928Gz

Wheel Loader

Engine		
Model	Cat® 3056E DIT ATAAC	
Rated Net Power*	107 kW	143 hp
Maximum Net Power*	115 kW	155 hp
Buckets		
Bucket Capacities	2.0 m^3 – 2.3 m^3	2.6 yd^3 – 3.0 yd^3
Weights		
Operating Weight	12 310 kg	27,140 lb

* SAE J1349

928Gz Wheel Loader

Offering world class performance, value and reliability.

Caterpillar® Power Train

The 928Gz uses a Caterpillar power train for reliable, long life. The Caterpillar 3056E DIT ATAAC six-cylinder engine with Cat power shift transmission is performance-matched to the torque converter and axles for smoother performance and greater operator comfort. **pg. 4**

Operator Station

✔ The operator station is ergonomically designed to create a comfortable work area. Easy-to-use machine controls and a new gauge console reduce operator fatigue and increase efficiency and productivity. **pg. 6**

Hydraulic System

Hydraulic system offers advanced load-sensing features, fast loading cycles, easy reconfiguration and exceptional ride control. **pg. 8**

Environmentally Responsible Design

✔ Quiet operation, low engine emissions, less fluid disposal and clean, easy servicing help you meet worldwide regulations and protect the environment. **pg. 12**

Complete Customer Support

Caterpillar dealers offer unmatched customer support with excellent warranty programs and fast parts availability, resulting in maximum uptime and minimum repair costs. **pg. 13**

The 928Gz delivers power and versatility to meet a wide range of job applications. This tough, dependable machine is designed to help you work more productively and profitably.

Caterpillar Buckets

Caterpillar buckets feature rugged construction, integral spill plates and replaceable heel wear plates. **pg. 9**

Serviceability

Perform daily maintenance with easy ground-level access to all major service points. Gull-wing doors provide excellent engine access and a swing-out fan simplifies radiator service. **pg. 10**

Owning & Operating Costs

✔ Extended service intervals, an advanced electronic warning system, lower fuel consumption and faster cycle times save you time and money. **pg. 11**

✔ *New Feature*

Caterpillar Power Train

Rugged, dependable Cat components deliver maximum rimpull to the ground and full power to the loader hydraulics.

Caterpillar Engine. The six-cylinder 3056E Direct Injection Turbocharged (DIT) engine with Air-to-Air After Cooler (ATAAC) has a proven reputation for reliability, durability and performance. Fuel injection is electronically controlled for precise timing.

Torque Rise. The engine features a 41% torque rise for increased power during heavy-duty use.

Emission Standards. The 3056E DIT ATAAC engine meets worldwide emissions standards.

Cylinders. Low cylinder pressure rise and low peak pressure provide outstanding reliability and durability.

Cooling System. Engine and cooling system are in separate compartments for clean, quiet operation and easy service.

Air-to-Air After Cooling. Air-to-air after cooling reduces engine emissions.

Electronic Control Module. The Caterpillar engine control module not only controls the timing needs of the engine but also monitors critical systems to maintain optimum performance and provide engine protection.

Service Intervals. The recommended engine oil change requirement is every 500 hours of operation.

Axles. Heavy-duty design features strong gears and bearings for durable performance. Oscillating rear axle helps assure four-wheel ground contact for optimum traction and stability.

Brakes. Oil-disc brakes are adjustment-free and fully enclosed.

Optional Heavy-Duty Brakes. Optional heavy-duty brakes provide additional brake discs and axle oil cooler for severe applications.

Duo-Cone® Seals. Duo-Cone Seals keep oil in and contaminants out.

Limited Slip Differentials. Optional front and rear Limited Slip Differentials provide improved traction in poor or uneven underfoot conditions.

Transmission. Rugged, field-proven Caterpillar 4F/3R transmission uses heavy-duty components for durable and reliable operation. High-energy friction materials allow for better heat tolerance while thick reaction plates allow for better heat dissipation. The transmission is also designed for easy service and rebuild.

Electronic Clutch Pressure Control. The Electronic Clutch Pressure Control (ECPC) manages shift torque providing exceptional smoothness.

Gears. High-contact ratio spur gears are precision ground and heat treated for quiet, durable operation.

Shifting Options. Operator can choose manual shift or two autoshift modes (full throttle or variable shift control). Full throttle selection provides maximum acceleration while variable selection increases fuel economy and improves operator comfort.

Operator Station

Ergonomic design emphasizes comfort, visibility and easy operation.

Cab. The ergonomic cab provides a comfortable work environment with large windows, spacious interior room, generous storage areas and low interior sound levels.

Access/Egress

Access/Egress. Access/egress is through a two-door design. Both doors open fully and lock flush against the cab. Steps leading up to the cab are wide and angled out for secure footing.

Windows. Large windows improve visibility in all directions. The rear window features a standard electric defroster. Sliding glass is available as an option on the doors.

Visibility. Visibility to critical areas such as the bucket have been optimized. Lift arm spacing is wide and linkage geometry maximizes visibility throughout the production cycle.

Instrument Panel. Redesigned instrument panel is conveniently located with easy-to-read gauges and expanded warning/indicator and diagnostic functions.

Electronic Engine Speed Control. A specific engine rpm can be set and maintained with a switch in the cab.

