect each axle seal by preventing material, springs, wire, from cutting and damaging seals as material winds around when the tires rotate.



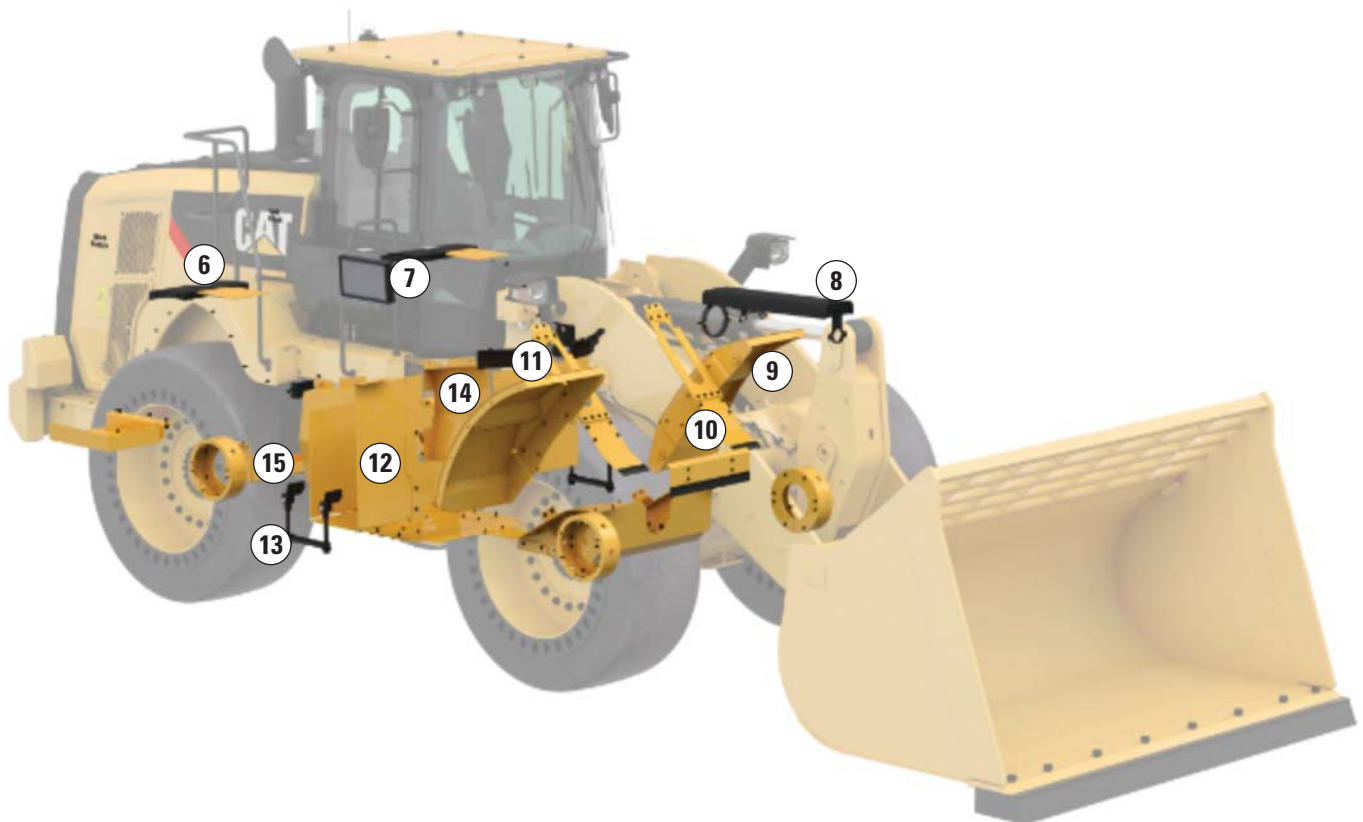
Bottom Guarding (Standard)

Waste Guarding

Protecting Your Investment

Standard Industry-Specific Guarding and Attachments

- ⑥ **Steel Rear Deflectors** replace standard non-metallic rear deflectors in extreme applications.
- ⑦ **Carbon Fresh Air Filter** – Activated charcoal filter replaces the standard cab recirculation filter to reduce the odor causing debris particles in the operator environment.
- ⑧ **Tilt Cylinder Guard** mounts to the cylinder and protects the tilt cylinder rod from damage caused by contact/impact from falling debris or material spillage over the work tool.
- ⑨ **Narrow Front Fenders** replace standard full-coverage fenders to provide more clearance to walls when the machine is operating in a confined space.
- ⑩ **Lift Cylinder Baffles** prevent the accumulation of debris and compaction under the lift cylinders, protecting the cylinder from damage.
- ⑪ **Cab Skirt Guard** protects the underside of the cab from damage and material accumulation.
- ⑫ **Reinforced Service Centers and Platforms** – The electrical and hydraulic service centers are reinforced with additional wear plates to resist damage to key components in the service centers. The service platforms are reinforced with welded-on plates to support additional weight for 3rd party suppression systems.
- ⑬ **Heavy Duty Ladder and Cable Steps** replace standard ladder to provide additional resistance to damage when machine is operated in a confined space. Steel cables replace the standard rubber strap and mates with the heavy duty steps to withstand the extreme nature of the application.
- ⑭ **Hitch Guards** bolt to the butterfly plate to prevent debris from packing around the transmission and hydraulic pumps.
- ⑮ **Steering Cylinder Guards** bolt to the frame just forward of the tires to protect the steering cylinders, sensors and pins from damage caused by debris from the rear tires.

