914G
Wheel Loader

Bucket capacities	1.2 to 1.4 m^3
Operating weight to	7950 kg
Cat 3054 T Engine	
Gross power	73 kW/98 hp
Flywheel power	67 kW/90 hp

914G Wheel Loader

Sets the new standard for performance, responsiveness and operating comfort for machines in this class.

Operator Station

Ergonomically designed for total machine control in a comfortable, spacious environment. All controls, levers, switches and gauges are positioned to maximize productivity.

✔ *Pilot hydraulic controls provide low-*
✔ *effort, quiet operation. Full-length glass windshield with silicon joints enhances visibility.* **pg. 4-5**

Cat Hystat Power Train

✔ *Delivers a broader range of power and performance to the ground with less operator input than converter-driven*
✔ *transmissions. Cat 3054 T diesel engine provides reliable power and very low exhaust emissions.* **pg. 6-7**

Totally New Design

One of the first Caterpillar machines completely designed using state-of-the-art three-dimensional modeling computer technology. The results include a highly responsive hydrostatic transmission, exceptional machine balance and easier serviceability than ever before.

Modern Operator's Environment

Engineered using advanced virtual reality technology to provide unparalleled visibility and operator comfort. Ergonomic controls and seating adjust to any operator. Implement controls are l ow-effort pilot hydraulic for smooth, precise operation.

Exceptional Performance

The 914G hydrostatic transmission provides continuously variable, uninterrupted torque throughout the entire speed range for a highly efficient, more productive machine.

✔ *New feature*

Axles and Brakes

✔ *Caterpillar axles feature new enclosed, hydraulically-actuated disc brakes on both front and rear for better performance and easier operation.* **pg. 7**

Serviceability

The 914G is designed for quick, easy service and minimal maintenance.

✔ *Lift-open engine hood with pneumatically-assisted struts provides uncompromised access to engine and*

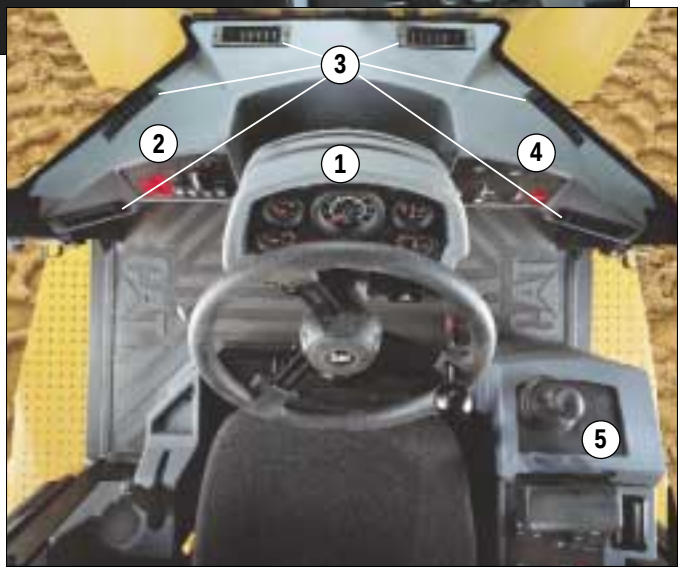
✔ *components. New cooling system offers improved cooling capacity, simplified service and extended service intervals.* ***pg. 8***

Operator Station

Ergonomical design emphasizes comfort, visibility and easy operation.

Operator Comfort. The G-Series cab design employed a powerful supercomputer using virtual reality to simulate the ideal operator environment. The result is remarkable peripheral visibility coupled with operators' most requested features. The 914G cab is a spacious work environment that promotes productive operation. Exceptional sound insulation and use of low-noise components make the Cat 914G cab one of the quietest in the industry.

Operators can customize the cab to their individual needs through the vast range of adjustments. The seat, tilt steering console and climate controls are a few of the many areas of adjustments that make the 914G the new leader in operator preference.



1 Tilt Steering Console
2 Warning Indicators and Light Controls
3 Multi-Port Ventilation
4 Windshield Wiper Controls and Status Indicators
5 Implement Controls

Low-Effort Operation. New pilot hydraulic controls give the 914G uncompromised ease of operation of lift, tilt, and quick coupler functions. A remote transmission control option adds a forward/neutral/reverse control switch (1) on the implement lever for easier operation and enhanced productivity.