Steering System. The load-sensing, closed-center steering system with flow amplification matches steering response to a wide variety of applications. The adjustable steering console lifts easily out of the way. Dual suspended brake pedals function as a brake and a transmission neutralizer so the operator can maintain high engine rpm for full hydraulic flow and fast cycle times.

Low Effort Operation. Hydraulic joystick controls provide ease of lift and tilt functions. A single joystick is standard. An integrated directional control switch on the joystick provides easy operation and enhanced productivity. A two lever control is optional.

Seat. The standard seat is available in cloth or vinyl and with fully adjustable fore/aft position, seatback angle, bottom cushion height, armrest angle and suspension stiffness. Other seat options include:

- Cat Contour Seat, fabric, with adjustable backrest and lumbar support.
- Cat Contour Seat, fabric, electrically adjustable with air suspension.

Storage. Generous storage space includes a lockable compartment, coat hook and special molded compartments designed to hold a lunchbox/cooler, cup or can. A tool box is also provided.

Customize the Cab. The cab can be customized with:

- 12V converter for powering electronics such as cellular phones, two-way radios and music systems
- Radio installation packages
- Sun visor for windshield
- Roll-down sun screen for rear window
- External mirror package
- Auxiliary lighting packages

Hydraulic System

Hydraulic system provides improved efficiency and greater control.

Precise Control. Designed by Caterpillar, the hydraulic system provides low-effort operation and superior control.

Performance. Fast loader cycle times result in greater productivity. The hydraulic system is matched to the power train for outstanding performance.

Joystick Control. Low effort, joystick implement control improves efficiency with simultaneous lift and tilt functions.

Tilt Cylinder. A large tilt cylinder delivers exceptional backdrag performance.

Hoses. Caterpillar XT™ hoses and couplings provide rugged, reliable performance with significantly reduced risk of leaks and blown lines.

Dual Circuit Control Valve. The 928Gz comes standard with a control valve for lift and tilt functions. One additional valve section can be added to the existing ones for additional functions.

Ground Level Access. The control valves feature convenient ground level access for easy modifications to the system.

Pumps. Separate steering and implement pumps improve machine response.

Load-Sensing Steering. Load-sensing steering provides low effort operator control, making more power available for rimpull, breakout and lift forces.

Pressure Taps. Standard pressure taps allow quick diagnosis of the entire hydraulic system.

Optional Ride Control System. The improved Ride Control System provides a comfortable ride at all speeds and improved hard bank digging. Three modes are available: auto, on and off.

Caterpillar Buckets

Caterpillar buckets are an integral part of a machine designed to optimize performance.

Choice of Buckets. Caterpillar offers a variety of buckets to meet your specific job requirements. Careful match of the bucket design and machine operating characteristics provide the best digging, loading and carrying performance.

General Purpose Buckets. Caterpillar general purpose buckets, available in 2.0 m^3 (2.6 yd^3) and 2.3 m^3 (3.0 yd^3) capacities with bolt-on cutting edge, and are suitable for most general applications. Features include:

- Improved bucket design with longer floor and a larger radius for easier flow of material into the bucket
- Patented Two-Bolt Corner Guard Cutting Edge System for superior wear resistance, better stability and a simple bolt-on system
- Built-in, replaceable heel wear plates for extended bucket life

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

Versatility. For expanded machine versatility, factory installed quick couplers and other special purpose buckets are also available. Contact your Caterpillar dealer for details.

Serviceability

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

Easy Access. Gull-wing engine enclosure doors with gas struts lift for exceptional access to filters and service points. Radiator and oil coolers are easily accessible for cleaning.

Simplified Routine Service. All service points are accessible from the ground level. Easily check radiator coolant, hydraulic oil and transmission oil levels with sight gauges.

Swing-out Cooling Fan. A swing-out cooling fan allows quick, easy cleaning and service of the radiator. The fan is hydraulically driven and separate from the engine compartment for exceptional low noise operation.

Optional Reversing Fan. Optional reversing capability of the fan cleans screens without interrupting machine operation.

S•O•S℠ Ports. Scheduled Oil Sampling ports are factory installed for improved access to engine, transmission and hydraulic oils. S•O•S ports make oil sampling quicker, cleaner and provide the best oil sample for analysis.

Oil Filters. Spin-on filters for engine oil, transmission oil and hydraulic oil are vertically mounted for easier servicing.

Self-Diagnostics. Self-diagnostic transmission and data link allows quick and easy troubleshooting by service personnel. Service codes are easily accessed through the gauge console.

Extended Life Coolant/Antifreeze. Cat Extended Life Coolant/Antifreeze allows extended operation (up to 6,000 hours) between changes.

Other Service Features. Other service features include:

- Maintenance-free driveshaft
- Stationary radiator and coolant hoses
- Standard hydraulic oil cooler
- Adjustment-free brakes
- Adjustment-free engine fuel system
- Grouped grease fittings
- Positive torque hose clamps
- Braided, color coded and numbered wiring

Owning & Operating Costs

Cost saving features help improve your bottom line.

Low Fuel Consumption. The 3056E DIT ATAAC engine features low fuel consumption for more economical operation.

Increased Power, Faster Cycle Times. High horsepower and increased torque rise results in more power and faster cycle times, allowing the operator to get more work done in a day.

Extended Service Intervals. Service intervals have been extended to reduce machine service time and increase machine availability:

- 4,000 hour hydraulic oil change (S•O•S sampling required)
- 1,000 hour hydraulic filter change
- 500 hour engine oil change

Smoother Transmission for Increased Productivity. A smoother shifting transmission provides a more comfortable work environment, allowing the operator to be more productive throughout the entire work shift.

