

428

Backhoe Loader



Proven Cat® Engine

Powered with a proven and reliable Cat® engine. There are two power rating options for the Tier 2 equivalent Cat 3054C engine: 68.5 kW and 74.5 kW. For those requiring the Tier 3 equivalent C4.4 engine, again there are two power rating options: 70 kW and 74.5 kW. All the options deliver superior performance with best in class fuel efficiency.

Improved Operator Comfort

Pilot hoe controls are an optional upgrade on your 428. These controls mounted on fully adjustable pods offer the operator finer controls whilst giving improved ergonomics and comfort.

Greater Lifting Performance

The option of a larger boom cylinder will give greater lifting performance on the back of the 428 machine.

Powershift Transmission

The 4 speed powershift transmission, improves operator comfort by utilizing the Power Shuttle Lever to shift gears. There is no floor-mounted gear shift lever, improving the already spacious work environment.

Excavator Style Boom

The Excavator Style Boom is iconic to the Cat backhoe loader (BHL). This gives the operator more dig depth and reach when working around obstacles meaning less repositioning of the machine is required.

Powerful and Efficient Hydraulics

The load sensing and closed center hydraulic system actively matches power and flow to the demand and delivers best in class fuel efficiency and better component life. Flow sharing valves provide greater control and precision to the operation.

Power Management Modes

The operator can choose between Eco Mode (only with Pilot Control option), Standard Mode or Standard Plus dependent on job and site conditions. Eco Mode will save the operator fuel, lowering their owning and operating costs, where Standard Plus mode will give more speed and power when time or tough ground conditions demand this.

Product Link™

Product Link™ comes as standard on the Cat BHL depending on local restrictions. Cat Product Link offers data like machine location, Service Meter Units (Hours) (SMU), etc.

428 Backhoe Loader Specifications

Engine

	428 Standard Offering Tier 2 Equivalent	428 Optional Offering Tier 2 Equivalent	428 Optional Offering Tier 3 Equivalent	428 Optional Offering Tier 3 Equivalent
Engine	3054C 68.5 kW Mechanical Turbo	3054C 74.5 kW Mechanical Turbo	C4.4 70 kW Mechanical Turbo Intercooled	C4.4 74.5 kW Mechanical – Turbo Intercooled
Ratings at 2,200 rpm				
Gross Power SAE J1995	69 kW/94 hp	75 kW/102 hp	71 kW/97 hp	76 kW/104 hp
Gross Power ISO 14396	68 kW/93 hp	74 kW/101 hp	70 kW/95 hp	75 kW/101 hp
Net Power Rating at 2,200 rpm				
SAE J1349	64 kW/87 hp	70 kW/95 hp	65 kW/88 hp	69 kW/94 hp
ISO 9249	65 kW/88 hp	71 kW/96 hp	65 kW/89 hp	70 kW/95 hp
Bore	105 mm	105 mm	105 mm	105 mm
Stroke	127 mm	127 mm	127 mm	127 mm
Displacement	4.4 L	4.4 L	4.4 L	4.4 L
Torque Rise (net)	38% @ 1,400 rpm	31% @ 1,400 rpm	37% @ 1,400 rpm	32% @ 1,400 rpm
SAE J1349 (net)	384 N·m	397 N·m	383 N·m	398 N·m
Power Rating Conditions				
No De-Rating Required Up To	2286 m	2286 m	2286 m	2286 m

• Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.

Transmission

Travel speeds of backhoe loader at full throttle, when equipped with 440/80-28 rear tires.

	Power Shuttle Transmission (Standard)	Powershift Transmission (Optional)	Auto-Shift Transmission Lock-Up Torque Converter (Optional)
Forward			
1st	5.6 km/h	5.9 km/h	5.9 km/h
2nd	9.2 km/h	9.5 km/h	9.5 km/h
3rd	21 km/h	20 km/h	12 km/h
4th	37 km/h	40 km/h	20 km/h
5th	—	—	27 km/h
6th	—	—	40 km/h
Reverse			
1st	5.6 km/h	5.9 km/h	5.9 km/h
2nd	9.2 km/h	12.4 km/h	12 km/h
3rd	21 km/h	27 km/h	27 km/h
4th	37 km/h	—	—
5th	—	—	—
6th	—	—	—

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Axle Ratings

Front Axle, AWD	
Static	12 000 kg
Dynamic	6000 kg
Rear Axle	
Static	13 000 kg
Dynamic	7000 kg