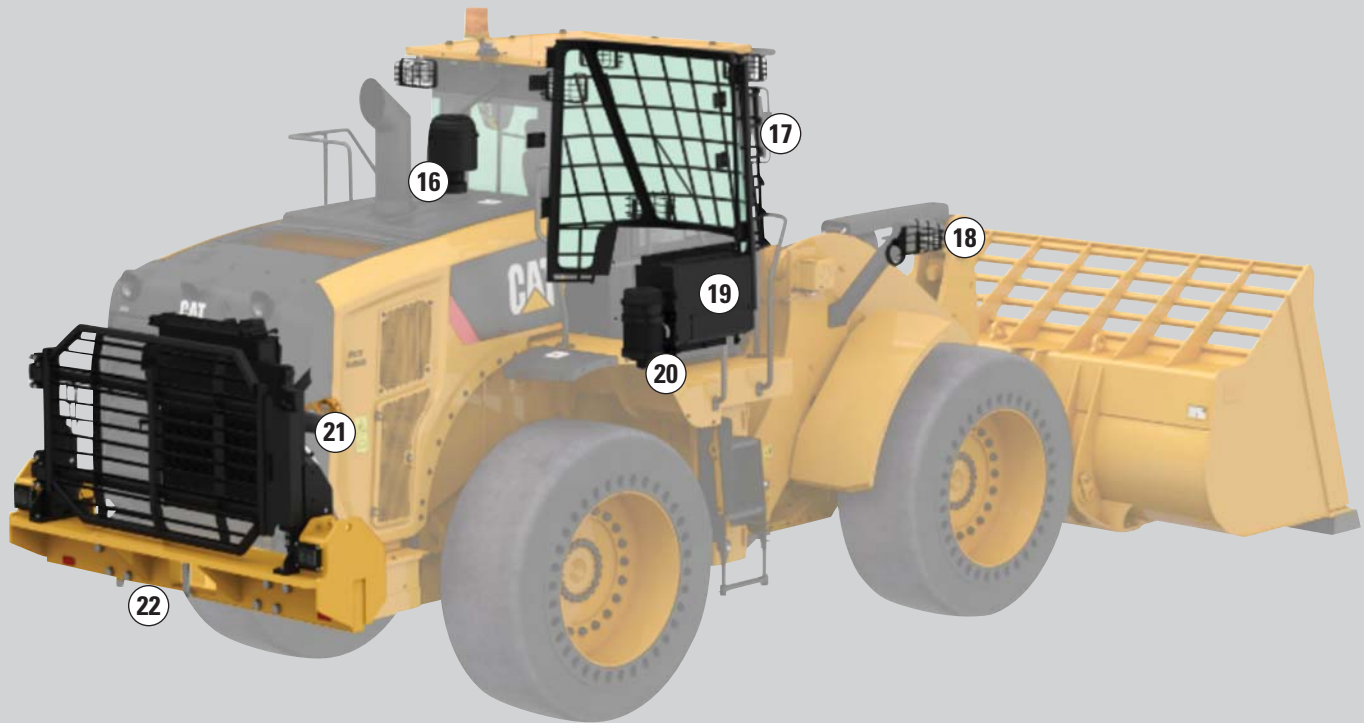


Top Guarding (Standard)

Waste Guarding

Options to Protect Your Investment

Optional Industry-Specific Guarding and Attachments



16 Turbine Trash Precleaner uses centrifugal force to spin debris out of the air extending the air filter elements' service interval. A metallic screen prevents larger debris from clogging the filter.

17 Window Guards are available in three designs to help protect the cab glass from damage while working in tough waste applications. Two front windshield guard options and a full cab glass guard are available to protect your wheel loader. Rubber-mounted, flat glass is also available to easily replace front glass.

18 Light Guards (Roading, Work, Rear) protect front roading lights, cab work lights and rear stop/tail lights from damage by debris.

19 Steel HVAC Cover and Roof Cap provide additional cab protection for those applications susceptible to falling objects and debris.

20 Powered Cab Precleaner Unit protects your cab from ingesting airborne debris and is recommended for high debris, dusty applications.

21 Variable Pitch Fan automatically purges cooling cores by periodically reversing air flow when needed – can be manually purged if conditions warrant.

22 Rear Guard Counterweight provides additional rear machine protection. The heavy-duty radiator guard is hinged for easy access to the airborne debris screen and cooling core (included in operating specification pages).

Durable

Designed to Meet Your Needs



Structures

Proven frames and loader arms are designed to withstand the high load stresses encountered in waste handling applications.

- Robotically welded two-piece frame designs provide rigid structures that absorb forces associated with penetration, loading and twisting.
- The M Series articulating hitch design provides increased bearing force capacity.
- Proven Z-Bar linkage offers excellent penetration, high breakout force and faster dig times for improved tire life, superior fuel efficiency and excellent production capabilities.
- Optional high lift linkage offers increased hinge pin height for improved stacking capability as well as easier load out of high side trucks and containers. The high lift provides more reach when loading haul units in ½ separation applications.

Axles

M Series axles are designed to handle extreme conditions inherent with waste handling applications.

- On-the-fly disc type differential locks improve tractive effort and productivity in poor or slick underfoot conditions while reducing tire wear and operating costs.
- Manually activated front differential locks are standard equipment.
- Optional fully automatic front and rear axle differential locks monitor wheel slippage and require no operator intervention to activate. With automatic differential locks, operator stress level and fatigue are minimized, allowing the operator to remain focused on efficiency and primary work objectives.

Transmission

Caterpillar provides two transmission offerings matched to machine systems and designed to deliver superior fuel efficiency and performance.

Power Shift Transmission

(950M, 966M)

- Standard lock up clutch torque converter matched with engine power and hydraulics for improved performance and fuel efficiency.
- Split-flow oil system uses multi-viscosity oil to enhance fuel economy.

Cat Continuously Variable

Transmission (966M XE)

- Power is transmitted through a variator unit (hydraulic pump and motor) as well as a parallel mechanical gear path to maximize transmission efficiency over a wide range of operating conditions.
- Torque converter is eliminated and rated engine speed lowered.
- Rimpull can be adjusted as floor conditions change, reducing fuel burn and improving tire life.
- XE models are proven to be more productive, more fuel efficient with less operator fatigue while keeping tire wear to a minimum.

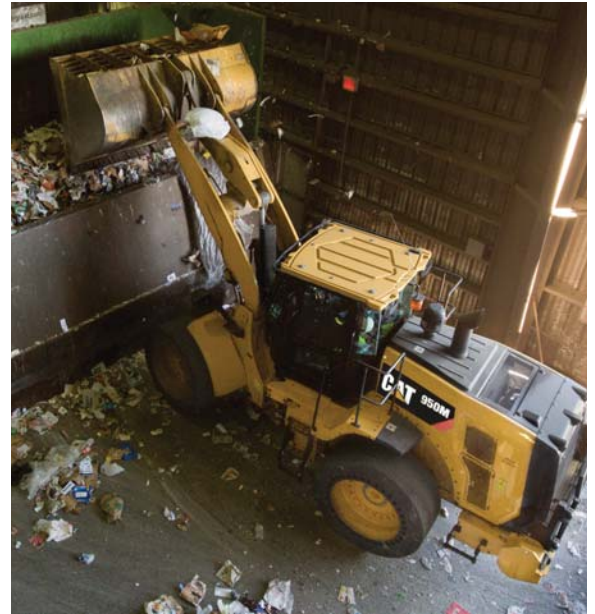
Productive

Work Smart and Move More

Hydraulics

M Series hydraulic systems provide greater up time, machine performance and operator comfort.

- Mono block main hydraulic valve has 40 percent fewer leak points for greater up time.
- Integrated ride control is more effective over greater payload ranges, increasing productivity and operator efficiency.
- Larger displacement hydraulic pumps provide performance and fuel efficiency through high flow at lower engine RPMs.
- Optional 3rd and 4th valve hydraulic functions allow for greater work tool and job site versatility.



Fuel Efficient

Engineered to Lower Your Operating Costs



Engine

Cat ACERT engines provide maximum fuel efficiency and increased power density while meeting Tier 4 Final emission standards.