Demand Fan. Demand fan changes speed to meet cooling requirements and save fuel.

Engine Derate Feature. Auto Derate monitors vital engine systems and will reduce the engine horsepower up to 50% to protect the engine.

Equipment Management Option. Caterpillar's asset management or equipment management system called Product Link-World View, enables dealers and their customers to track equipment for hours and location, and in some cases monitor machine health. This easy-to-use system provides information flow between a machine and the user through the internet based Dealer StoreFront. This information helps lower operating costs through timely service/repairs and optimized machine use.

Machine Security System Option. The Machine Security System (MSS) inhibits unauthorized machine use by immobilizing vital electrical circuits. Critical machine circuits are inhibited unless a valid key is used to start the machine.

Environmentally Responsible Design

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

Low Fuel Consumption. The 928Gz is a top performer in it's size class. The result is more work done in a day, less fuel consumed and minimal impact on the environment.

Low Exhaust Emissions. The Cat 3056E DIT ATAAC is a low emission engine designed to meet current worldwide emission regulations and is Tier 2 compliant.

Quiet Operation. The engine cooling system allows the engine to be fully enclosed, allowing less engine noise to escape. With the optional sound suppression package, the 928Gz is even quieter.

Ozone Protection. To help protect the earth's ozone layer, the 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 easily removed without spillage. The Cat 3056E is fitted with a Closed Circuit Breather to eliminate valve cover drips. Cat O-ring face seals, XT hose and hydraulic cylinders are all designed to help prevent fluid leaks that can weaken the machine's performance and cause harm to the environment.

Rebuildable Components. All major components are designed for rebuildability.

Biodegradable Hydraulic Oil. Caterpillar biodegradable hydraulic oil can be used in the 928Gz, providing an environmentally-sound alternative to mineral-based oils.

Complete Customer Support

Caterpillar dealer services ensure a longer machine operating life with lower costs.

Selection. Make detailed comparisons of machines before purchasing. What are the job requirements? What production is needed? What is the true cost of lost production? Your Cat dealer can give you precise answers to these questions.

Purchase. Look at the total package. Consider the financing options available through your Cat dealer as well as day-to-day operating costs. Dealer support services can be included in the cost of the machine to yield lower equipment owning and operating costs over the life of the machine.

Operation. For the best operating techniques to increase productivity and your profit, turn to your Cat dealer for the latest training literature and knowledgeable staff.

Maintenance. Choose from a wide range of maintenance services at the time of machine purchase. Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as S•O•S Oil Analysis and Technical Analysis help avoid unscheduled repairs that can cost unnecessary time and money.

Replacement. Repair, rebuild or replace? Your Cat dealer can help you evaluate the cost involved to make the right choice.

Product Support. You will find nearly all parts at our dealer parts counter. Cat dealers utilize a worldwide computer network to find in-stock parts to minimize machine downtime. Additionally, Caterpillar offers a line of genuine remanufactured components which can help lower repair costs.

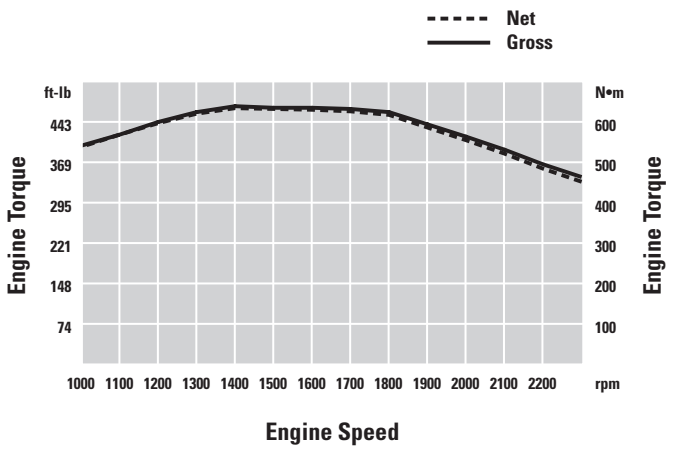
www.cat.com. For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com. Specializing in fast, accurate and up-to-date information, the Cat web site delivers the information you need to operate your business, 24-hours a day.

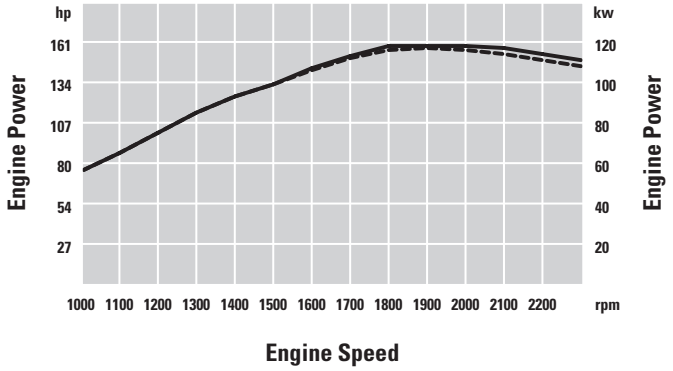
Engine

Model	Cat 3056E DIT ATAAC	
Rated Net Power @ 2,300 rpm		
SAE J1349	107 kW	143 hp
ISO 9249 (1997)	108 kW	145 hp
EEC 80/1269	108 kW	145 hp
Max. Net Power @ 1,900 rpm		
SAE J1349	115 kW	155 hp
ISO 9249 (1997)	117 kW	156 hp
EEC 80/1269	117 kW	156 hp
Bore	100 mm	3.94 in
Stroke	127 mm	5 in
Displacement	6 L	366 in^3

