



982M

Wheel Loader

Technical Specifications

Engine

Engine Model	Cat® C13
Maximum Power (1,700 rpm)	
ISO 14396	321 kW (436 hp metric)
Maximum Net Power (1,700 rpm)	
ISO 9249	297 kW (404 hp metric)
Peak Torque (1,200 rpm)	
ISO 14396	2182 N·m
Maximum Net Torque (1,100 rpm)	
ISO 9249	2054 N·m
Bore	130 mm
Stroke	157 mm
Displacement	12.5 L

- Meets either EU Stage V or EU Stage IV* emission standards.
*Stage IV engines comply with the transition provisions of the EU non-road emission regulation
- 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

Bucket Capacities	4.6-12.0 m ³
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Weight

Operating Weight	35 563 kg
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- 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 m³ general purpose bucket with BOCE.

Service Refill Capacities

Fuel Tank	426 L
DEF Tank	21 L
Cooling System	53 L
Crankcase	37 L
Transmission	77 L
Differentials and Final Drives – Front	92 L
Differentials and Final Drives – Rear	92 L
Hydraulic Tank	153 L

Operating Specifications

Static Tipping Load – Full 40° Turn	
With Tire Deflection	21 080 kg
No Tire Deflection	22 393 kg
Breakout Force	260 kN

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

Transmission

Forward 1	6.2 km/h
Forward 2	11.9 km/h
Forward 3	21.1 km/h
Forward 4	37.5 km/h
Reverse 1	7.0 km/h
Reverse 2	13.6 km/h
Reverse 3	24.1 km/h
Reverse 4	39.5 km/h

- Maximum travel speed in standard vehicle with empty bucket and standard L4 tires with 914 mm roll radius.

982M Wheel Loader Specifications

Axles

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

Sound

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

Operator Sound Pressure Level (ISO 6396:2008)	72 dB(A)
Exterior Sound Power Level European Union Directive “2000/14/EC” as amended by “2005/88/EC”	109 dB(A)*
Exterior Sound Pressure Level (SAE J88:2013)	78 dB(A)**

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

**For a typical 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.

Hydraulic System

Implement Pump Type	Variable Displacement Piston
Implement System	
Maximum Pump Output (2,250 rpm)	449 L/min
Maximum Operating Pressure	34 300 kPa
Optional 3 rd Function Maximum Flow	240 L/min
Optional 3 rd Function Maximum Pressure	21 780 kPa
Hydraulic Cycle Time with Rated Payload:	
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

Brakes	Brakes meet ISO 3450:2011 standards
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Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.6 kg of refrigerant which has a CO₂ equivalent 2.288 metric tonne.

