

# 928G

Wheel Loader



Bucket capacities	2.0 - 2.2 m <sup>3</sup>
Operating weight to	12 287 kg
Cat® 3116 T Engine	
Gross power	102 kW/137 hp
Flywheel power	93 kW/125 hp

# 928G Wheel Loader

*Offering world class performance, value and reliability.*

## **Cat Power Train**

The 928G uses an all Caterpillar® power train to most effectively get maximum power to the ground. A Caterpillar

- ✓ *3116 T standard low-emission engine and Cat power shift transmission is performance-matched to the Cat torque converter and axles. pg. 4-5*

## **Operator Station**

Ergonomically designed for total control in a comfortable, spacious environment. All controls, levers, switches and gauges are positioned to maximize comfort and productivity. Sound levels are greatly reduced.

- ✓ *Two-door cab offers exceptional ventilation and easy entry and exit.*
- ✓ *Full-length glass windshield with silicone joints enhances visibility. pg. 6-7*

## **Buckets and Ground Engaging Tools**

Choose from two general purpose buckets or a penetration bucket. Designed and built by Caterpillar, these buckets feature rugged construction, integral spill plates and replaceable heel wear plates. Various ground engaging tools are available to match virtually all job conditions.

**pg. 8**

## ***Performance You Can Feel***

*More horsepower, higher torque rise, greater rimpull, larger and stronger hydraulics and a new bucket design make the 928G a solid performer. The best place you can evaluate this exceptional performance, of course, is from the operator's seat.*

## ***Value You Can See***

*A larger, intelligent-design operator station offers exceptional forward and peripheral visibility. Lower interior and exterior sound levels and larger fuel capacity make the 928G easier to operate. New, wider loader linkage enhances visibility to the bucket and provides increased reach and dump clearance for expanded applications. And unprecedented serviceability helps keep you working with the machine, rather than on it.*

## ***Reliability You Can Trust***

*Proven Cat power train and hydraulic components, exhaustive field testing and the world's best support system assure the 928G will provide maximum uptime.*

- ✓ *New feature*





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### Serviceability

Easily perform daily maintenance with ground-level access to all major service

- ✓ points. *New gull-wing doors provide excellent engine access and a swing-out fan simplifies radiator service.*

*Fuel capacity has increased nearly*

- ✓ *25 percent for fewer interruptions. And a new transmission sight gauge makes checking the fluid level easier.*
- pg. 9**

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### Environmentally Responsible Design

Quieter operation, lower engine emissions, less fluid disposal and cleaner service help you meet worldwide regulations and protect the environment. **pg. 10**

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### Cat '5 Star Customer Service'

Turns your investment into profit, from purchase to resale through:

- Equipment Management Services for optimum profit
  - Maintenance Services for equipment protection
  - Predictive Services for optimum availability
  - Reconditioning Services for lower repair cost
  - Your Caterpillar dealer for satisfaction and peace of mind
- pg. 11**



## Caterpillar® Power Train

*Rugged, dependable Cat components carefully matched to most efficiently get maximum rimpull to the ground and full power to the loader hydraulics.*

The 928G delivers fast response and aggressive performance, even in tough applications. The Caterpillar power train makes it possible, featuring a Cat 3116 T diesel engine and power shift transmission precision-matched to a Cat torque converter and rugged axles. The power train is carefully tested and balanced to provide optimum performance in actual operating conditions.

### Caterpillar Low Emission 3116 T Diesel Engine.

The six-cylinder, turbocharged 3116 T is one of the most developed and proven engines offered by Caterpillar.

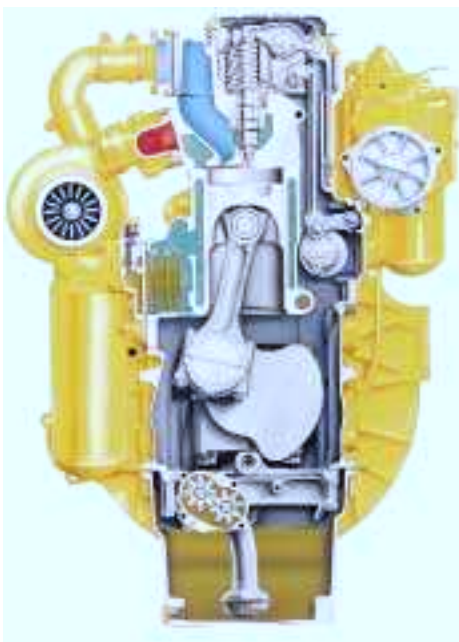
It has a strong reputation for reliability, durability and performance. Thanks to refinements to the cylinder head, pistons and turbocharger it's now cleaner running, too.

- The 3116 T delivers a full-rated net power of 93 kW (125 HP) at 2300 rpm. Machine weight-to-power ratio has improved for more aggressive operation... performance you can feel.
- Torque rise has increased to 46 percent at 1400 rpm. The result is more rimpull, greater lift force and faster cycle times.
- Improved intake and combustion chambers, new piston design and a new turbocharger significantly reduce emissions.
- New fuel-to-air ratio control system lowers smoke level.
- Meets all known current worldwide engine emission standards.
- Engine and cooling system are in separate compartments for quieter operation and easier service.

