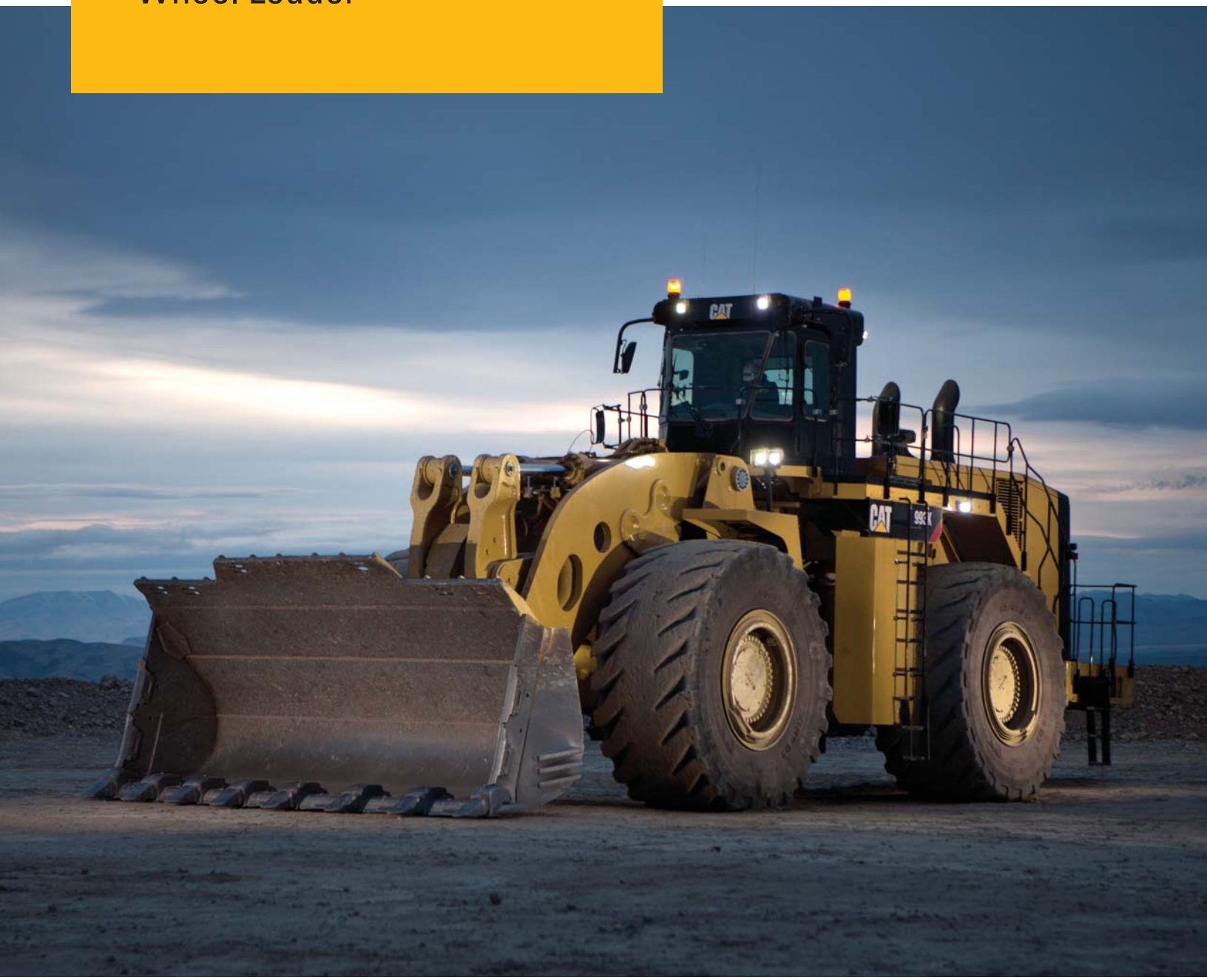
993K
Wheel Loader



Engine (Tier 4)		
Engine Model	Cat® C32 with ACERT™ Technology	
Emissions	U.S. EPA Tier 4	
Gross Power – SAE J1995	775 kW	1,039 hp
Net Power – ISO 14396	764 kW	1,024 hp
Buckets		
Bucket Capacities	12.2-23.7 m^3	16.0-31.0 yd^3
Operating Specifications		
Rated Payload – Standard Lift	27.2 tonnes	30.0 tons
Rated Payload – High Lift	24.9 tonnes	27.5 tons
Operating Weight*	133 668 kg	294,687 lb

*High lift, 60/65-51 BFOR (311-1938), standard cooling, 13.8 m^3 (18.0 yd^3) bucket (303-3280).

Engine (Tier 2)		
Engine Model	Cat C32 with ACERT Technology	
Emissions	U.S. EPA Tier 2 Equivalent	
Gross Power – SAE J1995	777 kW	1,041 hp
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Buckets		
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Lower your cost per ton with built-in durability.



Contents

Structures....4
Power Train....6
Hydraulics....8
Operator Station....10
Technology Solutions....12
Cat MineStar™ System....13
Safety....14
Serviceability....16
Customer Support....16
Sustainability....17
System Match Efficiency....18
Bucket Ground Engaging Tools....19
Specifications....20
Standard Equipment....26
Optional Equipment....27
Mandatory Attachments....27



Cat 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 993K 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 993K.

Structures

Best built for the toughest conditions.



Lift Arms

Your key to maximum uptime and productivity is our field-proven lift arms.

- Excellent visibility to the bucket edges and work area through a Z-bar design.
- High load stresses are absorbed by the solid steel lift arms.
- Enhance strength in key pin areas through the use of one piece castings.
- Stress relieved lift arms increase durability and lengthen time to repair.



Robust Structures

Your bottom line is improved by highly durable structures that achieve multiple life cycles and withstand the toughest loading conditions.