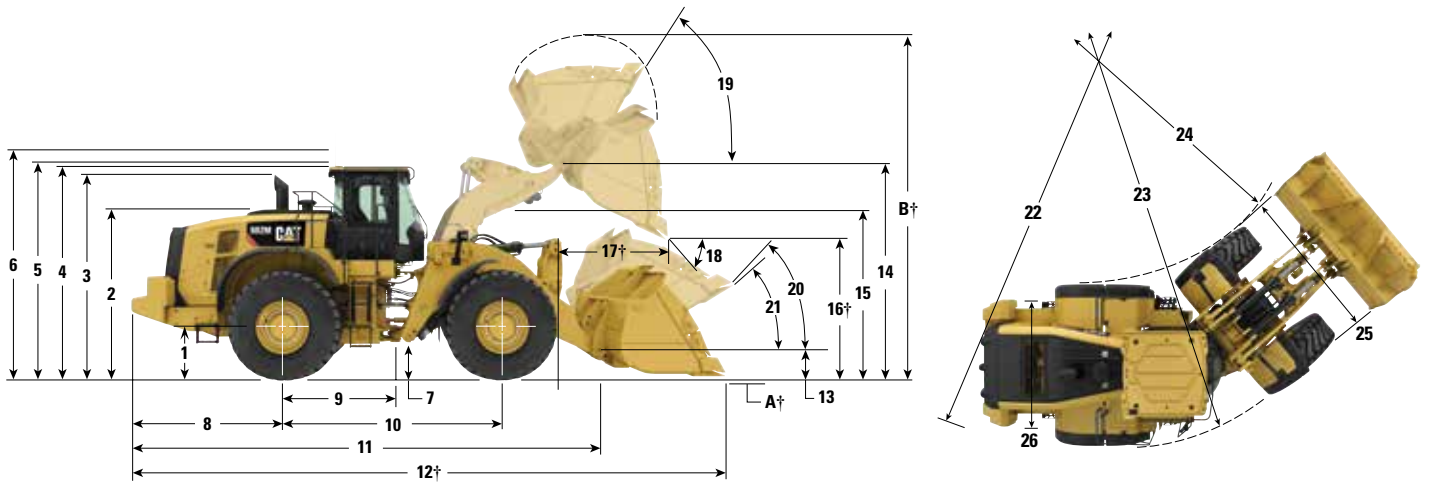
Cab

ROPS/FOPS	ROPS/FOPS meet ISO 3471:2008 and ISO 3449:2005 Level II standards
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982M Wheel Loader Specifications

Dimensions

All dimensions are approximate.



	Standard Lift	High Lift
1 Height to Axle Centerline	874 mm	874 mm
2 Height to Top of Hood	3083 mm	3083 mm
3 Height to Top of Exhaust Pipe	3719 mm	3719 mm
4 Height to Top of ROPS	3786 mm	3786 mm
5 Height to Top of Product Link Antenna	3864 mm	3864 mm
6 Height to Top of Warning Beacon	4085 mm	4085 mm
7 Ground Clearance	426 mm	426 mm
8 Center Line of Rear Axle to Edge of Counterweight	2716 mm	2823 mm
9 Center Line of Rear Axle to Hitch	1900 mm	1900 mm
10 Wheelbase	3800 mm	3800 mm
11 Overall Length (without bucket)	8584 mm	9083 mm
12 Shipping Length (with bucket level on ground)*†	10 177 mm	10 670 mm
13 Hinge Pin Height at Carry Height	790 mm	897 mm
14 Hinge Pin Height at Maximum Lift	4743 mm	5153 mm
15 Lift Arm Clearance at Maximum Lift	3884 mm	4072.1 mm
16 Dump Clearance at Maximum Lift and 45° Discharge*†	3365 mm	3774 mm
17 Reach at Maximum Lift and 45° Discharge*†	1569 mm	1631 mm
18 Dump Angle at Maximum Lift and Dump (on stops)*	50 degrees	50 degrees
19 Rack Back at Maximum Lift*	57 degrees	56 degrees
20 Rack Back at Carry Height*	48 degrees	49 degrees
21 Rack Back at Ground*	42 degrees	40 degrees
22 Clearance Circle (dia) to Counterweight	13 950 mm	13 950 mm
23 Clearance Circle (dia) to Outside of Tires	15 026 mm	15 026 mm
24 Clearance Circle (dia) to Inside of Tires	8148 mm	8148 mm
25 Maximum Width over Tires (unloaded)	3452 mm	3452 mm
Maximum Width over Tires (loaded)	3499 mm	3499 mm
26 Tread Width	2540 mm	2540 mm

*With 6.1 m³ general purpose pin on bucket with BOCE (see Operating Specifications for other buckets)

†Dimensions are listed in Operating Specification charts.

All height and tire related dimensions are with Bridgestone 875/65R29 VLTS L4 radial tires and standard counterweight (see Dimension Changes – Tires chart for other tires). "Width over Tires" dimensions are over the bulge and include growth.

982M Wheel Loader Specifications

Dimension Changes – Tires

Tire Brand	Michelin	Bridgestone	Bridgestone
Tire Size	875/65R29	875/65R29	29.5R29
Tread Type	L-3	L-3	L-5
Tread Pattern	XHA2	VTS	VSDL
Width over Tires – Maximum (empty)*	3473 mm	3447 mm	3425 mm
Width over Tires – Maximum (loaded)*	3504 mm	3472 mm	3448 mm
Change in Vertical Dimensions (average of front and rear)	-6 mm	-7 mm	82 mm
Change in Horizontal Reach	-1 mm	2 mm	-70 mm
Change in Clearance Circle to Outside of Tires	28 mm	-4 mm	-28 mm
Change in Clearance Circle to Inside of Tires	-28 mm	4 mm	28 mm
Change in Operating Weight (without Ballast)	-356 kg	-76 kg	1008 kg
Change in Static Tipping Load – Straight	-236 kg	-50 kg	667 kg
Change in Static Tipping Load – Articulated	-206 kg	-44 kg	583 kg

*Width over bulge and includes tire growth.

NOTE: Changes compared to 982M with Bridgestone 875/65R29 VLTS L4 tires.