- Engine emissions are controlled through precisely controlled fuel injection, utilization of the Cat NO_x Reduction System (NRS) and Selective Catalytic Reduction (SCR).
- Integrated machine systems lower average working engine speeds resulting in improved performance and fuel efficiency.
- Economy Mode automatically controls engine torque and speed based on power train resulting in optimal performance and improved fuel efficiency.

Easy to Operate

Safe. Comfortable. Efficient.



Ensuring you are safe, confident in the control of your machine, have a clean, comfortable and quiet operating environment with controls that are intuitive and low effort all contribute to lower fatigue and greater productivity.

Cab Access

- Angle of the steps up to the cab have been increased to 15 degrees enabling you to walk up the steps like stairs rather than climbing up vertically like a ladder.
- Optional remote door switch unlatches door remotely (located in electronic service center where operator accesses cab).



Visibility

- Newly designed ROPS and extended lower glass improve visibility to the left side of the machine.
- Large convex mirrors improve visibility to the rear while integrated spot mirrors provide close visibility to both sides of your machine.
- Standard rear vision camera is mounted to the rear grill or radiator guard for maximum rearward visibility.

Sound

- Viscous cab mounts connect the cab to the frame of the machine, decreasing noise and vibration.

Central Display

- Large text box provides in-language information about machine operation, feature activation, system troubleshooting and calibration.
- With the large analog gauges you can easily identify if key systems are within normal operating range.



Touch Screen Display

- Machine controls, rear vision camera and Cat Production Measurement system are contained in one multipurpose color touch screen display, making it simpler for you to use.
- Intuitive navigation with in-language text enables you to modify certain machine operating parameters and monitor machine conditions.

Control Panel

- Centralized switch panel with LEDs provides ready access to frequently required functions even while you are wearing gloves.
- The control panel only contains highly utilized machine controls, driving simplicity and ease of operation.
- “Help” feature explains the function of each membrane switch.



Electro Hydraulic (EH) Joystick Steering with Force Feedback (Speed Sensitive) (Standard 966M, Optional 950M)

- Industry-leading, seat-mounted joystick steering system provides precise machine control while decreasing your arm fatigue.



Steering Wheel (SW) (950M)

- Conventional steering wheel configuration offers a low effort hand metering unit (HMU) hydraulic steering system.



Electro Hydraulic (EH) Implement Controls

- Seat-mounted, single axis implement control levers (joystick optional) provide you with precise control of the work tool.
- In-cab programmable kick-outs and automatic cylinder snubbing are easy to set on-the-go for tilt, lower and lift, yielding quicker and more repeatable cycles.

Serviceable

Easy to Maintain. Easy to Service.

Engine Access

- The sloped, “one-piece” tilting hood provides industry-leading easy access to the engine, oil levels and coolant.

Cooling System

- Swing out hydraulic and A/C cooler cores provide convenient access to both sides for cleaning.
- A fold-down access panel allows access to the back side of the engine coolant and Air-to-Air After Cooler cores for cleaning.

Service Centers

- The electrical and hydraulic service centers provide grouped access to numerous features, enhancing safety and convenience for you and your service technicians, while reducing service time.
- The electrical service center, located beneath the left platform, contains the maintenance free batteries, a fuse relay panel, main disconnect switch, engine shutdown switch, hood tilt switch, and the jump start receptacle.
- Hydraulic system components are protected by full flow and kidney-loop filtration.
- A case drain screen provides additional protection and a separate kidney-loop filter with a finer micron rating continuously filters smaller particles out of the system.
- Multilevel design ensures the hydraulic oil is clean and thoroughly protects the rest of the hydraulic system from contamination.



Cooling

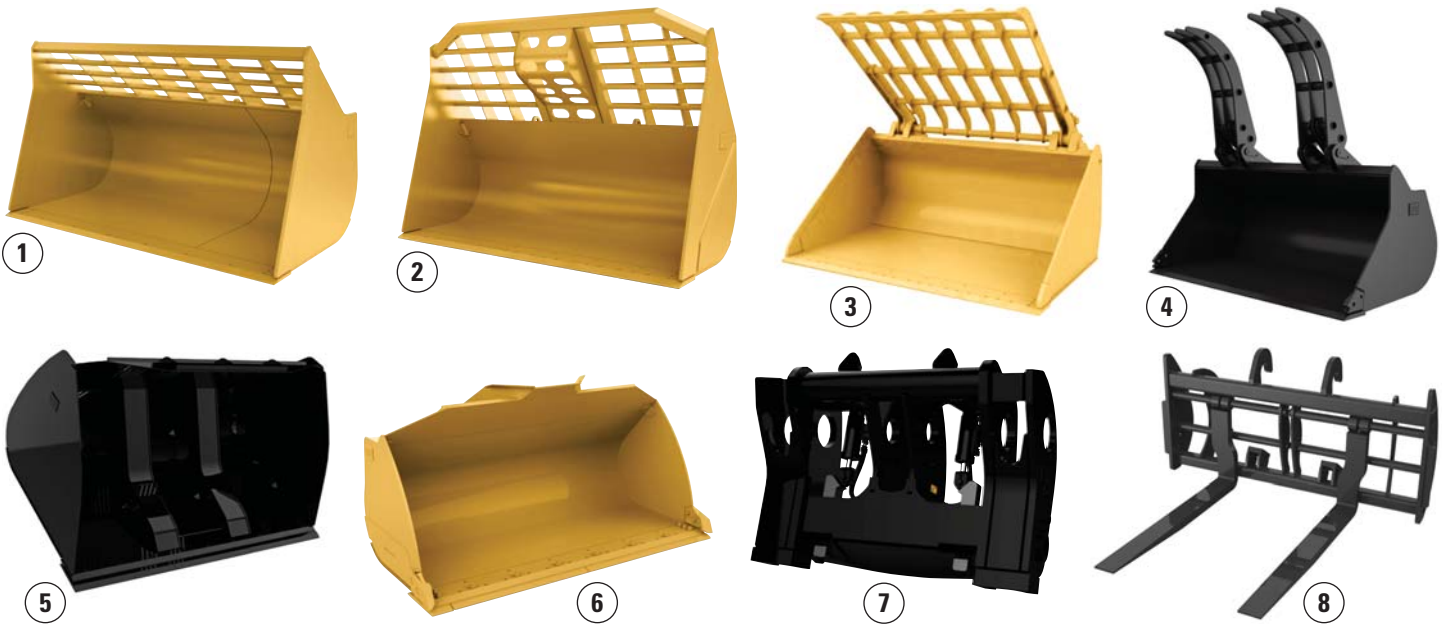
M Series cooling is designed to provide superior capacity in high airborne debris applications.

- Perforated rear grill shields your machine’s system from larger airborne debris entering the system.
- Choose between nine or six cooling fins per inch to customize the cooling system to fit your job site demands.
- Optional variable pitch fan automatically purges the cooling cores by periodically reversing air flow when needed.