Third and fourth function controls are also available for use with special attachments.

Hydrostatic, closed-center steering system with flow amplification provides fast or slow steering response, depending on the operational requirement.

More Seating Options. There is a wide choice of seat options. The Contour Series Seat, right, is the premium seat option and is designed for maximum comfort and fully-adjustable support. Ergonomically shaped seat cushions reduce pressure on the lower back and thighs, while allowing unrestricted arm and leg movement. Even the arm rest angle is adjustable.

Heated and air-suspension seats are among the other options to further enhance operator comfort.

Caterpillar® Hystat Power Train

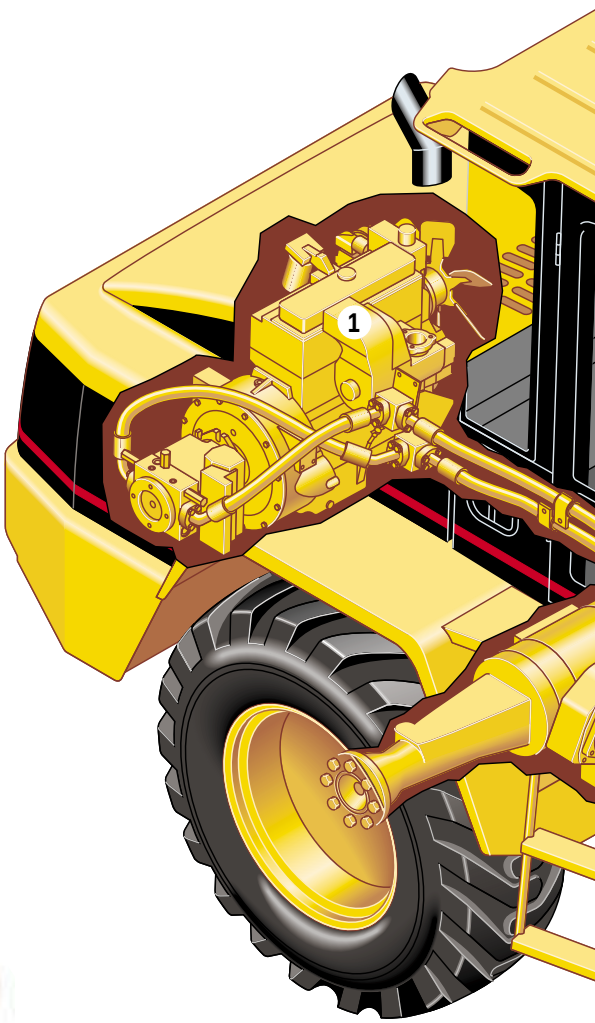
The Cat® hydrostatic power train provides dependable and smooth operation.