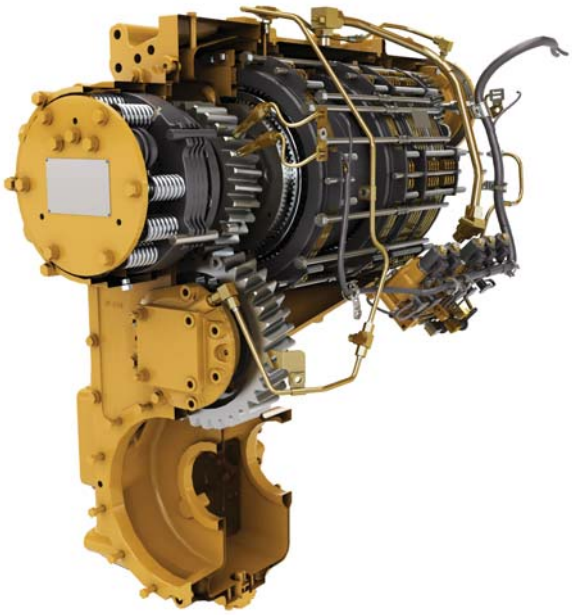
- Full box-section rear frame and four-plate loader tower resists shock and torsional loading to maintain hitch and loader linkage pin alignment.
- Robotically welded structures provide deep weld penetration for maximum durability and fatigue strength.
- Castings increase strength by spreading loads and reducing the number of parts.



Front Linkage

To ensure continued uptime, the 993K uses Cat Sleeve Bearing linkage pins which eliminate the need for daily greasing and routine maintenance.





Steering and Transmission Integrated Control System (STIC™)

Experience maximum responsiveness and control with STIC that combines directional selection, gear selection and steering into a single lever.

- Simple side-to-side motion turns machine right or left, minimizing operator movements.
- Easy to operate finger controlled gear selection.
- Smoother, faster cycles and less operator fatigue through the use of low effort integrated controls.

Cat Planetary Powershift Transmission

Building your success begins with a best-in-class transmission designed specifically for mining applications.

- Consistent, smooth shifting and efficiency through integrated electronic controls.
- Long life and reliability through heat treat gear and metallurgy.
- Three forward and three reverse speeds to match your application.



Cat C32 ACERT

The 993K utilizes a Cat C32 to provide the performance and efficiency customers demand.

- On-demand performance through the use of turbochargers and aftercoolers.
- High Torque Rise – 33% torque rise ensures high lugging forces during digging and acceleration in high rimpull conditions.
- Extended engine life and improved efficiency through reduced operating speed.
- Quick engine response through the use of electronic engine controls.



Power Train

Move material more efficiently with improved power and control.



Impeller Clutch Torque Converter (ICTC) and Rimpull Control System (RCS)

Lower your cost per ton utilizing advanced ICTC and RCS for modulated rimpull.

- Reduce tire slippage and wear by modulating rimpull from 100 to 25 percent while depressing left pedal. After 25 percent rimpull is achieved the left pedal applies the brake.
- Reduce the potential for wheel slippage without reducing hydraulic efficiency with RCS.
- Improve fuel efficiency in certain applications with our lock-up clutch torque converter providing direct drive.

Hydraulics

Productivity enabling you to move more and make more.



Positive Flow Control Hydraulics

Increase efficiency through our Positive Flow Control (PFC) Hydraulic System. PFC has concurrent pump and valve control. By optimizing pump control, hydraulic oil flow is proportionate to implement lever movement.

- Fast, productive cycles enabled by three electronically controlled, fully variable piston pumps.
- Increase bucket feel and control through increased hydraulic response.
- Consistent performance and efficiency with lower system heat.

Electro Hydraulic Controls

Operators increase productivity with our responsive implements feature.

- Operate comfortably through electronically controlled hydraulic cylinder stops.
- Handle easy-to-use soft detent controls.
- Conveniently set automatic implement kickouts from inside the cab.

Steering System

Confident loader operation starts with precise machine control enabled by the 993K's load sensing hydraulic steering system.

- Increase efficiency with our variable displacement piston pump.
- Achieve precise positioning for easy loading in tight areas with 43 degrees of steering articulation.
- Enhance operator comfort with integrated steering and transmission control functions.

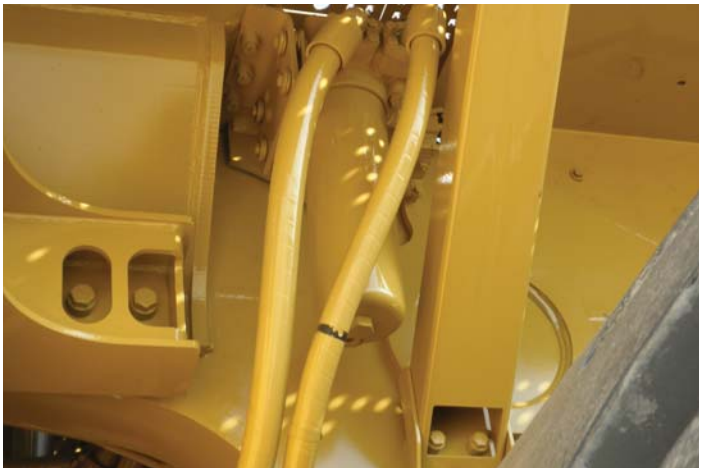
Filtration System

Benefit from extended performance and reliability of your hydraulic system with our advanced filtration system.

- Implement/fan case drain filters.
- Steering case drain filters.
- Implement, steering, brake and fan high pressure screens.
- Full flow implement return screens.
- Full flow fan/steering return filter.
- Pilot filtration.
- Extended life transmission filter.
- Front and rear axle oil filters.