Versatile

Various Tools to Match Your Operating Needs



① **Load & Carry Buckets:** The Cat Load & Carry Bucket is designed for low density materials with a smaller height and a deeper throat for “load and carry” applications. No matter the loading level, this bucket is an all-around tool for your waste and recycling needs.

② **Push & Doze (Dozing) Buckets:** The Cat Push & Doze Bucket (or Dozing Bucket) is specifically designed with a shallow throat and taller profile to “push” loads along the floor to a hole or hopper in the floor for ‘below grade’ (the haul unit is below the machine) applications.

③ **Waste Handling with Clamp (Tamp & Clamp) Buckets:** Waste Handling Buckets with Clamp are designed for picking, sorting, material redistribution, and tamping loads in trucks making them the ideal choice for site efficiency.

④ **Grapple Buckets:** Grapple Buckets are a General Purpose-type bucket with two independent clamps, allowing for maximum material retention.

⑤ **High Dump Buckets:** Fuel-saving design earns you more with every pass. Loads easily, dumps at any height for feeding trucks and hoppers.

⑥ **Performance Series General Purpose and Material Handling Buckets:** Designed for loading, carrying, stockpiling and backfilling in a variety of applications and materials. Available as pin-on or for use with the Fusion™ Coupler System.

⑦ **Fusion Quick Coupler:** The Fusion Coupler System provides performance virtually identical to pin-on with all the flexibility of a quick coupler system. The Fusion Coupler sits back, close in to the loader arms – minimizing offset and increasing the machine’s performance while proving one common interface across a range of medium and small wheel loaders.

⑧ **Pallet Forks:** Pick up and transfer a variety of banded or baled material. Fusion Pallet Forks feature an open frame design and offset tines for maximum visibility to the tines.

Waste Work Tool Options

Bolt-on steel and rubber cutting edges are available to suit your specific needs.





Integrated Technologies


Monitor, Manage, and Enhance Job Site Operations

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

Cat Connect services are also available from your dealership including:


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

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

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

Consult your local dealer on the services available.

Featured Cat Connect technologies include:

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

Product Link™/VisionLink®

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



DETECT Technologies

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

Rear Vision Camera

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

Rear Object Detection (Optional)

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



Owning Costs

Proven Best Investment

Customer Support Agreements

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

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.



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.

M Series Wheel Loaders Specifications

Engine



- Cat engine with ACERT Technology.
- 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.

	950M		966M		966M XE	
Engine Model	Cat C7.1 ACERT		Cat C9.3 ACERT		Cat C9.3 ACERT	
Displacement	7.01 L	428 in ³	9.3 L	568 in ³	9.3 L	568 in ³
Maximum Gross Power						
SAE J1995	187 kW	250 hp	232 kW	311 hp	—	—
Engine Speed	2,100 rpm		1,800 rpm		—	
Maximum Net Power						
SAE J1349	171 kW	230 hp	206 kW	276 hp	222 kW	298 hp
Engine Speed	2,100 rpm		1,700 rpm		1,600 rpm	
Peak Gross Torque						
SAE J1995	1235 N·m	911 lbf-ft	1599 N·m	1,179 lbf-ft	1728 N·m	1,275 lbf-ft
Engine Speed	1,300 rpm		1,200 rpm		1,200 rpm	
Maximum Net Torque						
SAE J1349	1163 N·m	858 lbf-ft	1527 N·m	1,126 lbf-ft	1618 N·m	1,193 lbf-ft
Engine Speed	1,300 rpm		1,000 rpm		1,000 rpm	

Cab/Sound



ROPS	ISO 3471:2008
FOPS	ISO 3449:2005 Level II

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.

	950M	966M	966M XE
With Cooling Fan Speed at Maximum Value:			
Operator Sound Pressure Level (ISO 6396:2008)	70 dB(A)	70 dB(A)	67 dB(A)
Exterior Sound Power Level (ISO 6395:2008)*	107 dB(A)	109 dB(A)	107 dB(A)
Exterior Sound Pressure Level (SAE J88:2013)**	75 dB(A)	76 dB(A)	76 dB(A)

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

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

M Series Wheel Loaders Specifications

Loader Hydraulic System



- Mono-block main hydraulic valve design reduces weight and has 40 percent fewer leak points than previous designs.
- Auxiliary third and fourth hydraulic functions can be easily added at the factory or in the field with the addition of a second remote valve.
- 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.

	950M		966M		966M XE	
Maximum Flow – Implement Pump	286 L/min	76 gal/min	360 L/min	95 gal/min	385 L/min	102 gal/min
3 rd Function Max Flow*	240 L/min	63 gal/min	240 L/min	63 gal/min	240 L/min	63 gal/min
4 th Function Max Flow*	240 L/min	63 gal/min	240 L/min	63 gal/min	240 L/min	63 gal/min
Maximum Working Pressure – Implement Pump	29 300 kPa	4,250 psi	31 000 kPa	4,496 psi	31 000 kPa	4,496 psi
3 rd Function Max Working Pressure*	21 780 kPa	3,159 psi	21 780 kPa	3,159 psi	21 780 kPa	3,159 psi
4 th Function Max Working Pressure*	21 780 kPa	3,159 psi	21 780 kPa	3,159 psi	21 780 kPa	3,159 psi
Cycle Times with Rated Payload						
Raise from Carry Position	5.1 s		6.1 s		6.1 s	
Dump at Maximum Raise	1.5 s		1.4 s		1.4 s	
Lower, Empty, Float Down	2.3 s		2.6 s		2.6 s	
Total Cycle Time	8.9 s		10.1 s		10.1 s	

*Optional.

Transmission



- Standard lock-up clutch torque converter matched with the engine power and hydraulics to improve performance and fuel efficiency.

	950M		966M		966M XE	
Forward 1	6.9 km/h	4.3 mph	6.5 km/h	4.0 mph	6.7 km/h	4.2 mph
Forward 2	12 km/h	7.5 mph	13 km/h	8.1 mph	12.6 km/h	7.8 mph
Forward 3	19.3 km/h	12.0 mph	23.5 km/h	14.6 mph	22.1 km/h	13.7 mph
Forward 4	25.7 km/h	16.0 mph	39.5 km/h	24.5 mph	39.5 km/h	24.5 mph
Forward 5	39.5 km/h	24.5 mph	N/A	N/A	N/A	N/A
Reverse 1	6.9 km/h	4.3 mph	7.1 km/h	4.4 mph	6.7 km/h	4.2 mph
Reverse 2	12 km/h	7.5 mph	14.4 km/h	8.9 mph	12.6 km/h	7.8 mph
Reverse 3	25.7 km/h	16.0 mph	25.9 km/h	16.1 mph	28.0 km/h	17.4 mph
Reverse 4	N/A	N/A	39.5 km/h	24.5 mph	N/A	N/A

• 950M – Maximum travel speed in standard vehicle with empty bucket and standard L3 tires with 787 mm (31 in) roll radius.