982M Wheel Loader Specifications

Bucket Fill Factors Chart

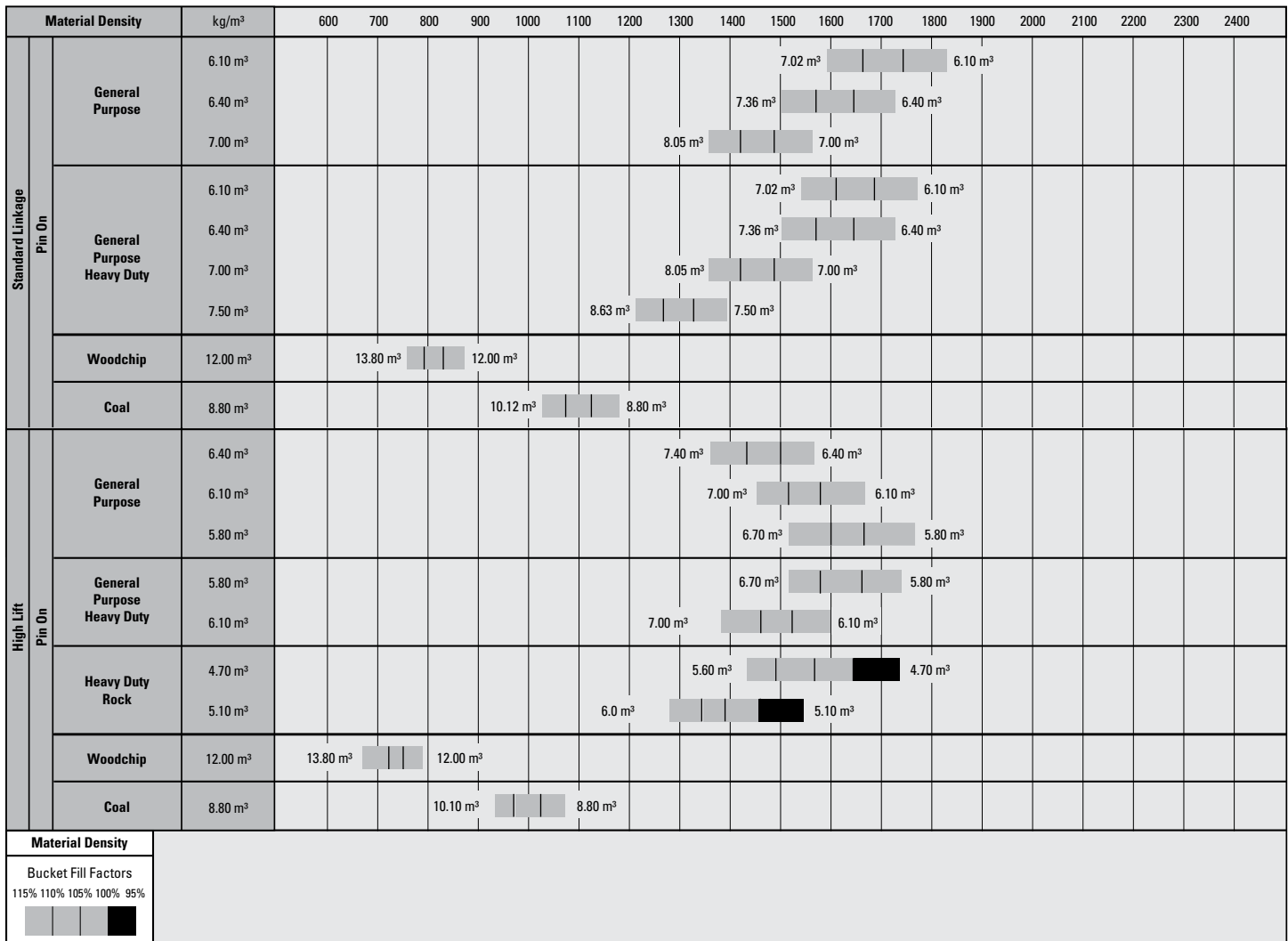
The bucket size must be chosen based on the density of the material and on the expected fill factor. The new Performance Series Buckets with longer floor, larger bucket opening, increased repository angle, rounded side boards and integrated spill guard, demonstrate fill factors significantly higher than 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	110	1.6-1.7
	19 mm and smaller	105	1.8
Rock:	76 mm and larger	100	1.6

*As a % of ISO 7546 rated capacity.