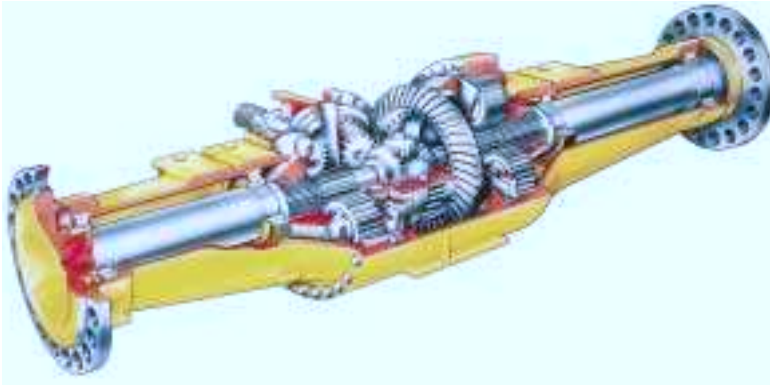
### Power Shift Transmission with Standard Autoshift.

Rugged, field-proven Caterpillar 4F/3R transmission uses heavy-duty components for durable and reliable operation. Full power shift capability and electronically-controlled Autoshift simplify operation. Plus, it's designed for easy service and rebuild.

- Robust design includes high-energy friction materials for better heat tolerance and thick reaction plates for better heat dissipation.
- High-contact ratio spur gears are precision ground and heat treated for quiet, reliable operation.
- Electronic Autoshift transmission increases operator efficiencies and optimizes machine performance. Operator can choose auto or manual operation.
- Dampened shifting provides smoother transition and reduced operator fatigue.
- Designed with fewer, simpler parts for more reliable operation.
- Simplified removal, disassembly and reassembly for overhaul and rebuild, making it easier to give the 928G a second or third life.







### **Caterpillar Axles and Brakes.**

Enclosed design allows extended operation, even in harsh environments.

- Heavy-duty design features stronger gears and bearings for durable performance.
- Duo-Cone Seals keep oil in and contaminants out.
- Oil-disc brakes are adjustment-free and fully enclosed.
- Optional front and rear Limited Slip differentials provide maximum traction in poor underfoot or uneven floor conditions.
- Oscillating rear axle helps assure four-wheel ground contact for optimum traction and stability.



## Operator Station

*Ergonomic design emphasizes comfort, visibility and easy operation.*



The 928G cab is a spacious and comfortable work environment that promotes safe, productive operation. The new cab includes larger windows, more interior room, better ergonomics, generous storage areas and a dramatic reduction in interior sound levels. The concept for this cab was developed using supercomputers and Virtual Reality. It all adds up to a more enjoyable and productive place to work.

**Access/Egress** is through the new two-door design. The left-hand door is for primary access/egress and the right-hand door provides secondary access/egress. Both doors open fully and lock flush against the side of the cab. Doors are available with either solid glass or sliding glass windows. Steps leading up to the cab are wide and angled out for secure footing.

**Larger Windows** improve visibility in all directions. Thirty-two percent more glass area\* opens the operator's view for remarkable forward and peripheral visibility. View to the bucket corners is better, too. And the stylish sloping hood allows the operator to see behind the machine better. The windshield and rear window are silicone-bonded for improved serviceability and to eliminate pillar obstructions. The rear window features a standard electric defroster.

\* compared to the former model.

**Low Sound Levels** are the result of several new designs. Interior sound measurements has been cut in half by use of a combination of improved sound insulation and the use of low-noise components. A new high-efficiency engine cooling system help reduce exterior sound levels by twenty percent. In all, the 928G is one of the quietest machines in its size class.

**Virtual Reality** played an important role in the development of the G-Series Cab. Visibility to critical areas like the bucket have been optimized. Lift arm spacing is wider and linkage geometry was modified to maximize visibility throughout the production cycle. As a result, you see more of the bucket when you need to see it.





**Low-effort Operation.** Pilot hydraulic controls give the 928G uncompromised ease of lift and tilt functions. A single lever control is standard – a two lever control is optional. A new remote transmission control option adds a forward/neutral/reverse control switch (1) on the single lever for easier operation and enhanced productivity. A padded, adjustable wrist rest helps reduce fatigue.

**Load-sensing, closed-center steering system** with flow amplification matches steering response to a wide variety of application requirements. The operator can position the steering console, along with all the machine's primary gauges, infinitely within the tilt range. With the stroke of a lever, the entire console lifts effortlessly out of the way for easy access or egress. Dual suspended brake pedals function as a brake and as a transmission neutralizer so the operator can maintain high engine rpm for full hydraulic flow. The suspended pedals are the best for ergonomics and also simplify cleaning the cab floor.

**Generous Storage Space** includes a lockable compartment for personal items, coat hook and special molded compartments designed to securely hold:

- lunchbox/cooler;
- Thermos vacuum bottle;
- cup or can.

**Customize The Cab** with a variety of available accessories:

- 12 VDC Converter for powering 12V electronics such as cellular phones, two-way radios and music systems.
- Radio prep packages for easy installation of a radio later.
- Sun visor for windshield.
- Roll-down sun screen for rear window.
- External mirror package.
- Auxiliary lighting packages.

**Seat Options** include the basic seat with fully adjustable fore/aft position, seatback angle, bottom cushion height, armrest angle and suspension stiffness. Seat cover is a combination of durable, breathable cloth and vinyl. Other seat options include:

- Cat Contour Series Seat which adds adjustable backrest and adjustable lumbar support.
- Cat Contour Series Seat with added air suspension, electrically adjustable.
- Basic seat with all vinyl covering.
- Basic seat, fabric covering, heated cushions (thermostatically controlled) and seat-activated parking brake warning.

All seats include a comfortable 75 mm wide retractable seat belt.



# Caterpillar Buckets

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

**Choice of Buckets.** Caterpillar offers two general purpose buckets and one penetration bucket that help maximize productivity of the 928G. Careful match of bucket design and machine operating characteristics provide the best digging, loading and carrying performance.