• 966M/966M XE – Maximum travel speed in standard vehicle with empty bucket and standard L3 tires with 826 mm (32.5 in) roll radius.

M Series Wheel Loaders Specifications

Service Refill Capacities

	950M		966M		966M XE	
Fuel Tank	275 L	72.6 gal	302 L	79.8 gal	302 L	79.8 gal
Diesel Exhaust Fluid (DEF) Tank	16 L	4.2 gal	16.8 L	4.4 gal	16.8 L	4.4 gal
Cooling System	59 L	15.6 gal	71.6 L	18.9 gal	71.6 L	18.9 gal
Engine Crankcase	22 L	5.8 gal	24.5 L	6.5 gal	24.5 L	6.5 gal
Transmission (gear box)	43 L	11.4 gal	58.5 L	15.5 gal	63 L	16.6 gal
Axles						
Front	43 L	11.4 gal	57 L	15.1 gal	57 L	15.1 gal
Rear	43 L	11.4 gal	57 L	15.1 gal	57 L	15.1 gal
Hydraulic Tank	125 L	33.0 gal	125 L	33.0 gal	125 L	33.0 gal

Power Train



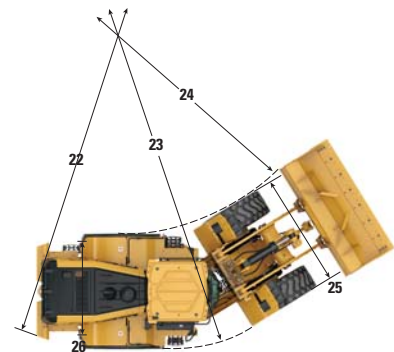
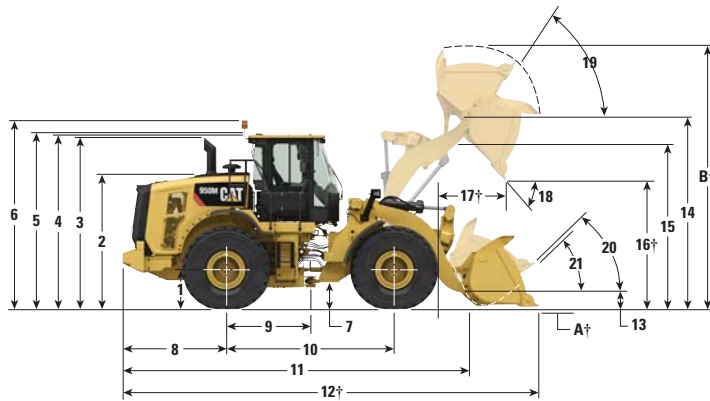
- M Series axles are designed to handle extreme applications resulting in reliable performance and durable life.
- The rear axle can oscillate to ± 13 degrees helping to ensure all four wheels stay on the ground providing stability even in the roughest terrain for excellent stability and traction.
-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

	950M	966M	966M XE
Front Axle	Fixed	Fixed	Fixed
Traction Aid (standard)	Manual Locking Differential	Manual Locking Differential	Manual Locking Differential
Traction Aid (optional)	Auto Locking Differential	Auto Locking Differential	Auto Locking Differential
Rear Axle	Oscillating	Oscillating	Oscillating
Oscillation Angle by Tire Size			
23.5R25	± 13 degrees		
26.5R25		± 13 degrees	± 13 degrees
29.5R25			
Traction Aid (standard)	Open differential	Open differential	Open differential
Traction Aid (optional)	Auto Locking Differential	Auto Locking Differential	Auto Locking Differential
Brakes			
Service	Inboard wet disc	Inboard wet disc	Inboard wet disc
Park	Spring applied hydraulically released	Spring applied hydraulically released	Spring applied hydraulically released

M Series Wheel Loaders Specifications

950M Waste Handler Dimensions

All dimensions are approximate.



	950M Waste Handler			
	Standard Lift		High Lift	
	mm	ft/in	mm	ft/in
1 Height to Axle Centerline	798	2'7"	798	2'7"
2 Height to Top of Hood	2748	9'0"	2748	9'0"
3 Height to Top of Exhaust Pipe	3464	11'4"	3464	11'4"
4 Height to Top of ROPS	3502	11'6"	3502	11'6"
5 Height to Top of Product Link Antenna	3704	12'2"	3704	12'2"
6 Height to Top of Warning Beacon	3798	12'6"	3798	12'6"
7 Ground Clearance	418	1'4"	418	1'4"
8 Center Line of Rear Axle to Edge of Counterweight	1942	6'4"	2071	6'10"
9 Center Line of Rear Axle to Hitch	1675	5'6"	1675	5'6"
10 Wheelbase	3350	11'0"	3350	11'0"
11 Overall Length (without bucket)	7099	23'4"	7559	24'10"
12 Shipping Length (with bucket level on ground)*†	8824	29'0"	9284	30'6"
13 Hinge Pin Height at Carry Height	698	2'3"	833	2'9"
14 Hinge Pin Height at Maximum Lift	4078	13'5"	4578	15'0"
15 Lift Arm Clearance at Maximum Lift	3331	10'11"	3685	12'1"
16 Dump Clearance at Maximum Lift and 45° Discharge*†	2518	8'3"	3024	9'11"
17 Reach at Maximum Lift and 45° Discharge*†	1685	5'6"	1720	5'7"
18 Dump Angle at Maximum Lift and Dump (on stops)*	47 degrees		44 degrees	
19 Rack Back at Maximum Lift*	59 degrees		59 degrees	
20 Rack Back at Carry Height*	49 degrees		49 degrees	
21 Rack Back at Ground*	36 degrees		40 degrees	
22 Clearance Circle (radius) to Counterweight	6186	20'4"	6186	20'4"
23 Clearance Circle (radius) to Outside of Tires	5989	19'8"	5989	19'8"
24 Clearance Circle (radius) to Inside of Tires	3215	10'7"	3215	10'7"
25 Width over Tires – Maximum (unloaded)	2753	9'1"	2753	9'1"
Width over Tires – Maximum (loaded)	2760	9'1"	2760	9'1"
26 Tread Width	2140	7'0"	2140	7'0"

*With 6.1 m³ (8.0 yd³) pin-on waste bucket with steel bolt-on cutting edges (see Operating Specifications for other Buckets) and rear guard counterweight.

†Dimensions are listed in Operating Specification charts.

