



# Cat<sup>®</sup> 993

## Wheel Loader

**Cat<sup>®</sup> Large Wheel Loaders are designed with durability built in, ensuring maximum availability through multiple life cycles. With optimized performance and simplified serviceability, our machines allow you to move more material efficiently and safely at a lower cost per ton.**

**Introduced in 2008 the success of the 993 is a testament to its heritage. Created from Cat Large Wheel Loader DNA, the roots of performance, durability, comfort and efficiency runs deep. Move more, make more with the 993.**

**Not all features are available in all regions. Consult your Cat dealer for specific configurations available in your region.**

### Designed for the Toughest Conditions

- The 993 utilizes a Cat C32B to provide the performance and efficiency customers demand.
- Your key to maximum uptime and productivity is our field-proven lift arms.
- Your bottom line is improved by highly durable structures that achieve multiple life cycles and withstand the toughest loading conditions.
- To ensure continued uptime, the 993 uses Cat Sleeve Bearing linkage pins which eliminate the need for daily greasing and routine maintenance.
- Experience maximum responsiveness and control with Steering and Transmission Integrated Control System (STIC™) that combines directional selection, gear selection and steering into a single lever.
- Building your success begins with a best-in-class transmission designed specifically for mining applications.

### Customer Support

- A valued partner, your Cat dealer is available whenever you need them.
  - Preventive maintenance programs and guaranteed maintenance contracts.
  - Best-in-class parts availability.
  - Improve your efficiency with operator training.
  - Genuine Cat Remanufactured parts.

### Protect Your Investment With Bucket Ground Engaging Tools (GET)

- Heavy Duty Rock Bucket – For face loading tightly compacted pit materials. Moderate-abrasion factors and high-impact loads are suitable for this bucket.\*
- High Abrasion Rock Bucket – For face loading iron ore. High-abrasion and moderate-impact loads are suitable for this bucket. A smooth floor is also desirable.\*
- Coal Bucket – For coal or other light density non abrasive materials.\*
- Protect expensive components. Reduce your operating costs. Get the most out of your machine's performance. Choose from a variety of performance-built Advansys GET to meet your application requirements.
- Simplify GET component replacement with hammerless CapSure™ retention for fast, easy and safe installation. CapSure tips, shrouds and sidebar protectors are easily locked and unlocked with a 180 degree turn of a ¾ inch ratchet.

### Efficient Loading/Hauling System Starts With a Perfect Match

- The standard 993 is sized to load the 90 tonnes (100 tons) 777 in four passes. The 993 High Lift loads the 136 tonnes (150 tons) 785 in six passes.
- For full truck payloads with minimum loading time, an efficient loading/hauling system starts with a perfect match. Cat wheel loaders are matched with Cat mining trucks to maximize volume of material moved at the lowest operating cost per ton.
- Selection of the right bucket width depends on penetration requirements and the loading target. Bucket sizes are matched to truck bed capacities for optimum loading efficiency and greater productivity.

**\*Note:** Some applications can be very abrasive. Consider that additional bucket protection can affect the performance of the machine through higher horsepower demand, higher fuel consumption and reduced productivity. With this in mind, it is important that you select appropriate protection for your application.