**Caterpillar General Purpose Buckets**, available in 2.0 m<sup>3</sup> and 2.2 m<sup>3</sup> capacities, are suitable for most general applications. Features include:

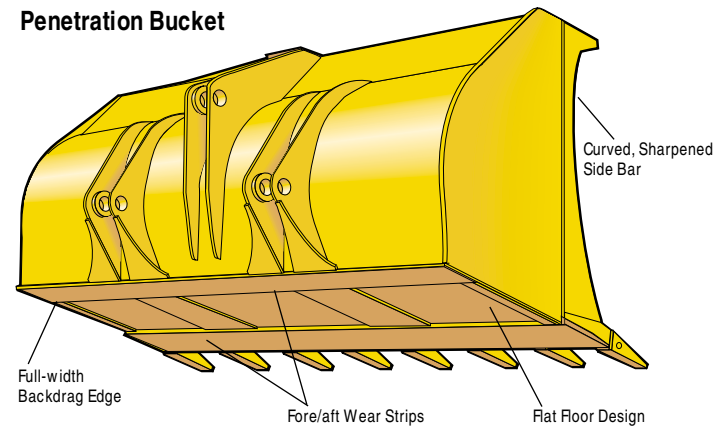
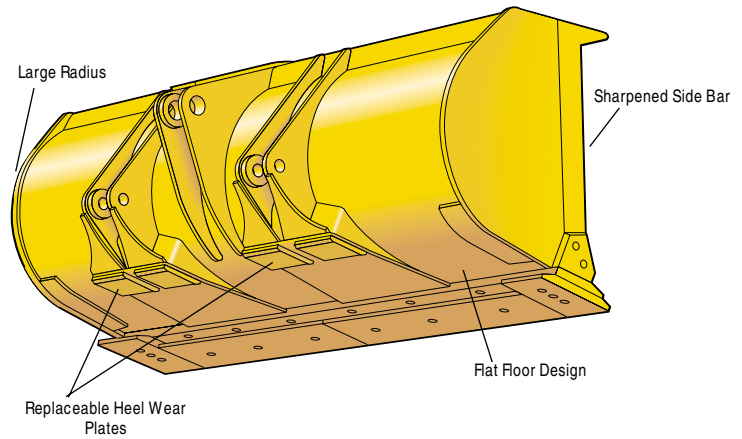
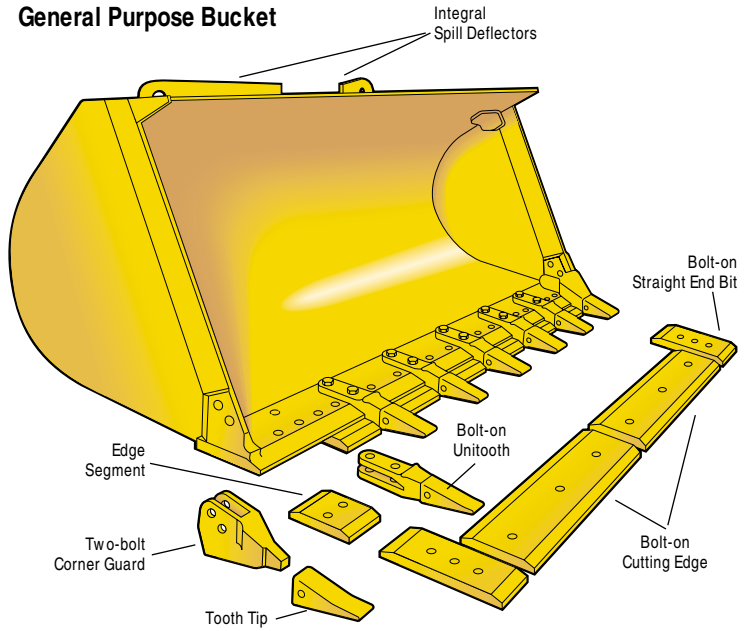
- New bucket design with longer, flatter floor and a larger radius... provides easier flow of material into the bucket.
- Patented Two-Bolt Corner Guard Cutting Edge System delivers superior wear resistance with a simple bolt-on system.
- Built-in, replaceable heel wear plates extend bucket life.
- Integral spill deflectors keeps material away from linkage.

**Ground Engaging Tools** include hardened steel cutting edges, choice of short or long teeth and a variety of tooth adapters. Properly selected, these tools optimize performance, improve load retention and extend the useful life of Caterpillar buckets.

**The Caterpillar Penetration Bucket** has a 2.1 m<sup>3</sup> capacity. It provides best results in materials that require moderate impact and breakout forces. Features include:

- Sharpened cutting edges and curved side bars for maximum penetration.
- Flush-mount weld-on teeth.
- Flat floor for easier loading.
- Full-width edge for backdragging.
- Fore/aft wear strips extend bucket life.

**For expanded machine versatility**, other special purpose buckets are also available. Contact your Caterpillar Dealer for details.





## Serviceability

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



**Easy, Wide Open Access.** Gull-wing engine enclosure doors with pneumatically-assisted lift cylinders effortlessly lift up for exceptional access to major power train components. All filters and service points are within easy reach.

**Simplified Routine Service.** All service points are accessible from ground level and are grouped in two locations. Sight gauges allow easy check of radiator coolant, hydraulic oil and transmission oil levels.

Swing-out Cooling Fan allows quick, easy cleaning and service of the radiator. The cooling fan is hydraulically driven and separate from the engine compartment. This innovative system features:

- Excellent access for cleaning radiator.
- High-efficiency fan and shroud.
- Very low-noise operation.
- Simple design for high reliability.
- Radiator and coolant hoses remain stationary.
- Standard hydraulic oil cooler.
- Uses new Cat Extended Life Coolant/Antifreeze for extended operation (up to 6000 h) between changes.