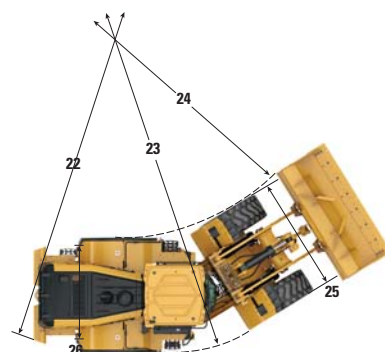
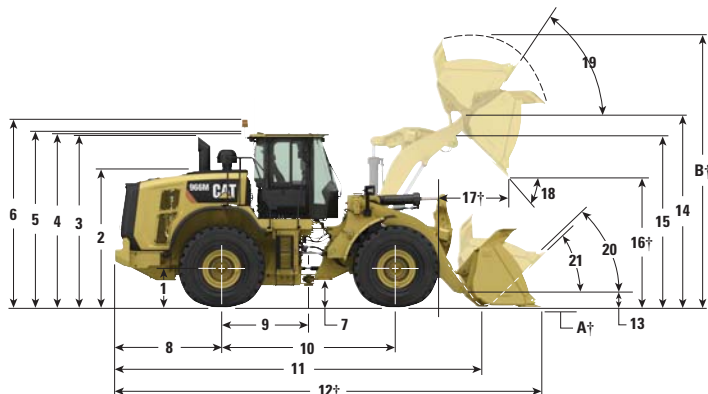
All height and tire related dimensions are with Brawler 23.5-25 HPS Solidflex Smooth tires (see Tire Option charts for other tires).

"Width over Tires" dimensions are over the bulge and include growth.

M Series Wheel Loaders Specifications

966M/966M XE Waste Handler Dimensions

All dimensions are approximate.



	966M/966M XE Waste Handler			
	Standard Lift		High Lift	
	mm	ft/in	mm	ft/in
1 Height to Axle Centerline	836	2'9"	836	2'9"
2 Height to Top of Hood	2855	9'4"	2855	9'4"
3 Height to Top of Exhaust Pipe	3559	11'8"	3559	11'8"
4 Height to Top of ROPS	3624	11'11"	3624	11'11"
5 Height to Top of Product Link Antenna	3673	12'1"	3673	12'1"
6 Height to Top of Warning Beacon	3896	12'9"	3896	12'9"
7 Ground Clearance	471	1'7"	471	1'7"
8 Center Line of Rear Axle to Edge of Counterweight	2180	7'2"	2500	8'2"
9 Center Line of Rear Axle to Hitch	1775	5'10"	1775	5'10"
10 Wheelbase	3550	11'8"	3550	11'8"
11 Overall Length (without bucket)	7371	24'3"	8191	26'11"
12 Shipping Length (with bucket level on ground)*†	9219	30'3"	9720	31'11"
13 Hinge Pin Height at Carry Height	667	2'2"	815	2'8"
14 Hinge Pin Height at Maximum Lift	4272	14'0"	4830	15'10"
15 Lift Arm Clearance at Maximum Lift	3680	12'0"	4177	13'8"
16 Dump Clearance at Maximum Lift and 45° Discharge*†	2669	8'9"	3227	10'7"
17 Reach at Maximum Lift and 45° Discharge*†	1526	5'0"	1501	4'11"
18 Dump Angle at Maximum Lift and Dump (on stops)*	46 degrees		45 degrees	
19 Rack Back at Maximum Lift*	62 degrees		71 degrees	
20 Rack Back at Carry Height*	50 degrees		49 degrees	
21 Rack Back at Ground*	42 degrees		39 degrees	
22 Clearance Circle (radius) to Counterweight	6872	22'7"	6872	22'7"
23 Clearance Circle (radius) to Outside of Tires	6720	22'1"	6720	22'1"
24 Clearance Circle (radius) to Inside of Tires	3894	12'10"	3894	12'10"
25 Width over Tires – Maximum (unloaded)	2959	9'9"	2959	9'9"
Width over Tires – Maximum (loaded)	2968	9'9"	2968	9'9"
26 Tread Width	2230	7'4"	2230	7'4"

*With 7.4 m³ (9.75 yd³) pin-on waste bucket with steel bolt-on cutting edges (see Operating Specifications for other Buckets) and rear guard counterweight.

†Dimensions are listed in Operating Specification charts.

All height and tire related dimensions are with Brawler 26.5-25 HPS Solidflex Smooth tires (see Tire Option charts for other tires).

"Width over Tires" dimensions are over the bulge and include growth.

M Series Wheel Loaders Specifications

950M Waste Handler Tire Options

Tire Brand	Brawler HPS	Brawler HPS	Flexport™	Flexport	Michelin	Bridgestone	Yokohama	Titan
Tire Size	23.5-25	23.5-25	65×13×25 (23.5×25)	65×13×25 (23.5×25)	23.5R25	23.5R25	23.5R25	23.5R25
Tread Type	—	—	—	—	L-3	L-3	L-3	L-3
Tread Pattern	Solidflex Smooth	Solidflex Traction	Smooth	OTR	XHA2	VJT	RB31	MXL
Width over Tires – Maximum (unloaded)*	2753 mm 9'0"	2753 mm 9'0"	2808 mm 9'3"	2808 mm 9'3"	2814 mm 9'3"	2798 mm 9'2"	2581 mm 8'6"	2812 mm 9'3"
Width over Tires – Maximum (loaded)*	2760 mm 9'1"	2760 mm 9'1"	2821 mm 9'3"	2821 mm 9'3"	2822 mm 9'3"	2831 mm 9'3"	2634 mm 8'8"	2833 mm 9'4"
Change in Vertical Dimensions (average of front and rear)	0 mm 0"	0 mm 0"	-6 mm 0"	-6 mm 0"	-50 mm -2"	-56 mm -2"	-54 mm -2"	-35 mm -1"
Change in Horizontal Reach	0 mm 0"	0 mm 0"	-1 mm 0"	-1 mm 0"	9 mm 0"	15 mm 1"	15 mm 1"	5 mm 0"
Change in Clearance Circle (radius) to Outside of Tires	0 mm 0"	0 mm 0"	61.7 mm 2"	61.7 mm 2"	62.4 mm 2"	71.2 mm 3"	-125.5 mm -5"	73.5 mm 3"
Change in Clearance Circle (radius) to Inside of Tires	0 mm 0"	0 mm 0"	-62 mm -2"	-62 mm -2"	-62 mm -2"	-71 mm -3"	126 mm 5"	-74 mm -3"
Change in Operating Weight (without Ballast)	0 kg 0 lb	-145 kg -320 lb	936 kg 2,064 lb	620 kg 1,367 lb	-3376 kg -7,443 lb	-3208 kg -7,072 lb	-3105 kg -6,845 lb	-3365 kg -7,419 lb
Change in Static Tipping Load – Straight	0 kg 0 lb	-97 kg -214 lb	624 kg 1,376 lb	414 kg 913 lb	-2252 kg -4,965 lb	-2140 kg -4,718 lb	-2071 kg -4,566 lb	-2244 kg -4,947 lb
Change in Static Tipping Load – Articulated	0 kg 0 lb	-84 kg -185 lb	544 kg 1,199 lb	361 kg 796 lb	-1963 kg -4,328 lb	-1866 kg -4,114 lb	-1806 kg -3,982 lb	-1957 kg -4,314 lb

*Width over tire bulge and includes tire growth.