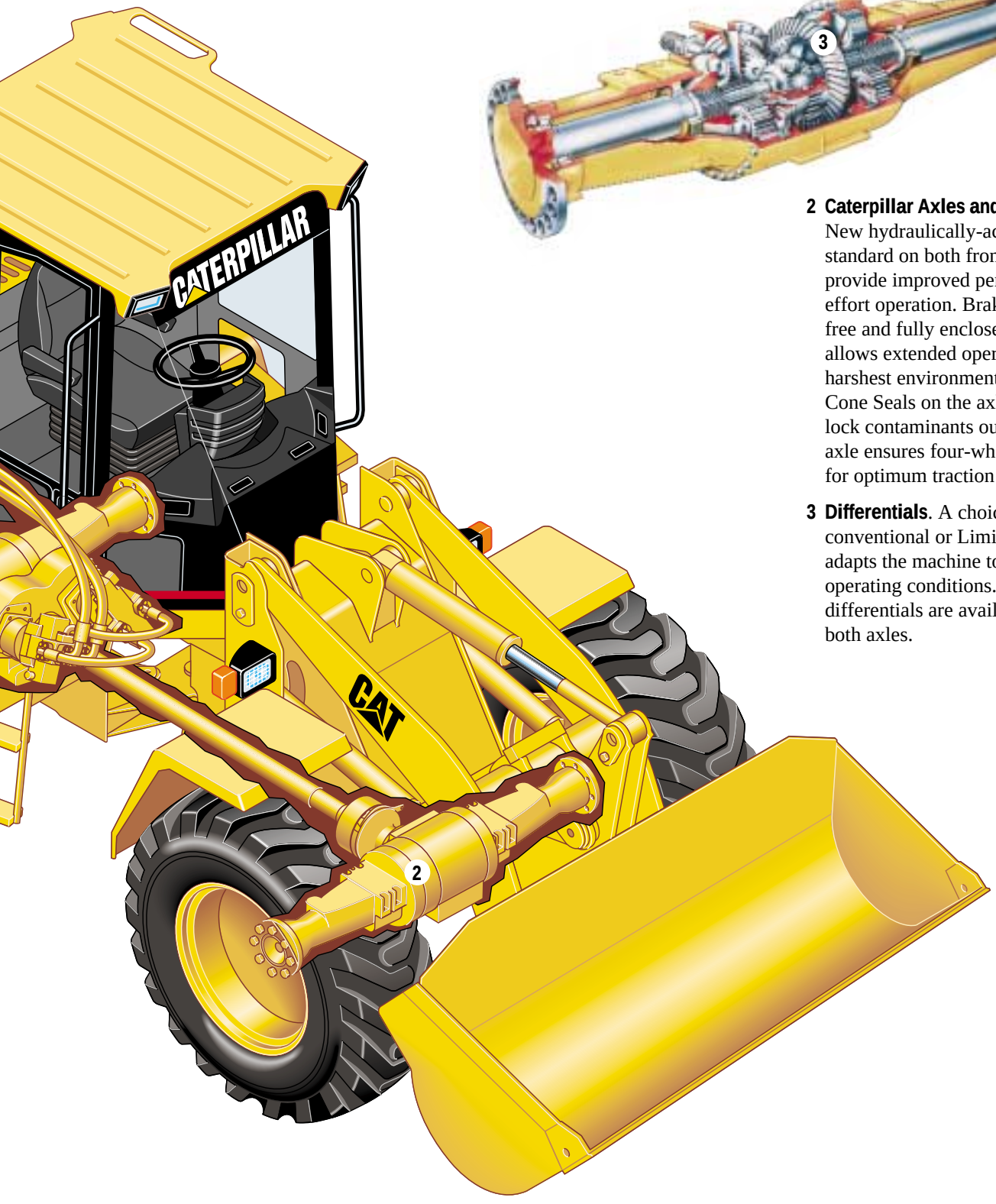
The 914G Hystat Power Train features a high-pressure closed-loop hydrostatic transmission. This transmission provides a broader range of power and performance to the ground, with less operator input, than conventional converter-driven transmissions. Advantages of the Cat Hystat Power Train include:

- Simple and smooth operation;
- Direct change of speed and direction;
- Stepless low speed variation without loss of power;
- Exceptional inching function for precise control;
- Hydrostatic braking reduces wear on mechanical brakes;
- Less heat generated when pushing against a pile of material;
- Higher working productivity;
- Highly reliable ... fewer parts than a mechanical transmission.

1 Caterpillar 3054 T Diesel Engine. This high-performance engine incorporates many of the same heavy-duty features that help make the larger Cat diesel engines the standard of the industry. It is designed for rugged, reliable operation while providing peak performance over a wide range of operating conditions. For added service life, the 3054 T has many rebuild features such as field-replaceable cylinder liners and replaceable valve guides and seats.

Low Emission Engine. The standard 3054 T is a very low emission engine designed not only to meet today's environmental standards, but also to meet future worldwide emission standards. It is one of the cleanest burning engines in its class.





2 Caterpillar Axles and Brakes. New hydraulically-actuated disc brakes, standard on both front and rear axles, provide improved performance and low-effort operation. Brakes are adjustment-free and fully enclosed. Enclosed design allows extended operation even in the harshest environments. Patented Duo-Cone Seals on the axle keep oil in and lock contaminants out. Oscillating rear axle ensures four-wheel ground contact for optimum traction and stability.

3 Differentials. A choice of standard conventional or Limited Slip differentials adapts the machine to a wide range of operating conditions. Limited Slip differentials are available on front, rear or both axles.

Buckets

Caterpillar's selection of general purpose and penetration buckets are an integral part of a machine designed to optimize performance.

Wide Choice of Buckets. Caterpillar offers a wide range of buckets to help match the machine to the job. General purpose and penetration buckets are available.