- Net Power ratings are tested at the reference conditions for the specified standard.
- Net power shown is the power available at the flywheel when the engine is equipped with alternator, air cleaner, muffler and fan at minimum speed.
- No derating required up to 3000 m (9,843 ft) altitude. Auto Derate protects engine, hydraulic and transmission systems.
- When the fan is at maximum speed, Rated Net Power is 97 kW (130 hp) and Maximum Net Power is 109 kW (146 hp) at the flywheel per the SAE reference conditions.
- The Caterpillar 3056E DIT ATAAC engine meets Tier 2 off-highway emission regulations.
- Features:
  - Electronically controlled rotary fuel pump
  - Three-ring, controlled-expansion, lubricated pistons
  - Gear-driven water and oil pumps
  - One-piece cast iron cylinder heads with two valves per cylinder
  - Fuel priming pump and fuel/water separator
  - S•O•S sampling port for engine oil
  - Replaceable dry liners
  - Cast aluminum valve cover
  - Radiator is easily accessed for cleaning

Engine Torque





Weights

Operating Weight	12 310 kg	27,140 lb

- Specifications shown are for 928Gz with optional counterweight, standard lubricants, full fuel tank, cab with air conditioning, sliding glass, Cat Contour Seat, Limited Slip axles with dual disc rear, 4L-4V hydraulics, heavy duty cooler, supplemental steering, ride control, radio, roading fenders, reversing fan, back-up alarm, guards, 2.0 m^3 (2.6 yd^3) bucket with bolt-on cutting edge, 80 kg (176 lb) operator and 20.5-R25 radial (L3) XHA tires.

Buckets

Bucket Capacities	2.0 m^3 – 2.3 m^3
	2.6 yd^3 – 3.0 yd^3

Steering

Minimum turning radius (over tire)	5233 mm	206 in
Steering angle, each direction	40°	
Steering cylinders, two, bore	69.9 mm	2.75 in
Hydraulic output at 2,300 engine rpm and 6900 kPa (1,000 psi)	104 L/min	27 gal/min
Maximum working pressure	20 700 kPa	3,000 psi

- Fully hydraulic power steering.
- Center-point frame articulation.
- Front and rear wheels track.
- Separate variable displacement piston pump provides steering power at all engine and ground speeds.
- Tilt steering console.
- High-impact rubber steering stops.
- Secondary steering system meets ISO 5010 and roading regulations in various countries.

Loader Hydraulic System

Output at 2,300 engine rpm and 6900 kPa (1,000 psi) with SAE 10W oil at 65° C (150° F)	151.5 L/min	40.3 gal/min
Hydraulic Cycle Time	10.1 Seconds	
Pump flow – Implement pump	152 L/min	40.15 gal/min
Hydraulic cycle time:		
Raise	6.1 Seconds	
Dump	1.2 Seconds	
Lower, empty, float down	2.8 Seconds	
Total	10.1 Seconds	
Relief valve setting	24 800 kPa	3,600 psi
Lift cylinders, double acting:		
Bore	120.6 mm	4.75 in
Stroke	685 mm	27 in
Tilt cylinder, double acting:		
Bore	127 mm	5 in
Stroke	550 mm	21.7 in

- Open-centered system.
- Fixed displacement vane-type implement pump.
- Low effort, hydraulic joystick controls.
- Electronic pilot shut-off switch disables implement functions for added safety.
- Hydraulic couplings with O-ring face seals.
- Optional heavy-duty oil cooler.
- Ride Control system available to provide smoother ride with less spillage from bucket during load & carry operations and better hard bank capability.

Service Refill Capacities

Fuel tank	225 L	59.4 gal
Cooling system	42 L	11.1 gal
Crankcase	14 L	3.7 gal
Transmission	34.5 L	9.1 gal
Differentials and final drives:		
Front	26 L	6.9 gal
Rear	25 L	6.6 gal
Hydraulic system (including tank)	125 L	33 gal
Hydraulic tank	70 L	18.5 gal

Transmission

Standard transmission maximum travel speeds:		
Forward 1	7.9 kph	4.9 mph
2	12.6 kph	7.8 mph
3	25.8 kph	16 mph
4	37.7 kph	23.4 mph
Reverse 1	7.9 kph	4.9 mph
2	12.6 kph	7.8 mph
3	25.8 kph	16 mph

- Electronically-controlled Caterpillar countershaft transmission with full on-the-go directional and speed change capability.
- 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.
- Computer controlled modulation provides smoother transitions.

Axles

Axle Oscillation	11°

Features:

- Fixed front, oscillating rear (±11°) allows rear movement of 384 mm (15 in)with 20.5 R25 tires.
- Caterpillar axle with fully-enclosed brakes and final drives.
- Patented Duo-Cone Seals between axle and housing.
- Limited Slip Differentials are optional on front, rear or both axles.
- Rear axle trunnion has remote lubrication fitting.
- Planetary final drives are lubricated from the main oil sump.
- High contact ratio gearset reduces noise levels during meshing.