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


Bucket Selection Chart



Note: All buckets are showing Bolt-On Edges.

982M Wheel Loader Specifications

Bucket Selection Chart

Material Density		kg/m ³	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400			
Aggregate Handler Linkage Pin On	General Purpose	6.40 m ³											7.36 m ³			6.40 m ³								
		7.00 m ³										8.05 m ³			7.00 m ³									
		7.50 m ³									8.63 m ³			7.50 m ³										
	General Purpose Heavy Duty	6.10 m ³													7.02 m ³			6.10 m ³						
		6.40 m ³													7.36 m ³			6.40 m ³						
		7.00 m ³											8.05 m ³			7.00 m ³								
		7.50 m ³									8.63 m ³			7.50 m ³										
	Material Density																							
Bucket Fill Factors																								
115% 110% 105% 100% 95%																								
																								

Note: All buckets are showing Bolt-On Edges.

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

982M Wheel Loader Specifications

Operating Specifications with Buckets

Linkage		Standard Linkage							
Bucket Type		General Purpose			Heavy Duty General Purpose			Heavy Duty Quarry Rock	High Lift Delta
		Bolt-On Cutting Edges	Teeth and Segments	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Teeth and Segments	Bolt-On Cutting Edges	Teeth and Segments	
Edge Type									
Capacity – Rated	m ³	6.10	6.10	6.40	6.10	6.10	6.40	5.40	—
Capacity – Rated at 110% Fill Factor	m ³	6.71	6.71	7.04	6.71	6.71	7.04	5.94	—
Width	mm	3602	3665	3602	3602	3665	3602	3648	—
16† Dump Clearance at Maximum Lift and 45° Discharge	mm	3365	3197	3327	3373	3205	3327	3136	408
17† Reach at Maximum Lift and 45° Discharge	mm	1569	1703	1602	1578	1712	1602	1915	61
Reach at Level Lift Arm and Bucket Level	mm	3257	3468	3307	3258	3469	3307	3657	340
A† Digging Depth	mm	116	116	116	104	104	116	107	—
12† Shipping Length (with Bucket)	mm	10 168	10 403	10 218	10 162	10 397	10 218	10 586	502
B† Overall Height with Bucket at Maximum Lift	mm	6592	6592	6642	6592	6592	6642	6540	409
Loader Clearance Circle with Bucket at Carry Position	mm	15 769	15 986	15 800	15 761	15 978	15 800	16 073	363
Static Tipping Load, Straight (With Tire Deflection)*	kg	24 791	24 692	24 620	24 130	24 032	24 583	23 809	(2,178)
Static Tipping Load, Straight (No Tire Deflection)*	kg	26 101	26 001	25 938	25 440	25 340	25 901	25 108	(2,406)
Static Tipping Load, Articulated (With Tire Deflection)*	kg	21 080	20 981	20 918	20 414	20 315	20 881	20 062	(1,192)
Static Tipping Load, Articulated (No Tire Deflection)*	kg	22 393	22 293	22 239	21 725	21 626	22 201	21 364	(2,200)
Breakout Force**	kN	260	259	251	257	257	251	232	(9)
Operating Weight*	kg	35 564	35 636	35 655	36 227	36 299	35 695	36 694	1,037

*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.

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

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

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

982M Wheel Loader Specifications

Operating Specifications with Buckets – Aggregate Handler

Linkage		Aggregate Handler					
Bucket Type		General Purpose	Heavy Duty General Purpose		Material Handling		Heavy Duty Material Handling
		Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges
Edge Type							
Capacity – Rated	m ³	6.40	6.40	7.00	6.40	7.00	6.40
Capacity – Rated at 110% Fill Factor	m ³	7.04	7.04	7.70	7.04	7.70	7.04
Width	mm	3602	3602	3602	3602	3602	3602
16† Dump Clearance at Maximum Lift and 45° Discharge	mm	3312	3312	3262	3233	3185	3248
17† Reach at Maximum Lift and 45° Discharge	mm	1602	1602	1644	1516	1581	1518
Reach at Level Lift Arm and Bucket Level	mm	3307	3307	3374	3321	3401	3311
A† Digging Depth	mm	132	132	132	132	120	120
12† Shipping Length (with Bucket)	mm	10 335	10 335	10 402	10 349	10 421	10 331
B† Overall Height with Bucket at Maximum Lift	mm	6627	6626	6693	6610	6694	6607
Loader Clearance Circle with Bucket at Carry Position	mm	15 801	15 801	15 842	15 809	15 850	15 794
Static Tipping Load, Straight (With Tire Deflection)*	kg	26 038	26 001	25 761	25 592	24 471	24 813
Static Tipping Load, Straight (No Tire Deflection)*	kg	27 454	27 416	27 186	26 964	25 850	26 181
Static Tipping Load, Articulated (With Tire Deflection)*	kg	22 083	22 045	21 816	21 694	20 578	20 907
Static Tipping Load, Articulated (No Tire Deflection)*	kg	23 507	23 469	23 249	23 076	21 966	22 285
Breakout Force**	kN	251	251	240	249	232	247
Operating Weight*	kg	36 302	36 342	36 483	36 370	37 355	37 148