Reinforced construction that resists high load twisting and distortion. Integral spill plates help reduce spillage.
Choice of ground engaging tools includes:

- Bolt-on cutting edges
- Bolt-on teeth
- Bolt-on segments
- Weld-on flush-mounted teeth

Serviceability

More access and fewer maintenance requirements add up to unparalleled ease of service.

Quick Access. A tilt-up engine enclosure hood with dual pneumatically-assisted lift cylinders provides exceptional access to major power train components. All filters and service points are reachable from ground level.

Ease of Maintenance. The cooling system features a new trash-resistant radiator and a new oil cooler design:

- Oil cooler tilts out 35° for cooling system inspection and cleaning;
- Quick-release hydraulic oil cooler for fast, easy access;
- Extended Life Coolant/Antifreeze with 6000 hour change intervals.

Service features:

- Radial Seal air cleaner with service indicator;
- Battery access (engine hood);
- Ecology drain valves available;
- Electrical fuse access (right door);
- Ground level filter changes;
- Remote grease fittings;
- Visual fluid level checks:
  - hydraulic oil
  - coolant
  - windshield wiper fluid.

Engine

Caterpillar four-stroke cycle, four cylinder 3054 turbocharged diesel engine.

Ratings at 2200 rpm	kW	hp
Gross power	73	98

The following ratings apply at 2200 rpm when tested under the conditions for the specified standard:

Net power	kW	hp
ISO 9249	67	90
EEC 80/1269	67	90

Dimensions

Bore	100 mm
Stroke	127 mm
Displacement	4.0 liters

Exhaust Emissions

The Caterpillar 3054 T meets the current European and North American emission regulations, as well as the future proposed EU/EPA Off-Highway Construction Equipment regulations (ISO 8178).

Power rating conditions

- based on standard air conditions of 25°C and 99 kPa dry barometer.
- used 35° API gravity fuel having an LHV of 42,780 kJ/kg when used at 30°C (ref. a fuel density of 838.9 g/L).
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- no derating required up to 2286 m altitude.

Features

- direct-injection rotary fuel pump with individual adjustment-free injection valves.
- cast iron block with internally stiffened deep skirt design.
- field replaceable dry cylinder liners.
- replaceable valve guides and seats.
- large-diameter, hardened chrome-molybdenum steel crankshaft.
- three-ring controlled-expansion pistons lubricated from oil jets.
- helical steel front gear train.
- fuel priming pump and fuel/water separator are standard.
- gear-driven oil pump located in oil pan.
- gear-driven water pump.
- direct electric 24-volt starting and charging system with two heavy-duty 12-volt 900 CCA Caterpillar batteries and 60-amp alternator.
- thermal starting aid is standard for improved starting in extremely cold temperatures.

Transmission

Closed-loop hydrostatic system delivers high performance.

Single-path, variable-displacement pump and two variable displacement motors driving fixed ratio gear box on rear axle.

Max travel speeds with 17.5-25 tires:

Forward	km/h
Low	9
High	35
Reverse	
Low	9
High	35

Features

- single lever control for easy and precise control of direction changes.
- full power directional changes.
- HIGH/LOW speed switch for roading or working transmission modes. Full rimpull is available in either mode.
- inching function allows *momentary* travel speeds as low as zero with full engine rpm.
- optional creeper function allows *extended periods* of low travel speeds (zero to 9 km/h) with full engine rpm.
- optional remote transmission control adds a forward/neutral/reverse switch on the implement lever and directional indicators on the instrument cluster.

Axles

Fixed front, oscillating rear (±11°).

Features

- Caterpillar axle with fully-enclosed brakes and final drives.
- Patented Duo-Cone Seals between axle and housing.
- heat-resistant triple lip seal on input yoke.
- rear wheel can raise or drop a total of 350 mm.
- conventional differentials standard.
- Limited Slip differentials are optional on front, rear or both axles.
- rear axle trunnion has remote lubrication fitting.

Brakes

Meets the following standards: OSHA, SAE J1473 OCT 90, ISO 3450-1985.

Service brake features

- inboard oil-immersed disc brakes on front and rear axles are standard.
- completely enclosed and sealed.
- adjustment-free.
- dual pedal, low-effort hydraulic braking system.
- hydrostatic drive is variably neutralized during braking.
- hydrostatic system provides additional hydraulic braking capacity.