Tires

Size	17.5-25PR (L-2)	
Tread Width	2427 mm	96 ft

Choice of:

- 17.5-25, 12PR (L-2)
- 17.5-25, 12PR (L-3)
- 17.5-R25, radial (L-2)
- 17.5-R25, radial (L-3)
- 17.5-R25, radial (L-2/L-3)
- 20.5-25, 12PR (L-2)
- 20.5-25, 12PR (L-3)
- 20.5-R25, radial (L-2)
- 20.5-R25, radial (L-3)
- 20.5-R25, radial (L-2/L-3)
- 600/65 R25, radial (L-3)
- Other tire choices are available, contact your Cat Dealer for details.
- In certain applications, the loader's productive capabilities may exceed the tire's tonnes-km/h (ton-mph) capabilities. Caterpillar recommends that you consult a tire supplier to evaluate all conditions before selecting a tire model.

Brakes

Features:

- Service brake:
  - 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.
  - Fully integrated with hydraulic system, no air system required.
- Secondary brake:
  - Indicator light alerts operator if brake pressure drops.
  - Continually-charged nitrogen accumulators provide emergency stopping power in case of engine power loss.
- Parking brake:
  - Mechanical, shoe-type brake.
  - Mounted on drive line for positive manual operation.
  - Application of parking brake neutralizes the transmission.
- Optional heavy-duty brakes with integrated oil cooler.

Cab

ROPS	SAE J1040 MAY94, ISO 3471-1994
FOPS	SAE J/ISO 3449 APR98 Level II, ISO 3449 1992 Level II

- Caterpillar cab and Rollover Protective Structure (ROPS) are standard in North America and Europe.
- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed as per work cycle procedures specified in ANSI/SAE J1166 May 90, results in operator sound exposure Leq (equivalent sound pressure level) of 74 dB(A).
- 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.

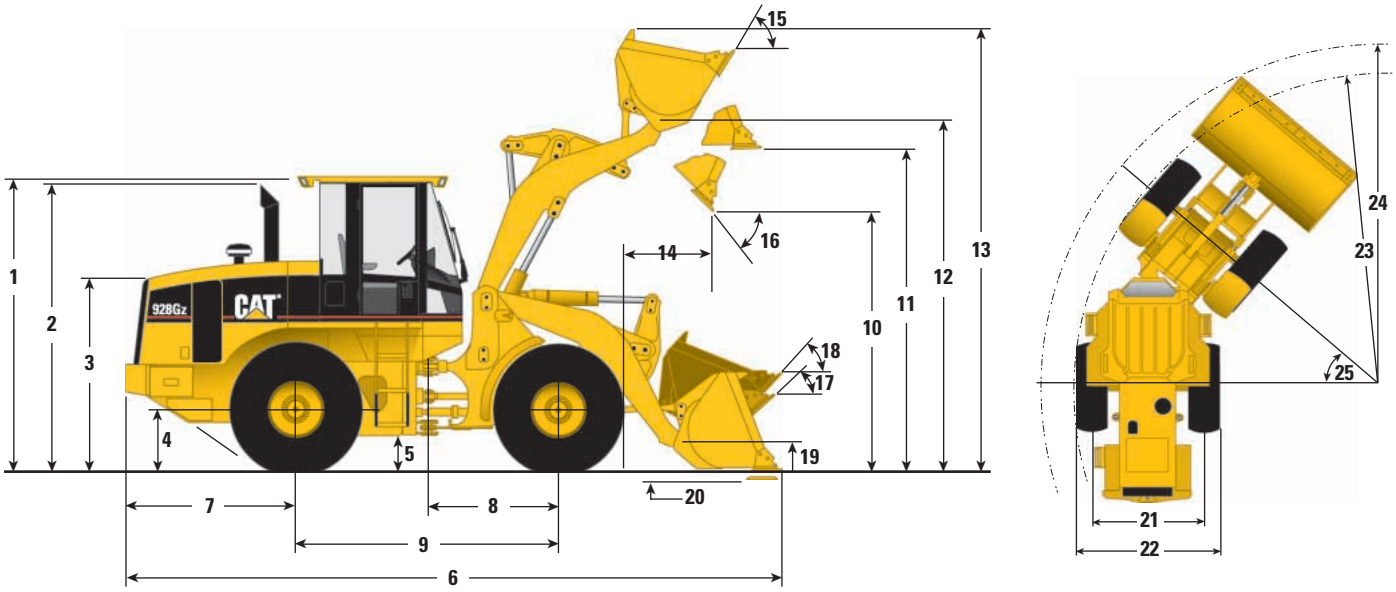
Implement Controls

Features:

- Lift circuit:
  - Four positions: raise, hold, lower and float.
  - Adjustable automatic kickout from horizontal to full lift.
- Tilt circuit:
  - Three positions: tilt back, hold and dump.
  - Adjustable automatic bucket positioner to desired loading angle.
  - Does not require visual spotting.
- Controls:
  - Choice of two low effort control systems: a joystick or a two-lever control of lift and tilt circuits.
  - Optional third function hydraulic circuit available with individual lever controls for remote hydraulic functions.
  - Controls can be disabled for roading.

Dimensions

All dimensions are approximate. Dimensions vary with bucket. Refer to Operating Specifications.