**Scheduled Oil Sampling (S•O•S) Valves** are factory installed for improved access to engine, transmission and hydraulic oils. S•O•S valves make oil sampling quicker, cleaner and provides the most representative oil sample for analysis.

Other service features include:

- Vertically-mounted spin-on filters for engine, transmission and hydraulic oil. Easy to reach and change without oil spill.
- Self-diagnostic transmission and data link allow quick, easy troubleshooting by service personnel.
- Driveshaft is permanently lubricated.
- Adjustment-free brakes.
- Adjustment-free engine fuel system.

## Environmentally Responsible Design

*Caterpillar machines not only help you build a better world, they help maintain and preserve the fragile environment.*



**More Performance Without More Machine.** The 928G is designed to provide more performance than ever before in a machine this size. That means more work done in a day, less fuel consumed and minimal impact on our environment.

**Low Exhaust Emissions.** The Cat 3116 T used in the 928G is a low emission engine designed to meet the world's toughest emission regulations. Refinements to the turbocharger, cylinder head and pistons improve fuel combustion so there are less emissions. Plus there is a new system that closely controls fuel-to-air ratio to help burn fuel efficiently and cleanly.

**Quiet Operation.** Not only does the operator notice a significant drop in machine sound levels inside the cab, but spectators outside hear less noise too. The 928G's new engine cooling system allows the engine to be fully enclosed so less engine noise escapes. The cooling fan, traditionally a major contributor to noise, is now hydraulically driven. The result is cool, quiet operation with less disturbance to the environment. With the optional sound suppression package, the 928G is even quieter.

**Ozone Protection.** To help protect the earth's ozone layer, the 928G's air conditioning unit uses only R-134a refrigerant which does not contain harmful chlorofluorocarbons (CFC's).

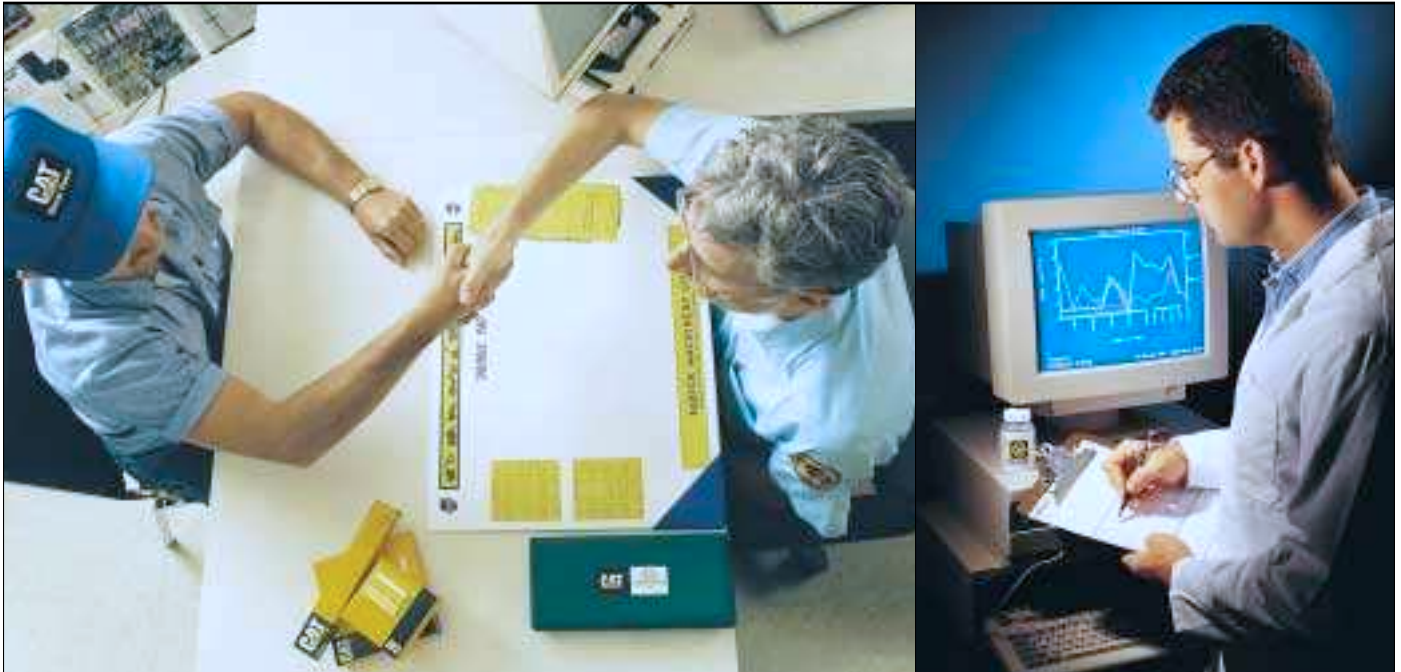
**Fewer Leaks and Spills.** Engine oil, transmission and hydraulic filters are positioned vertically and are easy to reach so they can be removed without spilling. Lubricant fillers and drains are also designed to minimize spills. Cat O-Ring Face Seals, XT Hose and hydraulic cylinders are all designed to help prevent fluid leaks that can rob machine performance and cause harm to the environment. Also, the new Cat Extended Life Coolant/Antifreeze provides extended service (up to 6000 hours) so there is less need for fluid disposal.