Parking brake features

- mechanical, shoe-type brake.
- mounted on drive line for positive manual operation.
- transmission is automatically neutralized when parking brake is applied.

Final Drives

Planetary final drives consist of ring gears and planetary carrier assemblies.

Features

- ring gears are pressed in and doweled into axle housing.
- carrier assemblies include planet gears with full-floating bronze sleeve bearings.
- high contact ratio gearset reduces noise levels during meshing.
- planetary reduction gears are inboard mounted for optimal protection and durability.

Loader Hydraulic System

Open-centered system. Pilot-operated hydraulic implement controls.

Implement system, fixed displacement pump	
Output at 2200 rpm and 6900 kPa with SAE 10W oil at 66°C	90 liters/min
Relief valve setting	24 550 kPa
Lift cylinders, double acting: bore and stroke	89 x 672 mm
Tilt cylinder, double acting: bore and stroke	102 x 400 mm

Hydraulic cycle time	Seconds
Raise	5.6
Dump	2.1
Lower, empty, float down	3.2

Features

- completely enclosed system.
- fixed displacement implement pump directly connected to engine output.
- low effort, pilot-operated controls.
- pilot shutoff valve disables implement functions for added safety.
- hydraulic couplings with O-Ring Face Seals.
- standard hydraulic oil cooler tilts out for easy cleaning of heat exchangers.
- Ride Control system available to reduce machine bounce when traveling.

Cab

ROPS is standard.

Features

- ROPS meets the following criteria:
  – ISO 3471-1980.
- also meets the following criteria for Falling Objects Protective Structure:
  – ISO 3449-1984.

Sound

The operator sound pressure level as measured according to the dynamic test procedure ISO 6396 is 74 dB(A). The exterior sound power level as measured according to the dynamic test procedure ISO 6395 or 95/27/EC is 73 dB(A).

Bucket Controls

Pilot-operated lift and tilt circuits.

Lift circuit features

- four positions: raise, hold, lower and float.
- can adjust automatic kickout from horizontal to full lift.

Tilt circuit features

- three positions: tilt back, hold and dump.
- can adjust automatic bucket positioner to desired loading angle.
- does not require visual spotting.

Controls

- low effort single-lever control of lift and tilt circuits.
- third and fourth function hydraulic circuits available with individual lever controls.
- controls can be locked for roading.

Steering

Full hydraulic power steering. Meets ISO 5010-1992.

Ratings

Minimum turning radius (over tire)	4748 mm
Steering angle, each direction	40°
Steering cylinders, two bore	63.5 mm
Hydraulic output at 2200 rpm and 6900 kPa	57 liters/min
Relief valve setting	21 700 kPa

Features

- center-point frame articulation.
- front and rear wheels track.
- dedicated fixed displacement steering pump provides flow at all engine and ground speeds.
- adjustable steering column.
- high-impact rubber steering stops.
- supplemental steering system available to meet roading regulations in various countries, and to meet ISO 5010.

Tires

Tubeless, nylon, loader design tires.

Choice of

- 15.5 - 25, 12PR (L-2).
- 15.5 - 25, 12PR (L-3).
- 15.5 - R25, radial (L-2 equivalent).
- 15.5 - R25, radial (L-3 equivalent).
- 17.5 - 25, 12 PR (L-2).
- 17.5 - 25, 12 PR (L-3).
- 17.5 - R25, radial (L-2 equivalent).
- 17.5 - R25, radial (L-3 equivalent).
- 17.5 - R25, radial (L-2/L-3 equivalent).

Note

In certain applications (such as load-and-carry work) the loader's productive capabilities might exceed the tires' tonnes-km/h capabilities. Caterpillar recommends that you consult a tire supplier to evaluate all conditions before selecting a tire model.

Service Refill Capacities

	Liters
Fuel tank	150
Cooling system	22
Crankcase	7
Transfer gearbox	
standard speed version	2.5
high speed version	4.0
Differentials and final drives	
front	15
rear	15
Hydraulic system (including tank)	100
Hydraulic tank	70

Engine Enclosure Hood

One-piece engine enclosure hood.

Provides open access to many service points. The hood is manufactured with a state-of-the-art material, Dicyclopentadiene (DCPD), which provides an excellent combination of impact resistance and durability.