M Series Wheel Loaders Specifications

966M/966M XE Waste Handler Tire Options

Tire Brand	Brawler HPS	Brawler HPS	Flexport	Flexport	Michelin	Bridgestone	Yokohama	Titan
Tire Size	26.5-25	26.5-25	70×14×28 (26.5×25)	70×14×28 (26.5×25)	26.5R25	26.5R25	26.5R25	26.5R25
Tread Type	—	—	—	—	L-3	L-3	L-3	L-3
Tread Pattern	Solidflex Smooth	Solidflex Traction	Smooth	OTR	XHA2	VJT	RB31	STL3
Width over Tires – Maximum (unloaded)*	2959 mm 9'8"	2959 mm 9'8"	2896 mm 9'6"	2955 mm 9'8"	2991 mm 9'10"	2982 mm 9'9"	2950 mm 9'8"	2954 mm 9'8"
Width over Tires – Maximum (loaded)*	2968 mm 9'9"	2968 mm 9'9"	2915 mm 9'7"	2972 mm 9'9"	3009 mm 9'10"	3016 mm 9'11"	2982 mm 9'9"	2989 mm 9'10"
Change in Vertical Dimensions (average of front and rear)	0 mm 0"	0 mm 0"	15 mm 1"	22 mm 1"	-37 mm -1"	-22 mm -1"	-22 mm -1"	-21 mm -1"
Change in Horizontal Reach	0 mm 0"	0 mm 0"	-21 mm -1"	-32 mm -1"	-9 mm 0"	-11 mm 0"	-8 mm 0"	-9 mm 0"
Change in Clearance Circle (radius) to Outside of Tires	0 mm 0"	0 mm 0"	-53 mm -2"	4 mm 0"	41 mm 2"	48 mm 2"	14 mm 1"	22 mm 1"
Change in Clearance Circle (radius) to Inside of Tires	0 mm 0"	0 mm 0"	53 mm 2"	-4 mm 0"	-41 mm -2"	-48 mm -2"	-14 mm -1"	-22 mm -1"
Change in Operating Weight (without Ballast)	0 kg 0 lb	-222 kg -489 lb	-700 kg -1,542 lb	-1177 kg -2,594 lb	-4464 kg -9,839 lb	-4300 kg -9,477 lb	-4188 kg -9,230 lb	-4344 kg -9,574 lb
Change in Static Tipping Load – Straight	0 kg 0 lb	-160 kg -353 lb	-505 kg -1,114 lb	-850 kg -1,874 lb	-3225 kg -7,107 lb	-3106 kg -6,846 lb	-3025 kg -6,668 lb	-3138 kg -6,916 lb
Change in Static Tipping Load – Articulated	0 kg 0 lb	-143 kg -315 lb	-451 kg -993 lb	-758 kg -1,671 lb	-2876 kg -6,338 lb	-2770 kg -6,105 lb	-2698 kg -5,946 lb	-2798 kg -6,168 lb

*Width over tire bulge and includes tire growth.

M Series Wheel Loaders Specifications

950M Waste Handler Operating Specifications with Buckets

Bucket Type		Pin-On Load & Carry	Pin-On Dozing	Pin-On Tamp & Clamp	Pin-On Grapple	Fusion/Dozing	Fusion/Grapple	
Edge Type		Steel Bolt-On Cutting Edges	Steel Bolt-On Cutting Edges	Steel Bolt-On Cutting Edges	Steel Bolt-On Cutting Edges	Steel Bolt-On Cutting Edges	Steel Bolt-On Cutting Edges	High Lift Delta*
Capacity – Rated	m ³	6.10	5.20	4.40	4.60	5.20	4.60	—
	yd ³	8.00	6.75	5.75	6.00	6.75	6.00	—
Capacity – Rated at 110% Fill Factor	m ³	6.70	5.70	4.80	5.10	5.70	5.10	—
	yd ³	8.75	7.50	6.25	6.75	7.50	6.75	—
Width	mm	3059	3059	3059	3059	3032	3059	—
	ft/in	10'0"	10'0"	10'0"	10'0"	9'11"	10'0"	—
16 † Dump Clearance at Maximum Lift and 45° Discharge	mm	2518	2854	2301	2572	2784	2563	506
	ft/in	8'3"	9'4"	7'6"	8'5"	9'1"	8'4"	1'7"
17 † Reach at Maximum Lift and 45° Discharge	mm	1685	1349	1891	1729	1419	1738	36
	ft/in	5'6"	4'5"	6'2"	5'8"	4'7"	5'8"	1"
Reach at Level Lift Arm and Bucket Level	mm	3174	2699	3474	3157	2798	3170	375
	ft/in	10'4"	8'10"	11'4"	10'4"	9'2"	10'4"	1'2"
A † Digging Depth	mm	8	8	16	43	43	43	4
	in	0"	0"	1"	2"	2"	2"	0"
12 † Overall Length	mm	8658	8183	8965	8641	8282	8654	626
	ft/in	28'5"	26'11"	29'5"	28'5"	27'3"	28'5"	2'0"
B † Overall Height with Bucket at Maximum Lift	mm	5983	6162	5322	6007	6148	6071	506
	ft/in	19'8"	20'3"	17'6"	19'9"	20'3"	19'11"	1'7"
Loader Clearance Circle Radius with Bucket at Carry Position	mm	6949	6800	7052	6944	6814	6945	211
	ft/in	22'10"	22'4"	23'2"	22'10"	22'5"	22'10"	8"
Static Tipping Load, Straight (Rigid Tire)	kg	14 099	16 025	12 302	13 575	15 006	13 183	-2319
	lb	31,074	35,320	27,114	29,920	33,073	29,055	-5,111
Static Tipping Load, Articulated (Rigid Tire)	kg	12 218	13 967	10 523	11 728	13 001	11 341	-2077
	lb	26,930	30,783	23,193	25,849	28,654	24,995	-4,577
Breakout Force	kN	131	190	107	123	162	122	-6
	lbf	29,506	42,701	24,075	27,656	36,407	27,426	-1,348
Operating Weight	kg	23 019	22 688	24 086	23 392	23 263	23 866	103
	lb	50,732	50,003	53,084	51,554	51,272	52,601	227

†Illustration shown with Dimension charts.

*Maximum values.

Static tipping loads and operating weights shown are based on machine configuration with Brawler HPS Solidflex Smooth tires, full fluids, operator, standard lift linkage, standard Waste Arrangement guarding, front window guard, rear guard counterweight, light guards, auto diff lock axles (front/rear) and two valve hydraulics.