Your operators can work more efficiently and stay comfortable with our customer-inspired cab features.

Entry and Exit

Enter and exit the cab easily and safely with these newly designed, ergonomic features.

- 45 degree access stairway.
- Fold up STIC steer/arm rest.

Cat Optimized Seat System

Enhance comfort and reduce operator fatigue with the Cat Optimized Seat System.

- High back design and extra thick, contoured cushions.
- Air suspension system.
- Easy-to-reach seat levers and controls for six way adjustments.
- Seat-mounted implement pod and STIC steer that moves with the seat.
- 76 mm (3 in) wide retractable seat belt.

Trainer Seat

Safely train other operators in comfort with our standard training seat.

- 76 mm (3 in) wide, retractable seat belt.
- Fold-down design with molded drink tray and storage.

Operator Station

Best-in-Class operator comfort and ergonomics.



Environment

Your operator's productivity is enhanced with our clean, comfortable cab environment.

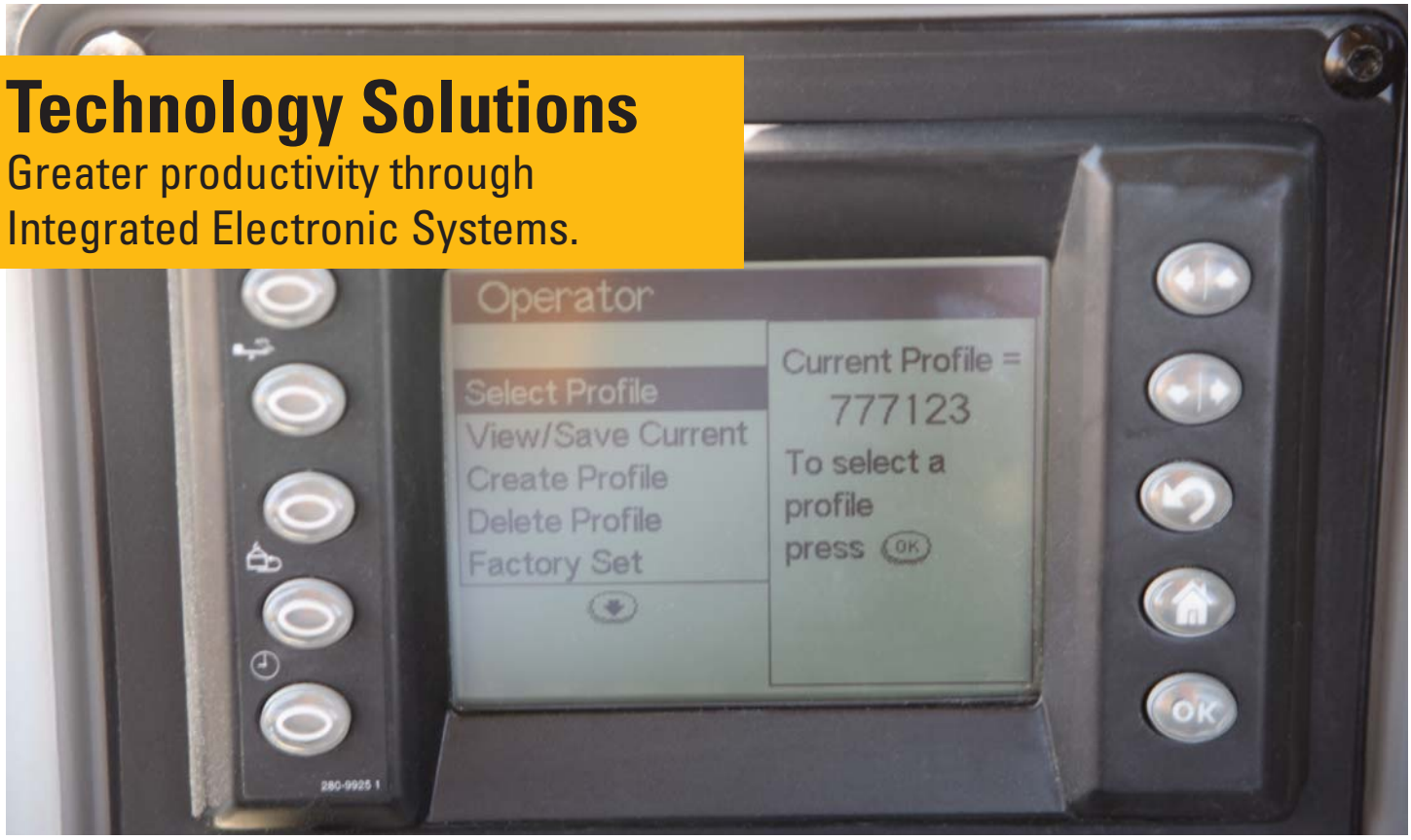
- Experience reduced vibrations from viscous cab mounts and seat air suspension.
- Maintain desired cab temperature with automatic temperature controls.
- Pressurized cab with filtered air.
- Sound level reduced to a quiet 70 dB(A).





Technology Solutions

Greater productivity through Integrated Electronic Systems.



The 993K electronic systems have been completely integrated to function as one machine. This integration creates a smart machine and more informed operator, maximizing the productivity of both.

VIMS™ 3G

We have worked hard to help our customers and operators perform at their best through our Vital Information Management System (VIMS 3G).

- Easy-to-view Advisor Display features a large screen.
- Intuitive operation and easy navigation with our enhanced user interface.
- Decrease service time by keeping operators informed about machine system malfunction or operation.

Operator Profile

Operator comfort begins with personalized machine feature settings. Through our Advisor Display, an operator can instantly recall personalized profiles.

- Store up to 10 separate operator profiles through Advisor.
- Decrease setup time between operators by recalling personalized screen layouts.

Payload Control System

Increase your efficiency with our Payload Control System 3.0.