The curved design of the engine enclosure provides unparalleled rear visibility as well as modern styling to the machine appearance.

Features

- impact resistant, rustproof.
- lockable latch.
- modern, stylish appearance.
- pneumatically-assisted struts.
- repairable.

Operating Specifications

		General Purpose Buckets						Penetration Buckets	
		With Bolt-On Cutting Edge		With Bolt-On Teeth, Segments		With Bolt-On Teeth		With Flush Mounted Teeth	
Rated bucket capacity	m^3	1.3	1.4	1.3	1.4	1.2	1.3	1.3	1.4
Struck capacity	m^3	1.1	1.2	1.1	1.2	1.0	1.1	1.1	1.2
Width	mm	2401	2401	2424	2424	2424	2424	2434	2434
Dump clearance at full lift and 45° discharge	mm	2659	2623	2667	2632	2715	2680	2680	2680
Reach at full lift and 45° discharge	mm	973	1008	964	1000	944	979	979	979
Reach at 45° discharge and 2130 mm clearance	mm	1331	1348	1282	1297	1259	1275	1287	1249
Reach with lift arms horizontal and bucket level	mm	1980	2030	1970	2020	1920	1970	1970	1970
Digging depth	mm	89	89	89	89	70	70	70	70
Overall length	mm	6229	6279	6328	6378	6310	6360	6358	6438
Overall height with bucket at full raise	mm	4390	4442	4390	4442	4390	4442	4442	4442
Loader clearance circle with bucket in carry position	m	10.34	10.37	10.42	10.45	10.42	10.45	10.44	10.49
Static tipping load straight*	kg	6098	6069	6059	6029	6169	6166	6183	6011
Static tipping load full 40° turn*	kg	5323	5295	5284	5256	5415	5387	5404	5232
Breakout force	kN	62.4	58.5	62.9	58.9	67.9	63.4	63.5	62.5
Operating weight	kg	7378	7391	7409	7422	7336	7349	7336	7500

* Static tipping and operating weights shown are for high-speed version 914G and include lubricants, full fuel tank, ROPS cab, 80 kg operator and 17.5 - R25 (L2 equivalent) tires.

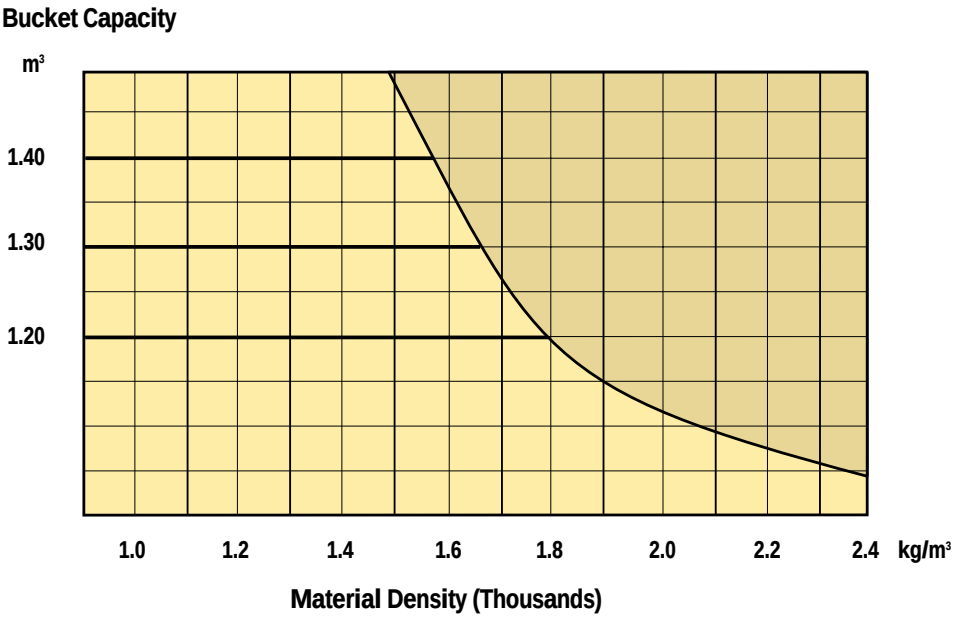
Typical material densities-loose

	kg/m³
Basalt	1960
Bauxite, Kaolin	1420
Clay	
natural bed	1660
dry	1480
wet	1660
Clay and gravel	
dry	1420
wet	1540
Decomposed rock	
75% rock, 25% earth	1960
50% rock, 50% earth	1720
25% rock, 75% earth	1570