**Rebuildable Components.** Many of the major components used in the 928G are designed for rebuildability. That means you have high-quality, certified rebuilt replacement parts available to you at a fraction of the cost of new. Plus there is less scrap for disposal.



## Cat '5-Star Customer Service'

*Your Cat 928G comes with something unique: Cat '5-Star Customer Service' from your Cat dealer.*



**Cat '5-Star Customer Service' means peace of mind from the minute you contact your Cat dealer.**

By building a partnership with your Cat dealer, you can focus on your business instead of your equipment. Cat '5-Star Customer Service' brings together all the products, services and people from Caterpillar and the Cat dealer network and puts them firmly behind you. Count on them to help you maintain your competitive edge.

**Cat '5-Star Customer Service' includes Equipment Management Services to help you make a better business decision.**

We'll assist you in selecting the right Cat equipment to suit your need, to optimize productivity. And we'll help you make smarter decisions, assist you with machine selection, purchasing or renting options, financing, and projected owning and operating costs.

**Maintenance Services that enable you to maximize machine availability and performance.**

Every Cat dealer has a wide choice of maintenance products and services to make sure your equipment achieves maximum performance for the lowest possible cost.

**Predictive Services to anticipate problems.**

By anticipating potential problems and preventing unscheduled repairs, Cat Predictive Services make sure that your equipment is always up and ready to run – because maximizing uptime means maximum earning capacity.

**Reconditioning Services for a wider choice of repair alternatives.**

Caterpillar factory-reconditioned parts and components get your equipment back on the job in the minimum of time and with lower repair costs, contributing to reduced operating costs and a more efficient operation.

**Off-the shelf availability of genuine Cat parts.**

Genuine parts, together with highly experienced, Cat-trained specialists make sure every repair is right first time and your machine is back earning its keep in the shortest possible time.

**Cat '5-Star Customer Service' is our commitment to combine outstanding equipment and services to give you the most cost effective solutions for your business.**

Caterpillar and Cat dealers

## Engine

Caterpillar four-stroke cycle, six cylinder 3116 T turbocharged diesel engine.

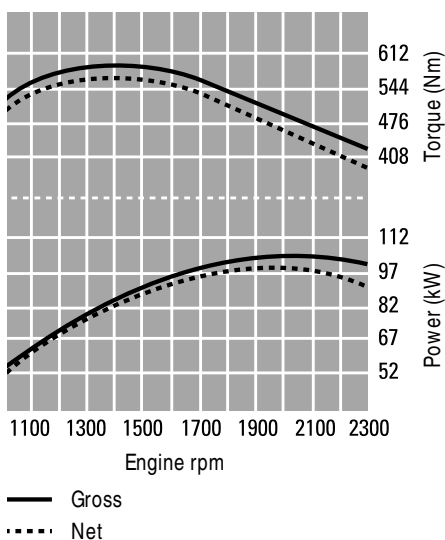
Ratings at 2300 rpm	kW	hp
Gross power	102	137

The following ratings apply at 2300 rpm when tested under the conditions for the specified standard

Net power	kW	hp
ISO 9249 (1989)	93	125
EEC 80/1269	93	125

### Dimensions

Bore	105 mm
Stroke	127 mm
Displacement	6.6 liters



### Exhaust Emissions

The Caterpillar 3116 T meets the current European and emission regulations.

### Power rating conditions

- net power advertised is the power available at the flywheel when the engine is equipped with air cleaner, fan, muffler and alternator.
- no derating required up to 2286 m altitude.

### Features

- direct-injection fuel system with adjustment-free unit injection.
- three-ring aluminum-alloy pistons, cam-ground, tapered and lubricated by oil spray.
- two alloy-steel valves per cylinder.
- tapered connecting rods.
- uniflow cylinder head design with integrally-cast intake manifold.
- cast iron block with internally stiffened deep-skirt design.
- induction-hardened, forged crankshaft.
- internal fuel, oil and water passages instead of external lines.
- gear-driven power steering pump.
- direct electric 24-volt starting and charging system with two 12-volt 700 CCA Caterpillar maintenance-free batteries and 50-amp alternator.
- air intake heater and heavy-duty starting system are available.

## Transmission

Caterpillar transmission with four forward, three reverse speed ranges and full power shift capability.

Electronically-controlled Caterpillar countershaft transmission with full on-the-go directional and speed change capability. Standard autoshift control provides either manual or automatic shift control. An optional remote transmission control switch is available for forward/neutral/reverse from the implement lever. It includes directional indicators on the instrument cluster.

### Max travel speeds (20.5-25 tires):

Forward	km/h
1	7.6
2	12.0
3	24.6
4	36.7
Reverse	km/h
1	7.6
2	12.0
3	24.6

### Features

- high-energy friction materials and thick reaction plates for better tolerance of heat.
- high-contact ratio spur gears are precision ground and heat treated for quiet, reliable operation.
- electronic autoshift is standard.
- button on implement control lever allows downshifting on demand.
- dampened shifting provides smoother transitions.



## Axles

Fixed front, oscillating rear ( $\pm 11^\circ$ ).

### Features

- Caterpillar axle with fully-enclosed brakes and final drives.
- patented Duo-Cone Seals between axle and housing.
- rear wheel can raise or drop a total of 480 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:  
ISO 3450-1996.

### Service brake features

- inboard oil-immersed disc brakes on front and rear axles are standard.
- completely enclosed and sealed.
- adjustment-free.
- separate circuits for front and rear.
- dual pedal braking system.
- switch in cab allows operator to select automatic transmission neutralizer which activates during braking.
- brakes are fully integrated with hydraulic system, no air system required.

### Secondary brake features

- Indicator light alerts operator if brake pressure drops.
- continually-charged nitrogen accumulators provide stopping power after loss of engine power.