M Series Wheel Loaders Specifications

966M/966M XE Waste Handler Operating Specifications with Buckets

Bucket Type		Pin-On Load & Carry	Pin-On Dozing	Pin-On Tamp & Clamp	High Lift Delta*
Edge Type		Steel Bolt-On Cutting Edges	Steel Bolt-On Cutting Edges	Steel Bolt-On Cutting Edges	
Capacity – Rated	m ³	7.40	6.50	5.00	—
	yd ³	9.75	8.50	6.50	—
Capacity – Rated at 110% Fill Factor	m ³	8.10	7.20	5.50	—
	yd ³	10.50	9.50	7.25	—
Width	mm	3357	3357	3357	—
	ft/in	11'0"	11'0"	11'0"	—
16 † Dump Clearance at Maximum Lift and 45° Discharge	mm	2669	2950	2456	558
	ft/in	8'9"	9'8"	8'0"	1'9"
17 † Reach at Maximum Lift and 45° Discharge	mm	1526	1245	1740	24
	ft/in	5'0"	4'1"	5'8"	11"
Reach at Level Lift Arm and Bucket Level	mm	3199	2802	3501	404
	ft/in	10'5"	9'2"	11'5"	1'3"
A † Digging Depth	mm	79	79	79	-25
	in	3"	3"	3"	-12"
12 † Overall Length	mm	9133	8736	9435	587
	ft/in	30'0"	28'8"	31'0"	1'11"
B † Overall Height with Bucket at Maximum Lift	mm	6376	6735	5515	558
	ft/in	20'11"	22'2"	18'2"	1'9"
Loader Clearance Circle Radius with Bucket at Carry Position	mm	7686	7584	7768	264
	ft/in	25'3"	24'11"	25'6"	10"
Static Tipping Load, Straight (Rigid Tire)	kg	20 063	22 057	17 440	-2931
	lb	44,219	48,615	38,437	-6,459
Static Tipping Load, Articulated (Rigid Tire)	kg	17 764	19 581	15 318	-2676
	lb	39,153	43,156	33,762	-5,897
Breakout Force	kN	136	182	111	-10
	lbf	30,776	41,070	25,083	-2,246
Operating Weight	kg	28 856	28 649	29 879	234
	lb	63,598	63,142	65,853	515

†Illustration shown with Dimension charts.

*Maximum values.

Static tipping loads and operating weights shown are based on machine configuration with Brawler HPS Solidflex Smooth tires, full fluids, operator, standard lift linkage, standard Waste Arrangement guarding, front window guard, rear guard counterweight, light guards, auto diff lock axles (front/rear) and two valve hydraulics.

M Series Wheel Loaders Standard Equipment

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 touch-screen display for rear vision camera, clock and machine parameters
- EH controls, SAL (single axis lever) lift and tilt function
- Steering, EH joystick, speed sensing with force feedback (966M)
- Steering, steering wheel (950M)
- Radio ready (entertainment) includes antenna, speakers and converter (12V, 10-amp)
- Air conditioner, heater, and defroster (auto temp and fan)
- EH parking brake
- Beverage holders (2) with storage compartment for cell phone/MP3 player
- Bucket/work tool function lockout
- Coat hook (2)
- Cab air filter
- Ergonomic cab access ladders and handrails
- Horn, electric
- Light, two dome (cab)
- Mirrors, rearview external with integrated spot mirrors
- Post mounted membrane 16 switch keypad
- 2 receptacles, 12V
- Seat, Cat Comfort (cloth) air suspension
- Seat belt, 51 mm (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

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

ELECTRICAL AND LIGHTING

- Batteries (2), maintenance free 1,400 CCA
- Ignition key; start/stop switch
- Starter, electric, heavy duty
- Starting and charging system (24V)
- Lighting system:
 - Four halogen work lights (cab mounted)
 - Two halogen roading lights (with signals)
 - Two halogen rear vision lights (hood mounted)
- 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, ACERT – meets Tier 4 Final emission standards
- Cat Clean Emissions Module (CEM) with Diesel Particulate Filter (DPF) and Diesel Exhaust Fluid (DEF) tank and pump
- Fuel priming pump (electric)
- Fuel/water separator
- Precleaner, engine air intake
- Economy Mode (selectable)
- Transmission, automatic
- Torque converter, locking clutch with free wheel stator

- Switch, transmission neutralizer lockout
- Axles, manually actuated differential lock front axle, open differential rear axle
- Axles, ecology drains
- Brakes, full hydraulic enclosed wet-disc with Integrated Braking System (IBS)
- Brake wear indicators
- Parking brake, disc and caliper
- Fan, radiator, on demand

LINKAGE

- Linkage, Z-bar
- Kickout, lift and tilt, automatic

HYDRAULICS

- Hydraulic system, load sensing
- Steering, load sensing
- Ride control, 2V
- Remote diagnostic pressure taps
- Hoses, Cat XT™
- Oil sampling valves
- Hydraulic oil cooler

FLUIDS

- Premixed extended life coolant with freeze protection to -34° C (-29° F)

OTHER STANDARD EQUIPMENT

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

Optional Equipment

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

OPERATOR ENVIRONMENT

- Door, remote opening system
- Cover, HVAC metallic
- EH controls, SAL 3rd function
 - Additional roller switch for 4th function
- EH controls, joystick lift and tilt
 - Additional integrated roller switches for 3rd and 4th functions
- 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 (*966M*)
 - Additional FNR with implement controls
- Steering, EH joystick, speed sensing with force feedback (*950M*)
- 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 auxiliary halogen cab mounted work lights or
- Two additional auxiliary front HI LED and two additional auxiliary rear LED cab mounted work lights with 2 LED work lights in the radiator grill and LED front turn signals also includes replacement of the standard four halogen cab mounted work lights with four LED work lights (the standard offering and only roading light available is the halogen roading light)
- Warning amber strobe beacon
- Reversing strobes
- External seat belt indicator light
- Speed limiter – 20 km/h (Europe only)

STARTERS, BATTERIES, AND ALTERNATORS

- Cold start – 120V
- Cold start – 240V

CAT CONNECT TECHNOLOGIES

- Link technologies: VIMS™
- Payload technologies:
 - Advanced Productivity subscription
 - Cat Production Measurement
 - Printer
- Detect technologies:
 - Cat Rear Object Detection
- Machine Security System

POWER TRAIN

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

LINKAGE

- High lift
- Quick coupler ready

HYDRAULICS

- 3rd function with Ride Control
 - Standard linkage
 - High lift linkage
- 4th function with Ride Control
 - Standard linkage
 - High lift linkage

FLUIDS

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

OTHER OPTIONAL EQUIPMENT

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

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

AEHQ8096 (07-2018)
(N Am)

© 2018 Caterpillar
All rights reserved

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

CAT, CATERPILLAR, SAFETY.CAT.COM, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

VisionLink is a trademark of Trimble Navigation Limited, registered in the United States and in other countries.