	kg/m³
Earth	
dry, packed	1510
wet, excavated	1600
Granite	
broken	1660
Gravel	
pitrun	1930
dry	1510
dry, 6-50 mm	1690
wet, 6-50 mm	2020
Gypsum	
broken	1810
crushed	1600
Limestone	
broken	1540
crushed	1540

	kg/m³
Sand	
dry, loose	1420
damp	1690
wet	1840
Sand and clay	
loose	1600
Sand and gravel	
dry	1720
wet	2020
Sandstone	1510
Shale	1250
Slag	
broken	1750
Stone	
crushed	1600

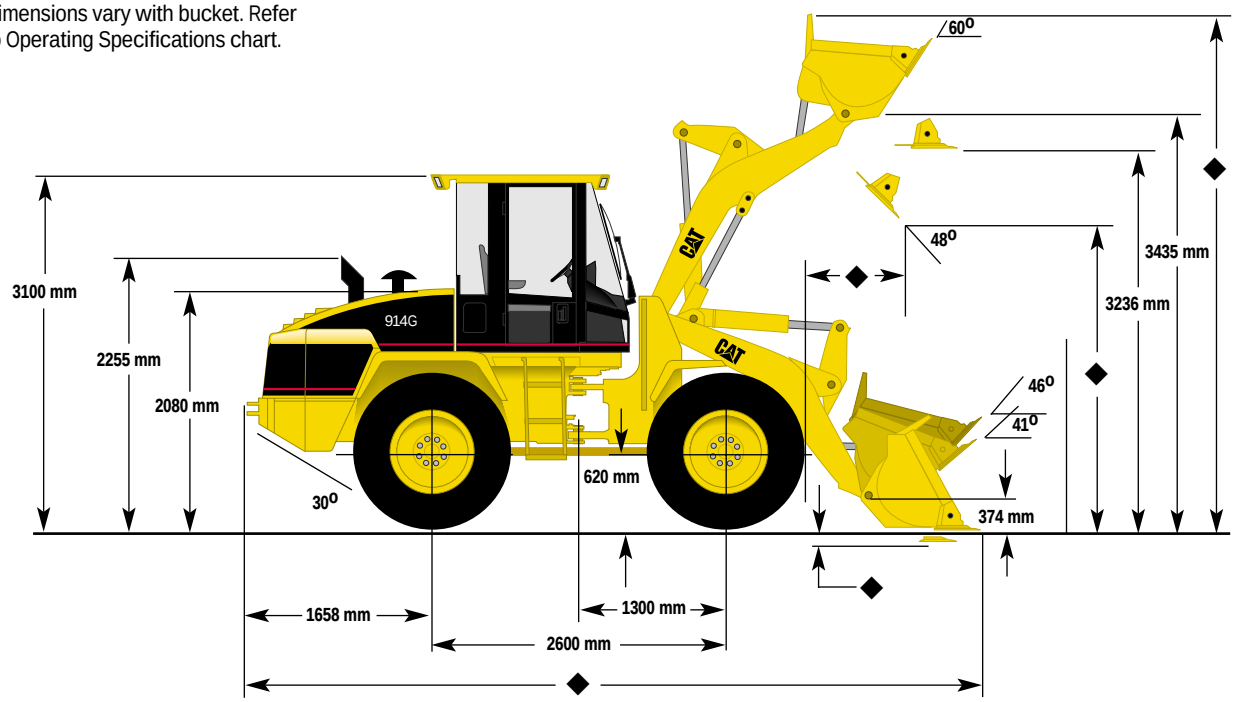
Bucket Size Selector



Dimensions with Bucket

All dimensions are approximate.

◆ Dimensions vary with bucket. Refer to Operating Specifications chart.