*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.

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

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

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

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

†Illustration shown with Dimension charts.

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

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

982M Wheel Loader Specifications

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
POWER TRAIN			OPERATOR ENVIRONMENT		
Axles, ecology drains	✓		Air conditioner, heater, and defroster (auto temp and fan)	✓	
Axles, open differential, front and rear	✓		Beverage holders (2) with storage compartment for cell phone/MP3 player	✓	
Axles – limited slip differentials, axle oil cooler		✓	Bucket/work tool function lockout	✓	
Brake wear indicators	✓		Cab access ladders and handrails	✓	
Brakes, full hydraulic enclosed wet-disc with Integrated Braking System (IBS)	✓		Cab air filter	✓	
Cat Clean Emissions Module (CEM) with Diesel Exhaust Fluid (DEF) tank and pump	✓		Cab, pressurized and sound suppressed (ROPS/FOPS)	✓	
Cat continuously variable transmission	✓		Cab tie-off	✓	
Economy mode (selectable)	✓		Coat hook (2)	✓	
Engine, Cat C13 – Stage V	✓		Cover, HVAC metallic		✓
Fan, radiator, electronically controlled, hydraulically driven, temperature sensing, on demand	✓		Door, remote opening system		✓
Fan, VPF (variable pitch fan), automatic and manual control		✓	EH controls, SAL (single axis lever) lift and tilt function	✓	
Fuel priming pump (electric)	✓		EH controls, joystick lift and tilt: – Additional integrated roller switch for 3 rd function		✓
Fuel/water separator	✓		EH controls, SAL 3 rd function		✓
Parking brake, disc and caliper	✓		EH parking brake	✓	
Precleaner, engine air intake	✓		Filter, carbon fresh air		✓
Radiator, high debris, 6 fins per inch, 43° cooling capacity	✓		Horn, electric	✓	
Radiator, low debris, 9 fins per inch, high ambient 47° cooling capacity		✓	Light, two dome (cab)	✓	
Switch, transmission neutralizer lockout	✓		Mirrors, heated rearview external with integrated spot mirrors		✓
Torque converter, locking clutch with free wheel stator	✓		Mirrors, rearview external with integrated spot mirrors	✓	
Transmission, automatic planetary power shift (4F/4R)	✓		Multi-function 18 cm color LCD touch-screen display for rear vision camera image display (reverse travel activated) and machine status, setting and health parameters	✓	
Transmission, heavy duty	✓		Post mounted membrane 16 switch keypad	✓	
CAT® CONNECT TECHNOLOGIES			Precleaner, HVAC		✓
Detect technologies:			Precleaner, HVAC (RESPA)		✓
Rear vision camera	✓		Radio, AM/FM/CD/USB/MP3 Bluetooth®		✓
Cat rear object detection		✓	Radio, CB ready		✓
Link technologies:			Radio ready (entertainment) includes antenna, speakers and converter (12V, 10-amp)	✓	
Product Link	✓		Receptacles (3), 12V	✓	
VIMS™		✓			
Payload technologies:					
Cat Production Measurement 2.0 (CPM), Printer, Aggregate Autodig		✓			
Machine security system		✓			

(continued on next page)