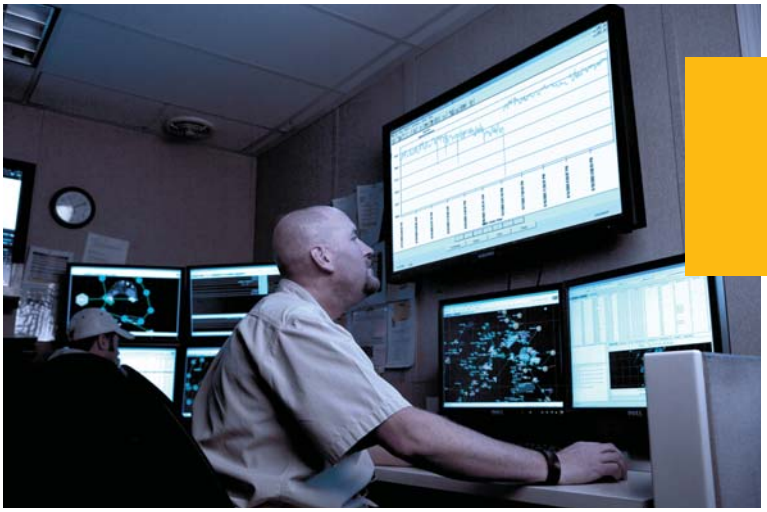
- Quick payload weighs with on-the-go weighing.
- Comprehensive record accuracy of machine performance with up to 1,000 truck records with 25 different materials.

Cycle Timer

Impact your bottom line through improved machine performance with Cycle Timer. Each loading segment time can be analyzed to help you achieve more efficient operation.

Features:

- Production Summary
- Machine Utilization
- Productive Cycle Time
- Loader Payload Summary
- Fuel Usage Summary



Cat MineStar™ System

Work more productively.





Cat MineStar System is the industry's broadest suite of integrated mine operations and mobile equipment management technologies, configurable to suit your operation's needs. Its capability sets – Fleet, Terrain, Detect, Health and Command – contain a range of technologies that let you manage everything from fleet assignment and condition monitoring to remote and autonomous control. The 993K can take advantage of many of these advanced technologies, some of which are standard out of the factory.

Fleet

Fleet provides comprehensive, real-time machine tracking, assignment and productivity management, giving you a comprehensive overview of all operations from anywhere in the world.

Terrain for Loading

Terrain with your 993K enables high-precision management of loading operations through the use of guidance technology. It increases 993K's productivity and provides you real-time feedback for improved efficiency.

Detect

Detect helps increase operator awareness, enhancing safety at your operation. It includes a range of capabilities designed to assist the operator with areas of limited visibility around fixed and mobile equipment.

Health

Health delivers critical event-based machine condition and operating data for your entire fleet. It includes comprehensive equipment health and asset monitoring capabilities, with a wide range of diagnostic, analytic and reporting tools.

Safety

Making your safety our priority.





Powered Access System

The Cat powered access system allows easier access to the primary stairs by improving ingress and egress to and from the rear platform.

- Safe, ergonomic access system.
- All operators have adequate space when using the wide stairway.
- Operators maintain three-point contact when using full handrails on each side.
- Raise and lower platform from cab level or ground.
- Occupants can quickly exit with a conveniently located emergency release valve if the loader becomes inoperable.

We are constantly improving our products in an effort to provide a safe work environment for the operator and those who work on your job site.

Machine Access

- 45 degree stairs increase safety for operators getting on and off the 993K.
- Walkways with non-skid surfaces and integrated lock out/tag out points are designed into the service areas.
- Windshield cleaning platforms provide safe and convenient access for the operator.
- Maintain three points of contact at all times through ground level or platform accessible service areas.
- Emergency egress access.

Visibility

- Optional pull down window shade and heated mirrors ensure extended visibility for safe operation.
- Cat Detect with Object Detection System (rearview camera and radar) or Vision (rearview camera) option increases operator awareness around the machine.
- Lighting packages provide excellent workspace visibility.
- Cab mounted LED warning beacons.

Operator Environment

- Low vibrations to the operator with viscous cab mounts and seat air suspension.
- Low interior sound levels.
- Operator training seat facilitates safe new operator training.
- Standard 76 mm (3 in) seat belts on the operator seat and operator training seat.







Serviceability

Enabling high uptime by reducing your service time.



We can help you succeed by ensuring your 993K has design features to reduce your downtime.

- Longer service intervals on fluids and filters.
- Safe and convenient service with ground level or platform access and grouped service points.
- Swing-out doors on both sides of the engine compartment provide easy access to important daily service checks.
- Ecology drains for ease of service and prevention of spilling potential environmental contaminants.
- Centralized remote pressure taps.
- Reduce downtime with VIMS system notifications so your operators and technicians can resolve any problems before failure.

Customer Support

Your Cat dealers know how to keep your mining machines productive.

Legendary Cat Dealer 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.





Sustainability

Stewards of the environment.

Protecting the Environment

Environmental responsibility is designed and built into our 993K's features.

- Burns up to 10% less fuel than the previous 993K to minimize your CO_2 footprint.
- Engine Idle Shutdown can help you save fuel by avoiding unnecessary idling.
- Reduce waste to the environment with our maintenance free batteries.
- Built for multiple lives, the Cat 993K is one of the most rebuilt products. To assist with maximizing machine life, Caterpillar provides a number of sustainable options such as our Reman and Certified Rebuild programs. In these programs, reused or remanufactured components can deliver cost savings of 40 to 70 percent, which lowers operating cost while benefiting the environment.
- Caterpillar offers retrofit packages to bring new features to older machines, maximizing your resource. And, when you go through the Cat Certified Rebuild program, these retrofit kits are part of the rebuild process.