Weights*

Operating Weight (estimated) (70 kW)*	8206 kg
Operating Weight (maximum) (ROPS Capacity)	11 000 kg
Cab, ROPS/FOPS	STD
Auto-Shift Transmission	96 kg
Ride Control	15 kg
Air Conditioning	45 kg
MP bucket (1.03 m ³)	
with Fold-over Forks	860 kg
without Fold-over Forks	674 kg
Loader QC	185 kg
Extendible Stick (excludes front counterweight)	208 kg
Counterweights, Base	
Stackable, One	250 kg
Maximum	485 kg
Minimum Counterweight Recommendations – Standard Stick	Parallel Lift
Loader Bucket	
GP	115 kg
MP	0 kg
Minimum Counterweight Recommendations – Extendible Stick	Parallel Lift
Loader Bucket	
GP	485 kg
MP	0 kg
Total Gross weight not to exceed	11 000 kg

*Machine Configuration – standard LRC engine; standard stick hoe; standard cab with A/C; AWD standard shift transmission; 1.03 m³ MP loader bucket; 610 mm standard duty hoe bucket; front 340/80-18 and rear 440/80-28 tires; no counterweight; 80 kg operator; full fuel tank.

Hydraulic System

Type	Closed Center
Pump Type	Variable-Flow, Axial Piston
Pump Capacity @ 2,200 rpm	160 L/min
System Pressure	
Backhoe	250 Bar
Loader	250 Bar

Steering

Type	Front Wheel
Power Steering	Hydrostatic
2WD Cylinder, One (1) Double-Acting	
Bore	65 mm
Stroke	106 mm
Rod Diameter	40 mm
Axle Oscillation	1°
AWD Cylinder, One (1) Double-Acting	
Bore	65 mm
Stroke	106 mm
Rod Diameter	40 mm
Axle Oscillation	11°

Turning Circle

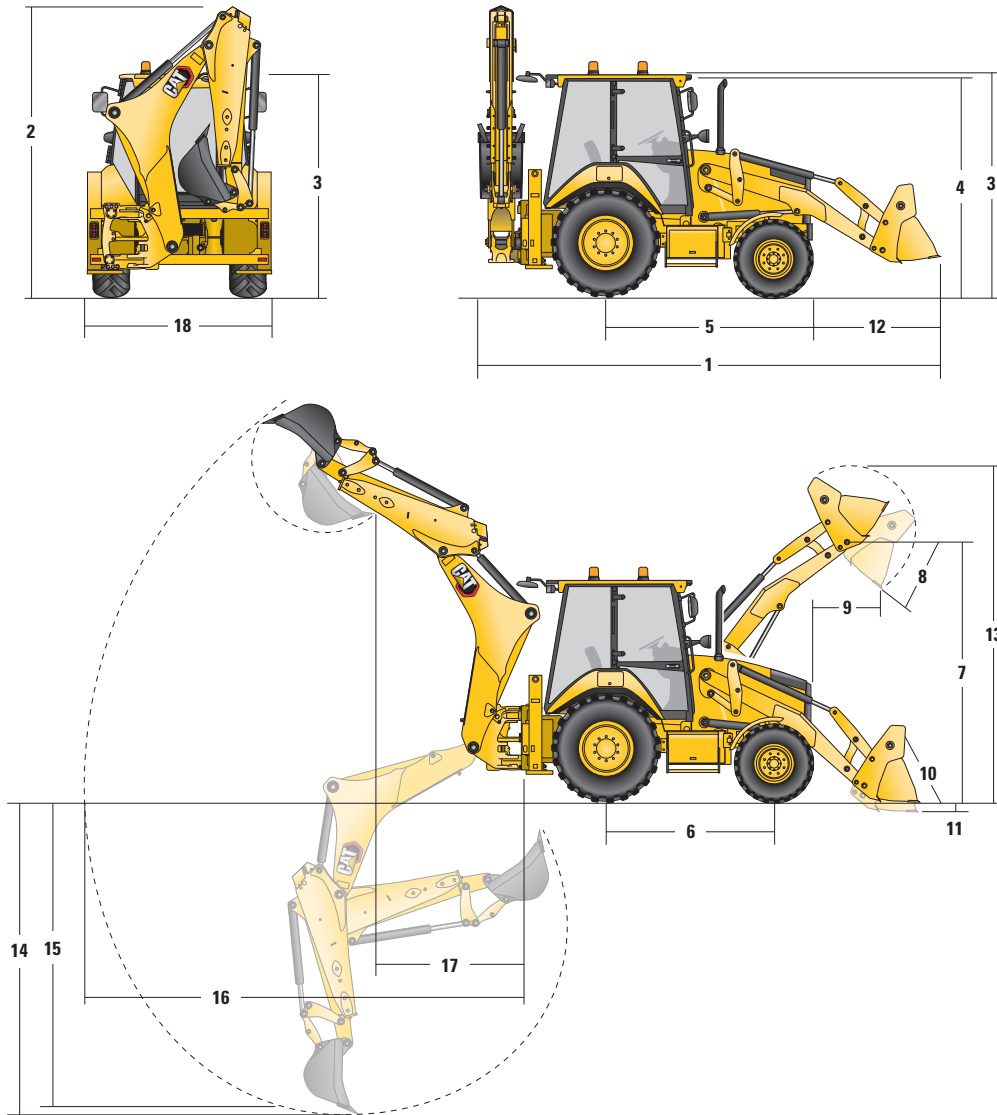
2WD/AWD (inner wheel not braked)	
Outside Front Wheels	8.205 m
Outside Widest Loader Bucket	10.745 m