### Parking brake features

- mechanical, shoe-type brake.
- mounted on drive line for positive manual operation.
- application of parking brake neutralizes the transmission.

## 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 2438 rpm and 6900 kPa with SAE 10W oil at 66°C	151.5 liters/min
Relief valve setting	24 800 kPa
Lift cylinders, double acting: bore and stroke	120.6 x 685 mm
Tilt cylinder, double acting: bore and stroke	127 x 550 mm

### Hydraulic cycle time

	Seconds
Raise	6.1
Dump	1.2
Lower, empty, float down	2.8
Total	10.1

### Features

- fixed displacement vane-type implement pump.
- 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 3471-1994.
- also meets the following criteria for Falling Objects Protective Structure:
  - ISO 3449-1992.

### Note

The operator sound pressure level in the cab according to 95/27/EC is 73 dB(A) with closed door and windows (cabfan on high speed). As manufactured by Caterpillar, this machine's exterior sound power level meets the criteria spelled out in the European Directives noted on the certificate of conformance and the accompanying labeling.

## Tires

Tubeless, nylon, loader design tires.

A wide range of brand and type of tires in the following sizes are available:

- 17.5 R 25
- 20.5 R 25
- 555/70 R 25

Please consult your Cat dealer for any special tires.

### 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.

## Steering

Full hydraulic power steering.  
Meets ISO 5010-1992.

### Ratings

Minimum turning radius: (over tire)	5233 mm
Steering angle, each direction:	40°
Steering cylinders, two: bore	69.9 mm
Hydraulic output at 2438 rpm and 7000 kPa	104 liters/min
Relief valve setting	20 700 kPa

### Features

- center-point frame articulation.
- front and rear wheels track.
- variable displacement piston pump provides steering power at all engine and ground speeds.
- tilt steering console.
- high-impact rubber steering stops.
- secondary steering system available to meet roading regulations in various countries, and to meet ISO 5010.

## 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

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

## Service Refill Capacities

	Liters
Fuel tank	230
Cooling system	40
Crankcase	20
Transmission	34
Differentials and final drives:	
front	26
rear	25
Hydraulic system (including tank)	125
Hydraulic tank	70



# Operating Specifications

		General Purpose Buckets						Penetration Bucket
		With Bolt-On Cutting Edge		With Bolt-On Teeth and Segments*		With Bolt-On Teeth*		With Flush Mounted Teeth*
Rated bucket capacity	m <sup>3</sup>	2.0	2.2	2.0	2.2	1.9	2.1	2.1
Struck capacity	m <sup>3</sup>	1.7	1.9	1.7	1.9	1.6	1.8	1.8
Bucket width	mm	2549	2549	2549	2549	2549	2549	2594
Dump clearance at full lift and 45° discharge	mm	2882	2845	2882	2845	2950	2913	2913
Reach at full lift and 45° discharge	mm	938	975	938	975	904	941	941
Reach at 45° discharge and 2130 mm clearance	mm	1466	1485	1409	1426	1376	1392	1403
Reach with lift arms horizontal and bucket level	mm	2264	2316	2264	2316	2192	2244	2244
Digging depth	mm	83	83	83	83	58	58	58
Overall length	mm	7255	7307	7255	7307	7163	7215	7215
Overall height with bucket at full raise	mm	4974	5073	4974	5073	4974	5073	5060
Loader clearance circle with bucket in carry position	mm	11 562	11 592	11 690	11 720	11 690	11 720	11 702
Static tipping load, straight	kg	9442	9285	9273	9116	9361	9294	9285
Static tipping load, full 40° turn	kg	8224	8081	8054	7913	8145	8081	8072
Breakout force	kN	115	109	114	107	124	116	117
Operating weight	kg	11 913	11 963	12 047	12 097	11 962	12 012	12 034

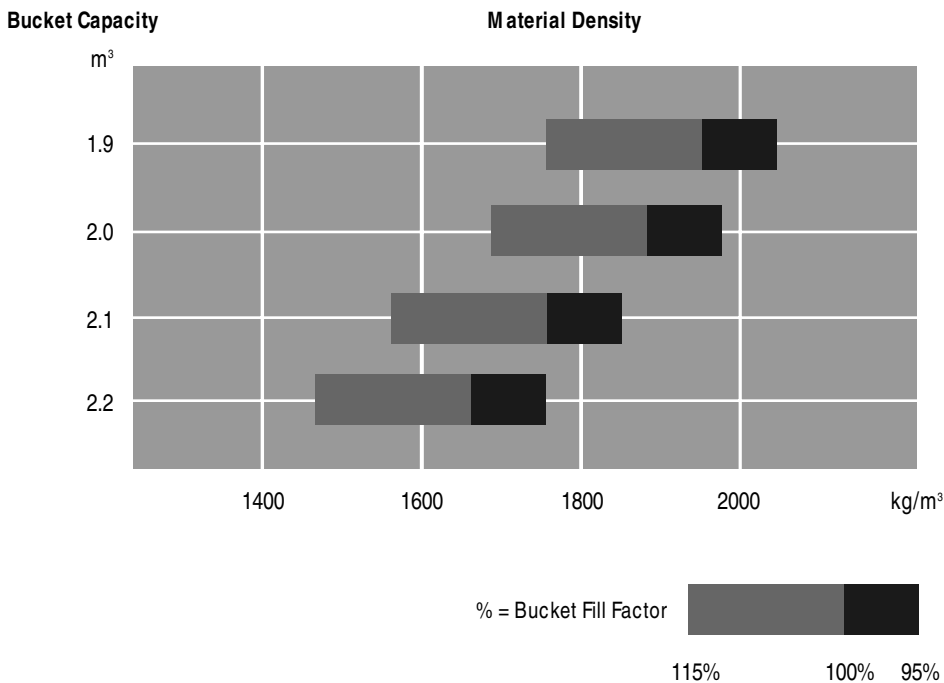
Specification shown include: optional counterweight, full fuel tank, 80 kg operator, ROPS cab, standard lubricants, 20.5 R25 XHA L-3 tires, secondary steering, sound suppression.