System Match Efficiency

Efficient loading/hauling system starts with a perfect match.

	777G	785D
Standard Lift	3-4	
High Lift		6

Application Match

The standard 993K is sized to load the 90 tonnes (100 tons) 777 in 3-4 passes. The 993K High Lift loads the 136 tonnes (150 tons) 785 in six passes.

Efficient Combination

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.

Bucket Selection

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.

Bucket Ground Engaging Tools

Protect your investment.

Selecting the right bucket will determine the productivity of your loader. The process of selection starts with knowing the density of the material you load. From there, you can select the size and appropriate protection strategies that will suit the rated payload targets of your machine. Your Cat dealer can help you configure your bucket or have a custom bucket made to suit your application.

Heavy Duty Rock Bucket

Applications: Face loading tightly compacted pit materials. Moderate-abrasion factors and high-impact loads are suitable for this bucket.

High Abrasion Rock Bucket

Applications: Face loading iron ore. High-abrasion and moderate-impact loads are suitable for this bucket. A smooth floor is also desirable.

Coal Bucket

Applications: For coal or other light density non abrasive materials.

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.





Enhance the productivity of your loader and protect your investment in buckets with our Ground Engaging Tools (GET). Your knowledgeable Cat dealer will work with you to understand your application and needs for the GET that is best for you. For a full list of Cat GET please visit *http://www.cat.com/get.*

993K Wheel Loader Specifications

Engine (Tier 4)

Engine Model	Cat C32 with ACERT Technology	
Emissions	U.S. EPA Tier 4	
Rated Speed	1,800 rpm	
Gross Power – SAE J1995	775 kW	1,039 hp
Net Power – ISO 14396	764 kW	1,024 hp
Net Power – EEC 80/1269	726 kW	973 hp
Net Power – ISO 9249	726 kW	973 hp
Net Power – SAE J1349	719 kW	964 hp
Bore	145 mm	5.7 in
Stroke	162 mm	6.4 in
Displacement	32.1 L	1,959 in³
Peak Torque @ 1,250 rpm	5470 N·m	4,034 lb ft
Torque Rise	33%	

• Standard ambient cooling.

Engine (Tier 2)

Engine Model	Cat C32 with ACERT Technology	
Emissions	U.S. EPA Tier 2 Equivalent	
Rated Speed	1,800 rpm	
Gross Power – SAE J1995	777 kW	1,041 hp
Net Power – ISO 14396	764 kW	1,024 hp
Net Power – EEC 80/1269	726 kW	973 hp
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Displacement	32.1 L	1,959 in³
Peak Torque @ 1,250 rpm	5470 N·m	4,034 lb ft
Torque Rise	33%	

• Standard ambient cooling.

Operating Specifications

Operating Weight (Tier 2)*	133 668 kg	294,687 lb
Operating Weight (Tier 4)*	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 m³	16.0-31.0 yd³
Cat Truck Match – Standard Lift	777	
Cat Truck Match – High Lift	777, 785	
Articulation Angle	43 degrees	

* High lift, 60/65-51 BFOR (311-1938), standard cooling, 13.8 m³ (18.0 yd³) bucket (303-3280).

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 BFOR (311-1938), 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.

Hydraulic System – Steering

Steering System – Circuit	Closed	
Steering System – Pump	Piston, variable displacement	
Maximum Flow @ 1,985 rpm (6900 kPa/1,000 psi)	505 L/min	133 gal/min
Relief Valve Setting – Steering	34 500 kPa	5,000 psi
Total Steering Angle	86 degrees	

Service Refill Capacities

Fuel Tank	2170.0 L	573.3 gal
Cooling System	303.5 L	80.2 gal
Crankcase	120.0 L	31.7 gal
Transmission	196.9 L	52.0 gal
Differentials and Final Drives – Front	482.0 L	127.3 gal
Differentials and Final Drives – Rear	482.0 L	127.3 gal
Hydraulic System Factory Fill	873.0 L	230.0 gal
Hydraulic System (tank only)	553.0 L	146.0 gal

• High Lift configuration.