Service Refill Capacities

Cooling System with A/C	18.0 L
Fuel Tank	160 L
Engine Oil with Filter	9.0 L
Diesel Exhaust Fluid	19.0 L
Transmission (Power Shuttle)	
AWD	18.0 L
Transmission (Powershift)	
AWD	19.0 L
Rear Axle	16.0 L
Planetaries	1.7 L
Front Axle (AWD)	11.0 L
Planetaries	0.7 L
Hydraulic System	95.0 L
Hydraulic Tank	42.0 L

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Machine Dimensions



	Parallel Lift Loader			Narrow Parallel Lift Loader		Parallel Lift Loader with QC	
	GP – 1.0 m ³	MP – 1.03 m ³	MP with Forks – 1.03 m ³	GP – 0.96 m ³	MP – 0.96 m ³	GP/QC – 1.0 m ³	MP/QC – 1.03 m ³
1 Overall Length in Rooding Position	5763 mm	5744 mm	5744 mm	5796 mm	5741 mm	5847 mm	5760 mm
Overall Transportation Length	5775 mm	5731 mm	5731 mm	5819 mm	5728 mm	5884 mm	5778 mm
2 Overall Transportation Height	3806 mm	3806 mm	3806 mm	3806 mm	3806 mm	3806 mm	3806 mm
Overall Width (excluding loader bucket)	2352 mm	2352 mm	2352 mm	2241 mm	2241 mm	2352 mm	2352 mm
3 Height to Top of Cab/Canopy	2822 mm	2822 mm	2822 mm	2822 mm	2822 mm	2822 mm	2822 mm
4 Height to Top of Exhaust Stack	2715 mm	2715 mm	2715 mm	2715 mm	2715 mm	2715 mm	2715 mm
5 Rear Axle Centerline to Front Grill	2705 mm	2705 mm	2705 mm	2705 mm	2705 mm	2705 mm	2705 mm
6 Wheelbase 2WD/AWD	2200 mm	2200 mm	2200 mm	2200 mm	2200 mm	2200 mm	2200 mm

Dimensions and performance specifications shown are for machines equipped with 340/80-18 front tires, 440/80-28 rear tires, standard cab, standard stick, 610 mm standard duty bucket, and 1.03 m³ MP loader bucket and standard equipment unless otherwise specified.

428 Backhoe Loader Specifications

Loader Bucket Dimensions and Performance

	Parallel Lift Loader			Narrow Parallel Lift Loader		Quick Coupler	
	GP – 1.0 m ³	MP – 1.03 m ³	MP with Forks – 1.03 m ³	GP – 0.96 m ³	MP – 0.96 m ³	GP – 1.0 m ³	MP – 1.03 m ³
Capacity (SAE rated)	1.03 m ³	1.03 m ³	1.03 m ³	0.96 m ³	0.96 m ³	1.03 m ³	1.03 m ³
Width	2406 mm	2406 mm	2406 mm	2262 mm	2262 mm	2406 mm	2406
Lift Capacity at Maximum Height	3728 kg	3488 kg	3303 kg	3738 kg	3505 kg	3509 kg	3278 kg
Lift Breakout Force	54 791 N	53 252 N	51 536 N	54 379 N	53 437 N	51 669 N	50 841 N
Tilt Breakout Force	54 292 N	59 845 N	58 900 N	51 336 N	60 142 N	48 223 N	53 400 N
Tipping Load at Breakout Point	6627 kg	6604 kg	6448 kg	6488 kg	6629 kg	6092 kg	6270 kg
7 Maximum Hinge Pin Height	3462 mm	3462 mm	3462 mm	3462 mm	3462 mm	3462 mm	3462 mm
8 Dump Angle at Full Height	45°	45°	45°	45°	45°	45°	45°
Dump Height at Maximum Angle	2755 mm	2780 mm	2780 mm	2723 mm	2782 mm	2669 mm	2749 mm
9 Dump Reach at Maximum Angle	805 mm	732 mm	732 mm	837 mm	731 mm	838 mm	784 mm
10 Maximum Bucket Rollback at Ground Level	38°	39°	39°	38°	39°	39°	38°
11 Digging Depth	99 mm	132 mm	132 mm	99 mm	131 mm	137 mm	118 mm
Maximum Grading Angle	113°	116°	116°	112°	116°	112°	114°
Width of Dozer Cutting Edge	N/A	2406 mm	2406 mm	N/A	2262 mm	N/A	2406 mm
12 Grill to Bucket Cutting Edge, Carry Position	1488 mm	1471 mm	1471 mm	1519 mm	1468 mm	1571 mm	1487 mm
13 Maximum Operating Height	4328 mm	4365 mm	4365 mm	4328 mm	4368 mm	4361 mm	4407 mm
Weight (does not include teeth)	438 kg	674 kg	860 kg	429 kg	676 kg	456 kg	693 kg