1	Height to top of ROPS/FOPS	3269 mm	(10 ft 9 in)
2	Height to top of exhaust stack	3189 mm	(10 ft 6 in)
3	Height to top of hood	2197 mm	(7 ft 2 in)
4	Height to center of axle	685 mm	(2 ft 3 in)
5	Ground clearance	408 mm	(1 ft 4 in)
6	Overall length	7252 mm	(23 ft 10 in)
7	Length – rear axle to bumper	1920 mm	(6 ft 4 in)
8	Center line of front axle to hitch	1450 mm	(4 ft 9 in)
9	Wheel base length	2900 mm	(9 ft 6 in)
10	Dump clearance at maximum lift and 45° dump	2879 mm	(9 ft 5 in)
11	Bucket clearance at maximum lift and level	3752 mm	(12 ft 4 in)
12	Bucket pin height at maximum lift	3872 mm	(12 ft 8 in)
13	Overall height – bucket raised	4971 mm	(16 ft 4 in)
14	Reach at maximum lift and 45° dump	927 mm	(3 ft 0 in)
15	Rack back angle at maximum lift	60°	
16	Dump angle at maximum lift	45°	
17	Rack back angle at ground	44°	
18	Rack back angle at carry	47.8°	
19	Carry height	449 mm	(1 ft 6 in)
20	Digging depth	86 mm	(3.4 in)

Dimensions listed are for 928Gz with optional counterweights, standard lubricants, full fuel tank, cab with A/C, sliding glass, Cat contour seat, limited slip axles with dual disc rear, 4L4V hydraulics, heavy duty cooler, supplemental steering, roading fenders, reversing fan, back-up alarm, guards, ride control, radio, 1.8 m^3 (2.3 yd^3) bucket with bolt-on cutting edge, 80 kg (176 lb) operator and 20.5 R25 radial (L-3) XHA tires. Refer to Operating Specifications for bucket variations.

		17.5-25 12PR (L-2) Tires		20.5 R25 (L-3) Tires		600/65 R25 (L-3) Tires	
21	Width at tread center	1950 mm	(6 ft 5 in)	1950 mm	(6 ft 5 in)	1950 mm	(6 ft 5 in)
22	Overall width over tires	2407 mm	(7 ft 11 in)	2504 mm	(8 ft 3 in)	2544 mm	(8 ft 4 in)
23	Minimum turning radius over tires	5186 mm	(17 ft 0 in)	5236 mm	(17 ft 2 in)	5256 mm	(17 ft 3 in)
24	Minimum turning radius over bucket	–	–	5781 mm	(19 ft 0 in)	–	–
25	Steering angle – left/right	40°		40°		40°	
	Change in vertical dimension	–65 mm	(–2.7 in)	no change	no change	–11 mm	(–4.3 in)

Operating Specifications

Pin-on Buckets

			General Purpose Buckets					
			With Bolt-On Cutting Edge		With Bolt-On Teeth & Segments*		With Bolt-On Teeth*	
	Rated bucket capacity (§)	m^3 yd^3	2.0 2.6	2.3 3.0	2.0 2.6	2.3 3.0	1.9 2.5	2.2 2.9
	Struck capacity (§)	m^3 yd^3	1.7 2.2	1.9 2.5	1.7 2.2	1.9 2.5	1.6 2.1	1.8 2.4
	Bucket width	mm ft/in	2549 8'4"	2549 8'4"	2549 8'4"	2549 8'4"	2549 8'4"	2549 8'4"
10	Dump clearance at full lift and 45° discharge (§)	mm ft/in	2879 9'5"	2842 9'4"	2766 9'1"	2730 8'11"	2766 9'1"	2729 8'11"
14	Reach at full lift and 45° discharge (§)	mm ft/in	927 3'0"	964 3'2"	1021 3'4"	1058 3'6"	1021 3'4"	1058 3'6"
	Reach at 45° discharge and 2130 mm (7'0") clearance (§)	mm ft/in	1455 4'9"	1474 4'10"	1492 4'11"	1509 4'11"	1492 4'11"	1509 4'11"
	Reach with lift arms horizontal and bucket level	mm ft/in	2253 7'5"	2305 7'7"	2399 7'10"	2451 8'0"	2399 7'10"	2451 8'0"
20	Digging depth (§)	mm in	86 3.4"	86 3.4"	99 3.9"	99 3.9"	99 3.9"	99 3.9"
6	Overall length	mm ft/in	7252 23'10"	7304 24'0"	7398 24'3"	7450 24'5"	7378 24'2"	7430 24'5"
13	Overall height with bucket at full raise (§)	mm ft/in	4971 16'3"	5070 16'8"	4971 16'4"	5070 16'8"	4971 16'4"	5070 16'8"
24	Loader clearance radius with bucket in carry position	mm ft/in	5781 19'0"	5796 19'0"	5845 19'2"	5860 19'3"	5845 19'2"	5860 19'3"
	Static tipping load straight (§)	kg lb	9859 21,735	9702 21,389	9690 21,362	9537 21,025	9778 21,556	9711 21,409
	Static tipping load full 40° turn (§)	kg lb	8587 18,931	8444 18,615	8417 18,556	8276 18,245	8508 18,757	8444 18,615
	Breakout force (§)	kg lb	11 723 25,844	11 095 24,460	11 590 25,551	10 961 24,164	12 604 27,787	11 880 26,191
	Operating weight	kg lb	12 308 27,135	12 358 27,245	12 442 27,431	12 492 27,541	12 357 27,243	12 407 27,353

Specifications shown are for 928Gz with optional counterweight, standard lubricants, full fuel tank, Cab with A/C, sliding glass, Cat Contour Seat, Limited Slip axles with dual disc rear, 4L 4V hydraulics, heavy duty cooler, supplemental steering, roading fenders, reversing fan, back-up alarm, guards, ride control, radio, 2.0 m^3 (2.6 yd^3) bucket with bolt-on cutting edge, 80 kg (176 lb) operator and 20.5 R25 radial (L-3) XHA tires.