\* Dimensions are measured to the tip of the bucket teeth to provide accurate clearance data. SAE standards specifies the cutting edge.

## Typical material densities-loose

	kg/m <sup>3</sup>		kg/m <sup>3</sup>		kg/m <sup>3</sup>
Basalt	1960	Granite		Sand and clay	
Bauxite, Kaolin	1420	broken	1660	loose	1600
Clay		Gravel		Sand and gravel	
natural bed	1660	pitrun	1930	dry	1720
dry	1480	dry	1510	wet	2020
wet	1660	dry, 6-50 mm	1690	Sandstone	1510
Clay and gravel		wet, 6-50 mm	2020	Shale	1250
dry	1420	Gypsum		Slag	
wet	1540	broken	1810	broken	1750
Decomposed rock		crushed	1600	Stone	
75% rock, 25% earth	1960	Limestone		crushed	1600
50% rock, 50% earth	1720	broken	1540		
25% rock, 75% earth	1570	crushed	1540		
Earth		Sand			
dry, packed	1510	dry, loose	1420		
wet, excavated	1600	damp	1690		
		wet	1840		

## Bucket Size Selector

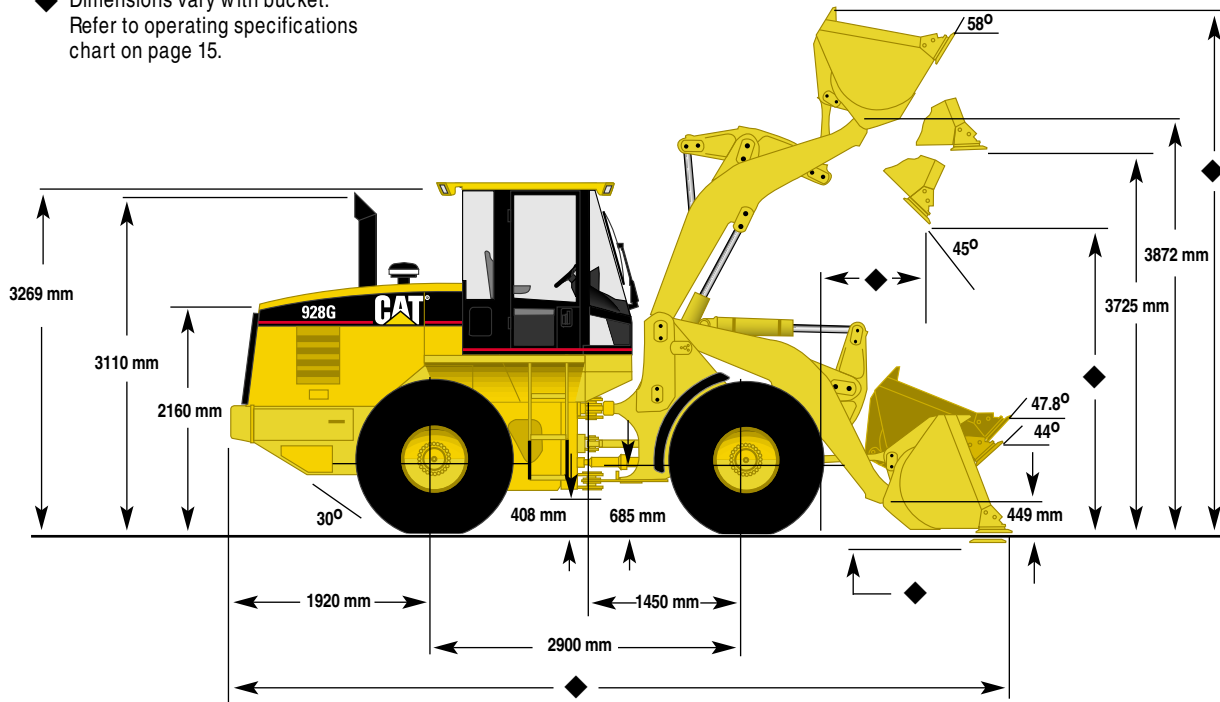




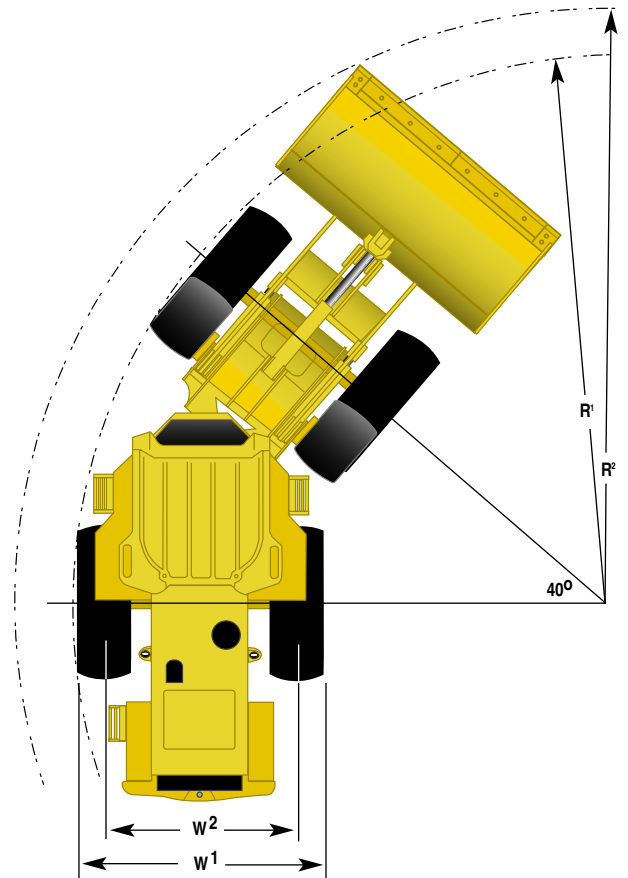
# Dimensions with Bucket

All dimensions are approximate.

◆ Dimensions vary with bucket.  
Refer to operating specifications  
chart on page 15.



	17.5 - 25	20.5 - 25
	mm	mm
Tread width over tires (W <sup>1</sup> )	2427	2537
Tread width (W <sup>2</sup> )	1950	1950
Change in vertical dimension	-68	-
Minimum turning radius		
Over tire (R <sup>1</sup> )	5228	5233
Over bucket (R <sup>2</sup> )	see chart on page 15	
Steering angle, each direction	40°	40°



## Standard Equipment

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

Air cleaner, dry type	Counterweight	Lighting system:
Alarm, back-up	Differentials, conventional (front/rear)	– brake lights
Alternator, 50-amp	Driveshaft, lubed for life	– directional, front/rear
Antenna, for radio	Electrical system, 24V	– working lights (halogen, flood):
Antifreeze/coolant, extended-life, protects to minus 36°C	Engine, Caterpillar 3116 T (Low Emission Diesel)	2 on front tower
Batteries, maintenance-free, heavy-duty 900 CCA, 12V, (2)	Engine enclosure, lockable	2 on front roof
Brakes:	Engine fuel priming pump	2 on rear roof
Service – enclosed, sealed	Fenders (front/rear)	Loader linkage, sealed Z-Bar design
Parking – mechanical on drive line	Hitch, drawbar	Load-sensing steering system
Bucket positioner, automatic	Horn, front warning (electrical)	Muffler
Cab, ROPS (sound suppressed and pressurized) with:	Hour meter, electric	Radiator, unit serviceable
– ground level door release	Hydraulic diagnostic connectors	Receptacle, for beacon light
– heater/defroster	Hydraulic oil cooler	Steering stops, cushioned
– rear window defroster, electric	Hydraulic system, 2-valve, 1-lever	Swing-out, hydraulically-driven fan
– personal storage space, cup holder	Implement control lever locks	Switch, key start and stop
– lighter	Indicators:	Torque converter