Buckets

Bucket Capacities	12.2-23.7 m^3	16.0-31.0 yd^3

Axles

Front	Fixed
Rear	Trunnion
Oscillation Angle	10 degrees

Sound

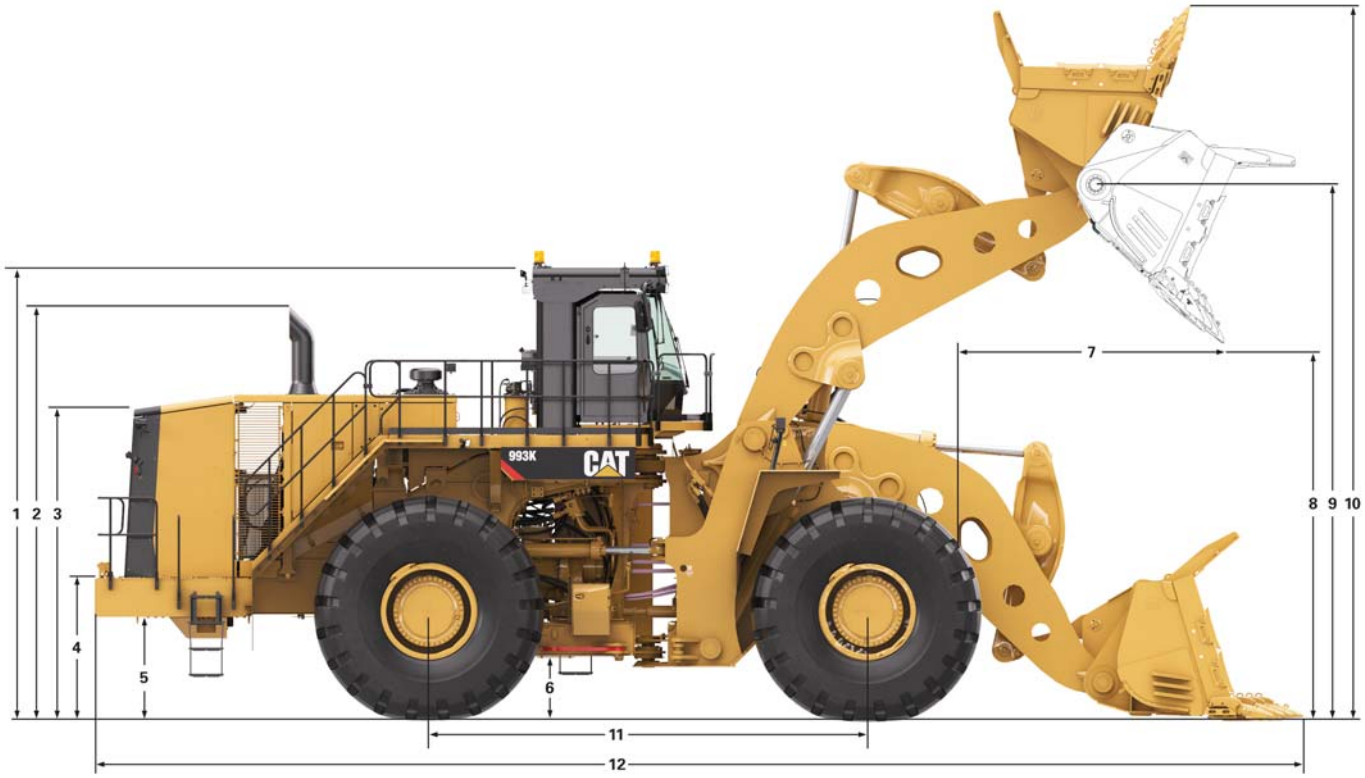
Operator Sound Pressure (ANSI/SAE J1166 FEB08)	72 dB(A)
Dynamic Operator Sound Pressure (ISO 6396:2008)	70 dB(A)

- Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors or windows are open for extended periods or in a noisy environment. Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors and windows are open for extended periods or in a noisy environment.
- The machine sound power level is 116 dB(A), measured according to the test procedures and conditions specified in ISO 6395:2008 for the standard machine configuration. The measurement was conducted at 70 percent of the maximum engine cooling fan speed.
- The machine sound power level is 113 dB(A), measured according to the test procedures and conditions specified in ISO 6395:2008 for the sound suppressed machine configuration. The measurement was conducted at 70 percent of the maximum engine cooling fan speed.

993K Wheel Loader Specifications

Dimensions

All dimensions are approximate.



		Standard Lift Linkage, 50/65-51 (311-1938), 13.8 m³ (18 yd³) (303-3280)		High Lift Linkage, 50/65-51 (311-1938), 13.8 m³ (18 yd³) (303-3280)	
1	Ground to Top of Exhaust Stacks	5555 mm	18.2 ft	5555 mm	18.2 ft
2	Ground to Top of ROPS	6069 mm	19.9 ft	6069 mm	19.9 ft
3	Ground to Top of Hood	4373 mm	14.3 ft	4373 mm	14.3 ft
4	Ground to Center of Rear Axle	1461 mm	4.8 ft	1461 mm	4.8 ft
5	Ground to Bumper Clearance	1389 mm	4.6 ft	1389 mm	4.6 ft
6	Ground to Lower Hitch Clearance	721 mm	2.4 ft	721 mm	2.4 ft
7	Reach at Maximum Lift, Dump Position	2602 mm	8.5 ft	2711 mm	8.9 ft
8	Clearance at Maximum Lift, Dump Position	4669 mm	15.3 ft	5314 mm	17.4 ft
9	B-Pin Height at Maximum Lift	7116 mm	23.3 ft	7761 mm	25.5 ft
10	Maximum Overall Height, Bucket Raised	9903 mm	32.5 ft	10 547 mm	34.6 ft
11	Rear Axle Center Line to Bumper	4475 mm	14.7 ft	4475 mm	14.7 ft
12	Wheel Base	5890 mm	19.3 ft	5890 mm	19.3 ft
13	Maximum Overall Length	15 264 mm	50.1 ft	15 909 mm	52.2 ft
14	Front Axle Centerline to Bucket Tip	5449 mm	17.9 ft	6094 mm	20.0 ft

Operating Specifications – Standard Lift

Tires: 50/65-51 Part No.: 311-1938 SLR: 1461 mm (57.5 in)