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

(§) Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers (SAE), including SAE Standards J732 JUN92 and J742 FEB85 governing loader ratings.

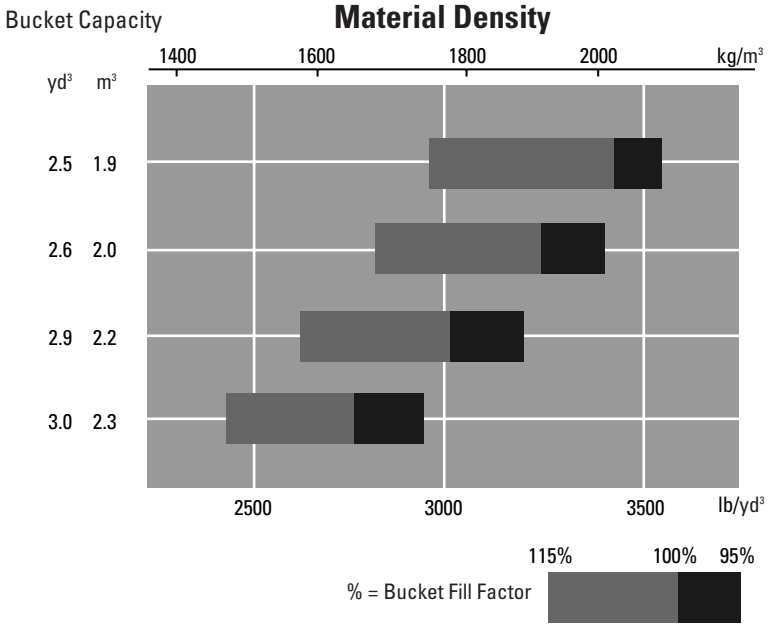
For operating specifications for hook-on buckets, please contact the factory.

Typical Material Densities – Loose

	kg/m³	lb/yd³
Basalt	1960	3305
Bauxite, Kaolin	1420	2394
Clay		
natural bed	1660	2799
dry	1480	2495
wet	1660	2799
Clay and gravel		
dry	1420	2394
wet	1540	2596
Decomposed rock		
75% rock, 25% earth	1960	3305
50% rock, 50% earth	1720	2900
25% rock, 75% earth	1570	2647
Earth		
dry, packed	1510	2546
wet, excavated	1600	2698
Granite		
broken	1660	2799
Gravel		
pitrun	1930	3254
dry	1510	2546
dry, 6-50 mm (0.2-2")	1690	2849
wet, 6-50 mm (0.2-2")	2020	3406

	kg/m³	lb/yd³
Gypsum		
broken	1810	3052
crushed	1600	2698
Limestone		
broken	1540	2596
crushed	1540	2596
Sand		
dry, loose	1420	2394
damp	1690	2849
wet	1840	3102
Sand and clay		
loose	1600	2698
Sand and gravel		
dry	1720	2900
wet	2020	3416
Sandstone	1510	2546
Shale	1250	2107
Slag		
broken	1750	2950
Stone		
crushed	1600	2698

Bucket Size Selector



Supplemental Specifications

	Change in Operating Weight		Change in Articulated Static Tipping Load with Hook-On Bucket 2.1 m^3 (2.75 yd^3)	
	kg	lb	kg	lb
W/O Air conditioner	–48	–106	–44	–97
Canopy, ROPS (less cab)	–198	–437	–181	–399
W/O Optional counterweight, 175 kg/385 lb	–290	–639	–483	–1065
W/O Guard, crankcase	–17	–37	–22	–49
W/O Guard, power train	–58	–128	–56	–123
W/O Ride Control System	–41	–90	–28	–62
W/O Secondary steering	–42	–93	–52	–115
Tires, 1-piece rims				
17.5-25, 12PR (L-2)	–661	–1457	–410	–904
17.5-25, 12PR (L-3)	–582	–1283	–361	–796
17.5-25, radial (L-2/L-3)	–519	–1144	–322	–710
17.5-25, radial (L-2)	–614	–1354	–381	–840
17.5-25, radial (L-3)	–458	–1010	–284	–626
Tires, 3-piece rims				
17.5-25, 12PR (L-2)	–529	–1166	–328	–723
17.5-25, 12PR (L-3)	–457	–1008	–283	–624
17.5-25, radial (L-2/L-3)	–413	–911	–256	–564
17.5-R25, radial (L-2)	–489	–1078	–303	–668
17.5-R25, radial (L-3)	–389	–858	–241	–531
20.5-25, 12PR (L-2)	–240	–529	–149	–328
20.5-25, 12PR (L-3)	–96	–212	–60	–132
20.5-25, radial (L-2/L-3)	–52	–115	–33	–73
20.5 R25, radial (L-2)	–172	–379	–107	–236
20.5 R25, radial (L-3)	0	0	0	0
600/65 R25, radial (L-3) Michelin	+4	+9	+2	+4
600/65 R25, radial (L-3) Goodyear	+216	+476	+134	+295