– coat hook	– air cleaner service	Transmission, 4F/3R, autoshift, single lever control and kickdown button
– rear view mirrors (2 inside)	– hydraulic oil level sight gauge	Vandalism protection, lockable service points
– tilt steering console	– transmission oil level gauge	Warning indicators:
– seat, adjustable suspension (fabric or vinyl)	– coolant level	– alternator
– seat belt, retractable, 75 mm	Instrumentation:	– coolant temperature
– tinted safety glass	– engine coolant temperature gauge	– engine oil pressure
– two door cab, fixed glass	– hydraulic oil temperature gauge	– parking brake
– wiper and washer, 2-speed, front/rear, with intermittent control	– torque converter oil temp. gauge	– service brake oil pressure
	– fuel level gauge	– transmission oil temperature
	Lift kickout, automatic	
	Lift/tilt kickout neutralizer	

## Optional Equipment

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

Air conditioner (R-134a refrigerant)	Hydraulic control, two lever	Seats:
Alternator, heavy duty, 70-amp	Hydraulic oil cooler, heavy-duty	– Caterpillar Contour Series, fabric
Antifreeze/coolant, extended-life, protects to minus 50°C	Hydraulic third valve	– Caterpillar Contour Series, fabric, with air suspension
Batteries, 900 CCA, for cold weather starting (two)	Lights:	Sliding door windows, (left and right)
Beacon light, rotating, magnetic-mount	– directional, front/rear	Sound suppression package
Buckets/ground engaging tools	– flood (auxiliary, cab-mounted)	Starting aids:
Canopy, ROPS	Load check valves (dealer-installed)	– engine coolant heater, 120V
Counterweight, 250 kg	Mirrors, external (two)	– air intake heater
Differential, Limited Slip	Radio prep packages:	Steering, secondary
– front axle and/or rear axle	– for 12V installation, includes speakers, cable, mounting bracket, hardware, converter, and	Sun screen, rear
Differential, NoSpin, rear axle only	accessory plug. Radio not included	Visor, sun (front)
Electrical accessories package (12V converter, accessory plug outlet, wiring)	– for 24V installation, same as above without converter or accessory plug.	Wipers and washer with intermittent control, front and rear
Fenders, roading	Rear window defroster, electric	
Guards:	Ride control system	
– crankcase		
– power train		
– vandalism protection (for use with ROPS canopy)		

## Supplemental Specifications

	Change in Operating Weight	Change in Articulated Static Tipping Load
	kg	kg
Air conditioner	+48	+56
Canopy, ROPS (less cab)	-198	-182
Counterweight, 250 kg (removal)	-252	-421
Guard, crankcase	+17	+24
Guard, power train	+58	+56
Ride control	+41	+20
Secondary steering (removal)	-42	-57



# 928G Wheel Loader

HEHL5214-1 (0299) hr

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

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