	Tread width	Width over tires	Ground clearance	Change in vertical dimensions
	mm	mm	mm	mm
15.5 - 25, 12 PR (L-2)	1800	2223	414	-42
17.5 - R25 (L-2 equivalent)	1800	2258	456	–

Supplemental Specifications

	Change in Operating Weight	Change in Articulated Static Tipping Load
	kg	kg
Air conditioner	+55	+71
Canopy, ROPS (less cab)	-199	-174
Counterweight, 150 kg	+152	+287
Ride control	+32	+6
Secondary steering	+30	+44
Tires & rims, 15.5 - 25, 12 PR (L-2)	-159	-99
Tires & rims, 15.5 - 25, 12 PR (L-3)	-78	-48
Tires & rims, 15.5 - R25, radial (L-2 equivalent)	-84	-52
Tires & rims, 15.5 - R25, radial (L-3 equivalent)	-36	-23
Tires & rims, 17.5 - 25, 12 PR (L-2)	-126	-78
Tires & rims, 17.5 - 25, 12 PR (L-3)	+12	+7
Tires & rims, 17.5 - R25, radial (L-3 equivalent)	+156	+96
Tires & rims, 17.5 - R25, radial (L-2/L-3 equivalent)	+95	+58

Standard Equipment

Standard equipment may vary. Consult your Caterpillar dealer for specifics.

Air cleaner, Radial Seal
Alarm, back-up
Alternator, 60-amp
Batteries, 12V, two
Brakes:
  Service – inboard, oil-immersed
  Parking – mechanical on drive line
Bucket control, single lever, pilot
Bucket positioner, automatic
Cab, ROPS (sound suppressed and pressurized) with:
  – ground level door release
  – heater/defroster
  – personal storage space
  – rear view mirrors (2 inside)
  – seat, adjustable suspension
  – seat belt (75 mm wide), retractable
  – tinted safety glass
  – two door cab
  – wiper and washer (front/rear)
Differentials, conventional (front/rear)
Electrical system, 24V
Engine, Caterpillar 3054 DIT
  (Low Emission Configuration)
Engine enclosure, lockable
Engine fuel priming pump
Fenders (front/rear)
Hitch, drawbar
Horn, front warning (electrical)
Hour meter, electric
Hydraulic oil cooler, tiltable
Implement control lever locks
Indicators:
  – air cleaner service
  – hydraulic oil level sight gauge
Instrumentation:
  – engine coolant temperature gauge
  – hydraulic oil temperature gauge
  – fuel level gauge
  – battery voltage gauge
Lift kickout, automatic
Lift/tilt kickout neutralizer
Lighting system:
  – brake lights
  – working lights (halogen):
    2 on front tower
    2 on front roof
    2 on rear roof
Loader linkage, Z-Bar design
Muffler
Radiator, unit core, expansion bottle
Starting aid, thermal
Steering stops, cushioned
Suction fan
Switch, key start & stop
Tilt steering console
Transmission, hydrostatic drive, two speed modes (HIGH/LOW)
Warning indicators:
  – parking brake
  – service brake oil pressure
  – hydraulic oil temperature
  – engine oil pressure
  – coolant temperature
  – hydraulic filter bypass
  – alternator

Optional Equipment

Optional Equipment may vary. Consult your Caterpillar dealer for specifics.

Air conditioner (R-134a refrigerant)
Batteries, heavy-duty (two)
Battery disconnect switch
Bottom guard, hystat motors
Buckets/ground engaging tools
Canopy, ROPS
Counterweight, 150 kg
Creeper control, transmission
Defroster, rear window, wired glass
Differential, Limited Slip
  – front axle and/or rear axle
Drain valves, ecological (hydraulic, engine, radiator)
Electrical accessories package (12V converter, accessory plug outlet, wiring)
Fenders, roading
Hydraulic third valve
Hydraulic fourth valve
Lights, auxiliary working
Low sound package
Mirrors, external (two)
Radio prep packages (12V):
  (speakers, antenna, converter, mounts)
Remote Forward/Neutral/Reverse Transmission Control
Ride control system
Rotating beacon, magnetic
Seats:
  – heated, fabric, w/parking brake alarm
  – Caterpillar Contour Series, fabric
  – Caterpillar Contour Series, fabric, air suspension
Sliding door window
Speedometer
Starting aid, engine coolant heater
Steering, secondary
Sun screen, rear window
Tires:
  – bias ply, 15.5 - 25 and 17.5 - 25
  – radial, 15.5 - 25 and 17.5 - 25
Tire rims, 1- and 3-piece
Tool box, lockable
Tool kit
Turn signals
Visor, sun
Wipers, intermittent control

914G Wheel Loader

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

HEHL5047-3 (1198) hr

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