Bucket Type		Rock						Coal
Ground Engaging Tools		Teeth & Segment						Teeth & Segment
Cutting Edge Type		Spade						Straight
Bucket Part No.		303-3270	303-3310	303-3260	303-3330	303-3280	303-3290	310-8990
Struck Capacity	m^3	10.0	10.0	10.0	10.0	11.0	12.0	20.0
	yd^3	13.1	13.1	13.1	13.1	14.4	15.7	26.2
Heaped Capacity	m^3	13.0	13.0	12.0	12.0	14.0	14.0	24.0
	yd^3	17.0	17.0	15.7	15.7	18.3	18.3	31.4
Width	mm	5080	5160	5080	5160	5080	5080	6300
	ft	16.7	16.9	16.7	16.9	16.7	16.7	20.7
Dump Clearance at Full Lift and 45° Discharge	mm	4768	4835	4858	4883	4669	4669	4614
	ft	15.6	15.9	15.9	16.0	15.3	15.3	15.1
Reach at Lift and 45° Discharge	mm	2503	2507	2413	2459	2602	2602	2605
	ft	8.2	8.2	7.9	8.1	8.5	8.5	8.5
Reach with Lift Arms Horizontal and Bucket Level	mm	4922	4878	4794	4810	5062	5062	5103
	ft	16.1	16.0	15.7	15.8	16.6	16.6	16.7
Digging Depth	mm	132	117	132	117	132	132	154
	ft	0.4	0.4	0.4	0.4	0.4	0.4	0.5
Overall Length	mm	15 124	15 068	14 996	15 000	15 264	15 264	15 323
	ft	49.6	49.4	49.2	49.2	50.1	50.1	50.3
Overall Height with Bucket at Full Raise	mm	9903	9876	9794	9794	9903	10 032	10 030
	ft	32.5	32.4	32.1	32.1	32.5	32.9	32.9
Loader Clearance Turning Radius (SAE CARRY)	mm	11 012	11 016	11 013	10 998	11 049	11 049	11 746
	ft	36.1	36.1	36.1	36.1	36.2	36.2	38.5
Full Dump Angle	deg	–50	–50	–50	–50	–50	–50	–50
Static Tipping Load – Straight (no tire squash)	kg	83 096	81 703	83 263	82 300	81 931	82 147	78 089
	lb	183,194	180,124	183,563	181,440	180,626	181,102	172,157
Static Tipping Load – Straight (with tire squash)	kg	79 105	77 736	79 312	78 354	77 962	78 114	73 991
	lb	174,396	171,378	174,853	172,741	171,877	172,212	163,122
Static Tipping Load – Full Turn (articulated 40°) (no tire squash)	kg	71 976	70 608	72 159	71 193	70 886	71 056	67 100
	lb	158,680	155,664	159,084	156,953	156,276	156,651	147,930
Static Tipping Load – Full Turn (articulated 40°) (with tire squash)	kg	64 192	62 859	64 431	63 471	63 141	63 220	59 190
	lb	141,519	138,580	142,046	139,929	139,202	139,376	130,491
Static Tipping Load – Full Turn (articulated 43°) (no tire squash)	kg	70 327	68 963	70 513	69 546	69 248	69 411	65 470
	lb	155,045	152,037	155,454	153,322	152,665	153,025	144,337
Static Tipping Load – Full Turn (articulated 43°) (with tire squash)	kg	61 906	62 065	63 762	63 342	59 853	59 704	56 337
	lb	147,606	148,378	152,242	151,492	142,546	142,221	134,559
Breakout Force	kN	718	734	762	761	674	673	638
	lb-f	161,390	165,010	171,372	171,035	151,499	151,252	143,361
Operating Weight	kg	132 251	133 234	131 988	132 788	132 702	132 877	135 859
	lb	291,564	293,731	290,984	292,748	292,558	292,944	299,518
Weight Distribution at SAE Carry (unloaded) – Front	kg	76 930	78 615	76 482	77 858	77 770	78 022	83 099
	lb	169,601	173,315	168,614	171,647	171,453	172,008	183,203
Weight Distribution at SAE Carry (unloaded) – Rear	kg	55 322	54 620	55 506	54 930	54 933	54 856	52 760
	lb	121,963	120,416	122,370	121,101	121,105	120,936	116,316
Weight Distribution at SAE Carry (loaded) – Front	kg	120 265	121 981	119 797	121 151	121 280	121 508	127 036
	lb	265,139	268,922	264,106	267,091	267,377	267,880	280,065
Weight Distribution at SAE Carry (loaded) – Rear	kg	39 202	38 469	39 408	38 854	38 638	38 585	36 040
	lb	86,426	84,810	86,879	85,658	85,182	85,065	79,454

993K Wheel Loader Specifications

Operating Specifications – High Lift

Tires: 50/65-51 Part No.: 311-1938 SLR: 1461 mm (57.5 in)