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## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>POWERTRAIN</b>			<b>ELECTRICAL AND LIGHTING</b>		
Engine, C32B	✓		150-amp alternator	✓	
Brakes, oil-cooled, multi-disc, service/secondary	✓		Four 1400 CCA batteries	✓	
Driveline parking brake	✓		Deutsch terminal connectors	✓	
Fuel Priming Pump (electric)	✓		24V starting and charging system	✓	
Ground level engine shutoff	✓		Diagnostic connector starting and charging system	✓	
Precleaner, engine air intake (above hood)	✓		Electrical system, 24 volt	✓	
Automatic, ether starting aid	✓		Electronic Service Center	✓	
Electronic throttle lock	✓		Electronic Transmission Control	✓	
Planetary powershift, 3F/3R electronic control transmission	✓		Lighting system, halogen (front and rear) lighting, access stairway	✓	
Rimpull Control System	✓		Starter receptacle for emergency start	✓	
Standard ICTC	✓		Starter and transmission lockouts in bumper	✓	
ICTC with lock up clutch		✓	Product Link (Cellular)		✓
Engine Brake		✓	Product Link (Satellite)		✓
<b>SERVICE</b>			<b>COLD WEATHER</b>		
Case drain filters	✓		120V or 240V coolant heating elements (recommended in conditions from -18° C to -30° C [0° F to -22° F])		✓
VIMS download and Cat® Electronic Technician service port in bumper	✓		Fuel heater (heated by recirculation using engine heat and a heat exchanger) (recommended in conditions from -18° C to -30° C [0° F to -22° F])		✓
Axle ecology drain	✓		-50° C (-58° F) antifreeze		✓
Front walkway around cab	✓		Heated Mirrors		✓
Ground-level fast-fill fuel system	✓		Heated Seat	✓	
Grouped hydraulic pressure ports	✓		<b>SAFETY</b>		
Guards, crankcase and power train	✓		Back-up alarm	✓	
Drawbar hitch with pin	✓		Mirrors, rearview (externally mounted)	✓	
Linkage pins, maintenance free	✓		Seat, trainer with lap belt, 76 mm (3 in) wide	✓	
Oil sampling valves	✓		Seat belt, retractable, 76 mm (3 in) wide	✓	
Product Link™	✓		Emergency platform egress	✓	
Service center with ground level electrical and fluid connections	✓		Implement lock switch	✓	
Sight gauges for steering, implement and transmission oil	✓		Stairway, left and right rear access	✓	
Transmission lockout, bumper	✓		Steering and transmission lock lever, cab	✓	
Grease lines	✓		Toe kicks	✓	
Automatic Autolube		✓	LED warning strobe		✓
<b>COOLING</b>			Object detection (radar)		✓
Standard ambient package (recommended for site conditions that do not exceed 43° C [110° F])	✓		Rear vision camera		✓
High ambient package (recommended for site conditions that do not exceed 55° C [131° F])		✓	Egress, powered rear access		✓
			Secondary Steering		✓
			Wheel Chocks		✓

(continued on next page)

**Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area.**

For additional information and additional regional offerings, refer to the Technical Specifications brochure available at [www.cat.com](http://www.cat.com) or your Cat dealer.

## Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
<b>OPERATOR ENVIRONMENT</b>			<b>EFFICIENCY</b>		
Premium seat with heated and actively cooled leather, adjustable lumbar support, air adjustable bolsters on the seat and backrest, seat cushion tilt adjustment, and adjustable-length seat cushion	✓		Automatic bucket leveler	✓	
Advisor Display, displays real time operating information, performs calibrations and customizes operator settings	✓		Automatic lift and lower bucket kickout	✓	
Air conditioner	✓		Positive Flow Control implement system	✓	
Air precleaner	✓		ICTC with lock-up clutch		✓
Cab, sound suppressed and pressurized, separate external Rollover Protective Structure (ROPS)/Falling Object Protective Structure (FOPS) radio ready for entertainment, includes antenna, speakers and converter (12-volt 10-amp) and power port	✓		Load-sensing steering	✓	
Cigar lighter, ashtray	✓		<b>MACHINE CONTROL AND GUIDANCE</b>		
Coat hook	✓		Cat Terrain ready		✓
Dual lever lift and tilt function controls	✓		<b>RIMS AND TIRES</b>		
Joystick lift and tilt function controls		✓	40.00×51 spare rim		✓
Digital display on center console: – Gear – Ground speed – Machine hours	✓		Tires – 50/65R51		✓
Heater, defroster	✓		Tires – 50/65-51		✓
Horn, electric	✓		Axle oscillation limit stop		✓
Instrumentation, gauges: – Coolant temperature – Fuel level – Hydraulic oil temperature – Power train oil temperature – Tachometer	✓		<b>LOAD AND CARRY OR EXTENSIVE TRAMMING</b>		
Light, cab, dome	✓		Ride Control		✓
Lunchbox, beverage and manual holders	✓		Rear Rooding Fenders		✓
Wet-Arm wipers/washers (front and rear): – Intermittent front and rear wipers	✓		<b>LINKAGE</b>		
AM/FM/CD/MP3 radio		✓	Standard lift (30 tons face)	✓	
Cab precleaner		✓	High lift (27.5 tons face)		✓
Satellite Sirius radio with Bluetooth®		✓	<b>SOUND SUPPRESSION</b>		
Sun screen		✓	Sound-suppression package		✓
Bonded glass, tinted	✓				
Rubber-mounted, high-impact resistant solar control glass (Complies with AS/NZS 2080)		✓			