Backhoe Dimensions And Performance

	Standard Stick – 4.3 m	E-Stick Retracted – 4.3 m	E-Stick Extended – 4.3 m
14 Digging Depth, SAE Maximum	4298 mm	4301 mm	5292 mm
Digging Depth, Manufacturer's Maximum	4778 mm	4782 mm	5700 mm
15 Digging Depth, 2400 mm Flat Bottom	3915 mm	3919 mm	4987 mm
Digging Depth, 600 mm Flat Bottom	4255 mm	4259 mm	5254 mm
Digging Depth, 600 mm Flat Bottom, Manufacturer's	4753 mm	4758 mm	5700 mm
Reach From Rear Axle Centerline at Ground Line	6741 mm	6746 mm	7672 mm
16 Reach From Swing Pivot at Ground Line	5651 mm	5656 mm	6582 mm
Maximum Operating Height	5665 mm	5666 mm	6265 mm
Loading Height	3991 mm	4000 mm	4599 mm
17 Loading Reach	1690 mm	1639 mm	2501 mm
Swing Arc	180°	180°	180°
Bucket Rotation	205°	205°	205°
Stabilizer Spread	1894 mm	1894 mm	1894 mm
18 Stabilizer Overall Width	2352 mm	2352 mm	2352 mm
Stabilizer Spread, Transport Position	1894 mm	1894 mm	1894 mm
Bucket Dig Force	63 447 N	63 419 N	63 419 N
Stick Dig Force	36 232 N	36 899 N	26 976 N

428 Standard and Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
Cab ROPS and FOPS			Hydraulics		
Cab, Standard	✓		Variable Displacement Piston Pump	✓	
Canopy Plus		✓	Hydraulic Quick Disconnects		✓
Cab, Deluxe		✓	Side Shift Lock	✓	
Tires/Steering/Brakes			Hydraulic Oil Cooler	✓	
All Wheel Drive	✓		Hydraulic Lines, One Way		✓
100% Differential Lock	✓		Hydraulic Lines, Two Way		✓
Hydraulic Boosted Brakes	✓		Loader Kickout, Float	✓	
Tires 26 inch	✓		Loader Kickout, Return to Dig	✓	
Tires 28 inch		✓	Powered Side Shift		✓
Engine/Transmission			Ride Control		✓
Engine Cat 3054C 68.5 kW	✓		Continuous Flow		✓
Engine Cat 3054C 74.5 kW		✓	Programmable Auxiliary Flow		✓
Engine C4.4 70 kW		✓	Booms, Sticks and Linkages		
Engine C4.4 74.5 kW		✓	Stick Standard, 4.3 m	✓	
Battery, 750 CCA, Standard	✓		Stick Extending, 4.3 m		✓
Battery, 750 CCA, Heavy Duty		✓	Hoe Quick Coupler, Mechanical		✓
Hinged Radiator Pack	✓		Hoe Quick Coupler, Hydraulic		✓
Standard Mode		✓	Loader Quick Coupler, Hydraulic		✓
Standard + Mode		✓	Transport Lock, Swing	✓	
Engine Block Heater		✓	Transport Lock, Boom	✓	
Diff Lock	✓		Other Attachments		
Transmission Neutralizer	✓		Counterweight, 115 kg		✓
Transmission, Four Speed Manual	✓		Counterweight, 240 kg		✓
Transmission, Four Speed Powershift		✓	Counterweight, 460 kg		✓
Transmission, Six Speed Lock-Up Torque Converter		✓	Front Fenders		✓
Controls			Street Pads, Stabilizers		✓
Controls, Mechanical Levers	✓		External Tool Box	✓	
Controls, Pilot Joysticks		✓	Transport Tie Downs	✓	
Pattern Selector (ISO/SAE)		✓	Electrical		
Power Steering, Hydrostatic	✓		Product Link Cellular		✓
			Product Link Satellite		✓
			Reversing Alarm	✓	
			Stabilizer Alarm	✓	
			Beacon, Rotating		✓
			Beacon, Strobe		✓

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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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