Standard Equipment

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

ELECTRICAL
- Alternator, 80-amp
- Alarm, back-up
- Batteries, maintenance-free, 950 CCA, (2)
- Directional signals (front & rear)
- Starting and charging system, 24V
- Halogen work lights (front & rear)
- Ignition key start/stop switch
- Roading lights
- Starting aid, thermal

OPERATOR ENVIRONMENT
- Cab, ROPS (sound suppressed and pressurized)
- Gauges:
  - Engine coolant temperature
  - Hydraulic oil temperature
  - Torque converter oil temperature
  - Fuel level gauge
  - Speedometer
  - Digital tachometer
  - Digital hour meter/odometer
- Warning indicators:
  - Primary steering malfunction
  - Electrical system voltage low
  - Coolant temperature
  - Engine oil pressure low
  - Parking brake applied
  - Brake charge pressure low
  - Transmission oil temperature
  - Transmission oil filter bypass
  - Hydraulic oil filter bypass
- Adjustable tilt steering column
- Coat hook
- Ground level door release
- Heater/defroster
- Horn, steering wheel mounted (electric)
- Hydraulic control lever lockout
- Interior light
- Interior and exterior auxiliary power sockets
- Lighter
- Lunch box storage with cup holder
- Pilot hydraulic implement controls
- Rear window defroster, electric
- Rear view mirrors (2 inside)
- Seat, adjustable suspension, armrest (fabric or vinyl)
- Seat belt, 75 mm (3 in), retractable
- Tinted safety glass
- Tool box
- Two door cab, fixed glass
- Wet arm front & rear wiper/washer, front intermittent

POWER TRAIN
- Engine, Caterpillar 3056E DIT ATAAC
- - Low emission diesel engine
- - Turbocharged
- - After cooled
- - Closed Circuit Breather (CCB)
- - Electronically controlled engine
- Air cleaner, dry type
- Brakes, enclosed wet-disc full hydraulic
- Differentials, conventional (front/rear)
- Driveshaft, lubed for life
- Engine fuel priming pump
- Engine speed control
- Fuel/water separator
- Muffler
- Radiator, unit serviceable
- S•O•S oil sampling port, engine oil
- S•O•S oil sampling port, transmission oil
- Torque converter
- Transmission, 4F/3R, autoshift, single lever control with F/N/R and kickdown button
- Transmission neutralizer; operator programmable

HYDRAULICS
- Hydraulic diagnostic connectors
- Hydraulic oil cooler
- Hydraulic control, 2-valve, 1-lever with F/N/R
- Load-sensing steering system
- S•O•S oil sampling port, hydraulic oil

OTHER STANDARD EQUIPMENT
- Antenna, for radio
- Antifreeze/coolant, extended-life protects to –36° C (–33° F)
- Automatic bucket positioner/fork positioner
- Brakes, secondary and parking
- Bucket positioner, automatic
- Counterweight
- Engine enclosure, lockable
- Fenders, front
- Hitch, recovery
- Loader linkage, z-bar with sealed pins
- Lift kickout, automatic
- Machine Security System ready
- Product Link-World View ready
- Remote grease lines
- Steering stops, cushioned
- Swing-out, hydraulically driven demand fan
- Vandalism protection, lockable service points
- Visual indicators:
  - Air cleaner service
  - Coolant level
  - Hydraulic oil
  - Transmission oil

Optional Equipment

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

Air conditioner (R-134a refrigerant)
Alternator, 95-amp
Antifreeze/coolant, extended-life, protects to –50° C (–58° F)
Beacon light, rotating, magnetic-mount
Brakes, heavy duty
Buckets/ground engaging tools
Canopy, ROPS
Counterweight, additional 297 kg (655 lb)
Differential, Limited Slip, front axle and/or rear axle
Differential, NoSpin, rear axle only (custom)
Dust bowl pre-cleaner
Electrical accessories package (12V converter, accessory plug outlet, wiring)
Extended lift arms available through Cat Work Tools
Fan, reversing
Fenders, roading, rear
Flood lights, auxiliary, cab-mounted
Guards:
- Crankcase
- Front driveline
- Power train
- Waste guarding package

Hydraulic control, two lever (lift/tilt)
Hydraulic control, third valve
Hydraulic oil cooler, heavy-duty
Load check valves (dealer installed)
Machine Security System
Material handling arm
Mirrors, external (two)
Pallet forks, carriage
Product Link
Quick Coupler
Radio prep packages:
- 12V installation, includes speakers, cable, mounting bracket, hardware, converter and accessory plug. Radio not included.
- AM/FM Radio
- AM/FM Radio, CD

Radiator, wide fin spacing, 5.5 fpi
Ride Control System
Seats:
- Cat Contour Seat, fabric, with adjustable backrest and lumbar support
- Cat Contour Seat, fabric, electrically adjustable with air suspension

Sliding door windows (left and right)
Sound suppression package (custom)
Starting aid, engine coolant heater, 120V
Steering, secondary
Sun screen, rear
Tires:
- Bias ply, 17.5-25 and 20.5-25
- Radial, 17.5-R25, 20.5-R25 and 600/65 R25

Visor, sun (front)

928Gz Wheel Loader

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 Caterpillar dealer for available options.

AEHQ5611-01 (1-06)

Replaces AEHQ5611

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