982M Wheel Loader Standard and Optional Equipment

Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
OPERATOR ENVIRONMENT <i>(continued)</i>			ELECTRICAL AND LIGHTING <i>(continued)</i>		
Roof, metallic		✓	Main disconnect switch	✓	
Seat, cloth, air suspension	✓		Receptacle start (cables not included)	✓	
Seat, suede/cloth, air suspension, heated		✓	Reversing strobes		✓
Seat, leather/cloth, air suspension, heated/cooled		✓	Speed limiter – 20 km/h		✓
Seat belt, 51 mm retractable, with indicator	✓		Starter, electric, heavy duty	✓	
Seat, heated air-suspension		✓	Starting and charging system (24V)	✓	
Steering, EH joystick, speed sensing with force feedback	✓		Warning amber strobe beacon		✓
Steering, EH wheel with directional FNR shifter and gear selector: – Additional FNR with implement controls		✓	FLUIDS		
Steering, secondary	✓		Premixed extended life coolant with freeze protection to -34°C	✓	
Sun visor, front	✓		Premixed extended life coolant with freeze protection to -50°C		✓
Sun visor, rear		✓	HYDRAULICS		
Viscous mounts	✓		Couplings, Cat O-ring face seal	✓	
Wet-arm wipers/washers front and rear, intermittent front wiper	✓		Hoses, Cat XT™	✓	
Windows, rubber mounted		✓	Hydraulic oil cooler (swing-out)	✓	
Window, sliding (left and right sides)	✓		Hydraulic system, load sensing	✓	
Windows, with front guard		✓	Oil sampling valves	✓	
Windows, with heavy duty front guard		✓	3 rd function with Ride Control – Standard linkage – Logger linkage		✓
Windows, with full guards front, rear and sides		✓	Remote diagnostic pressure taps	✓	
ELECTRICAL AND LIGHTING			Ride control, 2V	✓	
Alarm, back-up	✓		Steering, load sensing	✓	
Alternator, 145-amp brushed	✓		LINKAGE		
Batteries (2), maintenance free 1,400 CCA	✓		Forestry		✓
External seat belt indicator light		✓	High lift		✓
Ignition key: start/stop switch	✓		Kickout, lift and tilt, automatic (adjustable in cab)	✓	
Lighting system: four halogen work lights (cab-mounted), two halogen roading lights (with signals), two halogen rear vision lights (hood-mounted)	✓		Quick coupler ready		✓
Lighting system: work lights, four additional halogen cab-mounted or;		✓	Z-bar, cast crosstube/tilt lever	✓	
Lighting system: work lights, two additional auxiliary front HI LED and two additional auxiliary rear LED cab-mounted, two LED work lights in the radiator grill, LED front turn signals, replacement of the standard four halogen cab-mounted work lights with four LED work lights		✓	STARTERS, BATTERIES, AND ALTERNATORS		
			Batteries (4), maintenance free 1,400 CCA With 240V Engine Coolant Heater		✓
			WORK TOOLS		
			Forks, pallet		✓
			Performance Series buckets		✓

(continued on next page)

982M Wheel Loader Standard and Optional Equipment

Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
COMPUTERIZED MONITORING SYSTEM			OTHER STANDARD AND OPTIONAL EQUIPMENT		
With following gauges:	✓		Auto idle shutdown	✓	
Speedometer/tachometer			Cat Autolube System		✓
Digital gear range indicator			Ecology drains for engine, transmission, and hydraulics	✓	
Diesel Exhaust Fluid (DEF) level			Ether aid ready	✓	
Temperature: engine coolant, hydraulic oil, transmission oil			Fenders, steel front with mud-flap/rear with extension	✓	
Fuel level			Fenders, roading		✓
With following warning indicators:	✓		Filters: fuel, engine air, engine oil, hydraulic oil, transmission	✓	
Regeneration			Fuel cooler	✓	
Temperature: axle oil, engine intake manifold			Fuel tank, fast fill		✓
Pressure: engine oil, fuel pressure hi/low, primary steering oil, service brake oil			Grease zerks	✓	
Battery voltage hi/low			Grill, airborne debris	✓	
Engine air filter restriction			Guard, power train	✓	
Hydraulic oil filter restriction			Hitch, drawbar with pin	✓	
Parking brake			Oil change, high-speed engine		✓
DEF low level			One-piece tilting hood with side and rear doors	✓	
Transmission filter bypass			Platform, window washing	✓	
			Precleaner, turbine		✓
			Precleaner, trash		✓
			Precleaner rain cap	✓	
			Service centers (electrical and hydraulic)	✓	
			Sight gauges: engine coolant, hydraulic oil, and transmission oil level	✓	
			Toolbox	✓	
			Vandalism protection caplocks	✓	
			Wheel chocks		✓
			OTHER CONFIGURATIONS		
			Aggregate handler		✓
			Forestry		✓

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

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

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