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## Technical Specifications

Engine			
Engine Model	Cat® C32B		
Emissions	U.S. EPA Tier 4 Final, U.S. EPA Tier 2 Equivalent		
Rated Speed	1800 rpm		
Gross Power – SAE J1995 @ 1800 rpm			
Tier 4/HRC	775 kW	1039 hp	
Tier 2/LRC	767 kW	1029 hp	
Net Power – ISO 14396 @ 1800 rpm			
Tier 4/HRC	764 kW	1024 hp	
Tier 2/LRC	757 kW	1015 hp	
Net Power – EEC 80/1269 @ 1800 rpm			
Tier 4/HRC	726 kW	974 hp	
Tier 2/LRC	716 kW	960 hp	
Net Power – ISO 9249 @ 1800 rpm			
Tier 4/HRC	726 kW	974 hp	
Tier 2/LRC	716 kW	960 hp	
Net Power – SAE J1349 @ 1800 rpm			
Tier 4/HRC	719 kW	964 hp	
Tier 2/LRC	710 kW	952 hp	
Peak Torque SAE J1995 @ 1250 rpm			
Tier 4/HRC	5470 N·m	4,034 lb ft	
Tier 2/LRC	5470 N·m	4,034 lb ft	
Bore	145 mm	5.7 in	
Stroke	162 mm	6.4 in	
Displacement	32.1 L	1,959 in <sup>3</sup>	
Torque Rise	33%		
• Standard ambient cooling.			

### Operating Specifications

Operating Weight (Tier 2 Equivalent)*	133 668 kg	294,687 lb
Operating Weight (Tier 4 Final)*	133 668 kg	294,687 lb
Rated Payload – Standard Lift	27.2 tonnes	30.0 tons
Rated Payload – High Lift	24.9 tonnes	27.5 tons
Bucket Range	12.2-23.7 m <sup>3</sup>	16.0-31.0 yd <sup>3</sup>
Cat Truck Match – Standard Lift	777	
Cat Truck Match – High Lift	777, 785	
Articulation Angle	43 degrees	

\* High lift, 50/65-51 (364-6315) tires, standard cooling, 13.8 m<sup>3</sup> (18 yd<sup>3</sup>) bucket (496-9912).

Transmission		
Transmission Type	Cat Planetary Power Shift	
Forward 1	6.8 km/h	4.2 mph
Forward 2	11.9 km/h	7.4 mph
Forward 3	20.5 km/h	12.7 mph
Reverse 1	7.5 km/h	4.7 mph
Reverse 2	13.1 km/h	8.1 mph
Reverse 3	22.5 km/h	13.9 mph
Direct Drive – Forward 1	Lock-up disabled	
Direct Drive – Forward 2	13.0 km/h	8.0 mph
Direct Drive – Forward 3	22.8 km/h	14.1 mph
Direct Drive – Reverse 1	8.0 km/h	4.9 mph
Direct Drive – Reverse 2	14.2 km/h	8.8 mph
Direct Drive – Reverse 3	25.2 km/h	15.6 mph
• 50/65-51 (364-6315) calculated speeds.		

### Hydraulic System – Lift/Tilt

Lift/Tilt System – Circuit	Positive Flow Control	
Lift/Tilt System – Pump	Variable Piston	
Maximum Flow at 1,650 rpm	1180 L/min	311 gal/min
Relief Valve Setting – Lift/Tilt	29 500 kPa	4,200 psi
Cylinders – Lift/Tilt	Double-acting	
Lift Cylinder – Bore	267 mm	10.5 in
Lift Cylinder – Stroke	1682 mm	66.2 in
Tilt Cylinder – Bore	235 mm	9.3 in
Tilt Cylinder – Stroke	1040 mm	40.9 in
• High Lift configuration.		

### Hydraulic Cycle Time

Rackback	2.4 seconds
Raise	9.2 seconds
Dump	1.8 seconds
Lower	3.8 seconds
Lower Float Down	3.1 seconds
Total Hydraulic Cycle Time	17.2 seconds
• High Lift configuration, calculated speeds.	

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

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(Global)

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