Bucket Type		Rock						Coal
Ground Engaging Tools		Teeth & Segment						Teeth & Segment
Cutting Edge Type		Spade						Straight
Bucket Part No.		303-3270	303-3310	303-3260	303-3330	303-3280	303-3290	310-8990
Struck Capacity	m^3	10.0	10.0	10.0	10.0	11.0	12.0	20.0
	yd^3	13.1	13.1	13.1	13.1	14.4	15.7	26.2
Heaped Capacity	m^3	13.0	13.0	12.0	12.0	14.0	14.0	24.0
	yd^3	17.0	17.0	15.7	15.7	18.3	18.3	31.4
Width	mm	5080	5160	5080	5160	5080	5080	6300
	ft	16.7	16.9	16.7	16.9	16.7	16.7	20.7
Dump Clearance at Full Lift and 45° Discharge	mm	5413	5480	5503	5528	5314	5314	5259
	ft	17.8	18.0	18.1	18.1	17.4	17.4	17.3
Reach at Lift and 45° Discharge	mm	2612	2616	2522	2568	2711	2711	2714
	ft	8.6	8.6	8.3	8.4	8.9	8.9	8.9
Reach with Lift Arms Horizontal and Bucket Level	mm	5438	5394	5310	5326	5578	5578	5619
	ft	17.8	17.7	17.4	17.5	18.3	18.3	18.4
Digging Depth	mm	199	184	199	184	199	199	221
	ft	0.7	0.6	0.7	0.6	0.7	0.7	0.7
Overall Length	mm	15 769	15 714	15 641	15 646	15 909	15 909	15 965
	ft	19.5	19.4	19.1	19.1	20.0	20.0	20.2
Overall Height with Bucket at Full Raise	mm	10 547	10 521	10 439	10 439	10 547	10 677	10 675
	ft	34.6	34.5	34.2	34.2	34.6	35.0	35.0
Loader Clearance Turning Radius (SAE CARRY)	mm	11 308	11 311	11 309	11 292	11 348	11 348	12 043
	ft	37.1	37.1	37.1	37.0	37.2	37.2	39.5
Full Dump Angle	deg	–50	–50	–50	–50	–50	–50	–50
Static Tipping Load – Straight (no tire squash)	kg	69 659	68 341	69 856	68 908	68 656	68 775	64 946
	lb	153,571	150,665	154,006	151,916	151,360	151,624	143,182
Static Tipping Load – Straight (with tire squash)	kg	66 576	65 274	66 804	65 860	65 583	65 656	61 751
	lb	146,775	143,904	147,277	145,196	144,586	144,747	136,137
Static Tipping Load – Full Turn (articulated 40°) (no tire squash)	kg	59 871	58 572	60 081	59 130	58 927	59 011	55 261
	lb	131,994	129,130	132,455	130,359	129,911	130,096	121,830
Static Tipping Load – Full Turn (articulated 40°) (with tire squash)	kg	53 578	52 304	53 828	53 252	52 657	52 674	48 854
	lb	118,119	115,310	118,670	117,400	116,089	116,126	107,705
Static Tipping Load – Full Turn (articulated 43°) (no tire squash)	kg	58 420	57 124	58 631	57 680	57 484	57 563	53 825
	lb	128,794	125,936	129,259	127,163	126,730	126,904	118,664
Static Tipping Load – Full Turn (articulated 43°) (with tire squash)	kg	52 300	52 185	53 770	52 882	50 628	50 476	47 250
	lb	115,302	115,048	118,542	116,585	111,616	111,280	104,168
Breakout Force	kN	717	733	761	760	673	672	637
	lb-f	161,143	164,740	171,125	170,765	151,274	151,004	143,158
Operating Weight	kg	133 217	134 200	132 954	133 754	133 668	133 843	136 825
	lb	293,694	295,861	293,114	294,878	294,688	295,074	301,648
Weight Distribution at SAE Carry (unloaded) – Front	kg	81 114	82 919	80 637	82 111	82 005	82 276	87 684
	lb	178,825	182,804	177,774	181,024	180,790	181,388	193,311
Weight Distribution at SAE Carry (unloaded) – Rear	kg	52 104	51 282	52 317	51 643	51 663	51 567	49 141
	lb	114,869	113,057	115,340	113,854	113,898	113,686	108,337
Weight Distribution at SAE Carry (loaded) – Front	kg	123 719	125 558	123 225	124 686	124 768	125 014	130 818
	lb	272,753	276,808	271,665	274,884	275,066	275,609	288,404
Weight Distribution at SAE Carry (loaded) – Rear	kg	34 446	33 590	34 677	34 017	33 848	33 777	30 956
	lb	75,941	74,054	76,450	74,994	74,623	74,465	68,245

Changes in Specifications due to Tire Size*

Dimensional Changes

		50/65-51 (311-1938)	50/65R51 (311-2443)	50/65-51 (322-9665)	50/65R51 (311-2445)
Dump Clearance at Full Lift and 45° Discharge	mm	0	–51	0	–20
	in	0	–2.01	0	–0.79
Reach at Full Lift and 45° Discharge	mm	0	0	0	–2
	in	0	0	0	–0.08
Reach with Lift Arms Horizontal and Bucket Level	mm	0	0	0	–2
	in	0	0	0	–0.08
Digging Depth	mm	0	+51	0	+20
	in	0	+2.01	0	+0.79
Overall Length	mm	0	+41	0	+16
	in	0	+1.61	0	+0.63
Overall Height with Bucket at Full Raise	mm	0	–51	0	–20
	in	0	–2.01	0	–0.79
Total Width (Width over Tires)	mm	0	+18	0	+13
	in	0	+0.71	0	+0.51

Weight Changes

		50/65-51 (311-1938)	50/65R51 (311-2443)	50/65-51 (322-9665)	50/65R51 (311-2445)
Static Tipping Load – Straight (no tire squash)	kg	0	0	0	–583
	lb	0	0	0	–1,285
Static Tipping Load – Straight (with tire squash)	kg	0	–850	0	–2319
	lb	0	–1,874	0	–5,113
Static Tipping Load – Full Turn (articulated 40°) (no tire squash)	kg	0	0	0	–515
	lb	0	0	0	–1,135
Static Tipping Load – Full Turn (articulated 40°) (with tire squash)	kg	0	–1000	0	–3398
	lb	0	–2,205	0	–7,491
Static Tipping Load – Full Turn (articulated 43°) (no tire squash)	kg	0	0	0	–505
	lb	0	0	0	–1,113
Static Tipping Load – Full Turn (articulated 43°) (with tire squash)	kg	0	–730	0	–1774
	lb	0	–1,609	0	–3,911
Operating Weight	kg	0	0	0	–760
	lb	0	0	0	–1,676

*50/65-51 used as baseline tire; 303-3280 bucket.

993K Standard Equipment

Standard Equipment

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

ELECTRICAL

- Alarm, back-up
- Alternator, 150-amp
- Batteries, maintenance free, 4 – 1,400 CCA
- Deutsch terminal connectors
- Diagnostic connector starting and charging system
- Electrical system, 24 volt
- Electronic Service Center
- Electronic transmission control
- Lighting system, halogen (front and rear) lighting, access stairway
- Starter and charging system, 24V
- Starter receptacle for emergency start
- Starter and transmission lockouts (bumper)

OPERATOR ENVIRONMENT

- Advisor Display, displays real time operating information, performs calibrations and customizes operator settings
- Air conditioner
- Air precleaner
- Cab, sound suppressed and pressurized, separate external rollover protective structure (ROPS/FOPS) radio ready for entertainment, includes antenna, speakers and converter (12-volt 10-amp) and power port
- Cigar lighter, ashtray
- Coat hook
- Controls, lift and tilt function
- Digital display on center console
  - Gear
  - Ground speed
  - Machine hours
- Heater, defroster
- Horn, electric
- Instrumentation, gauges
  - Coolant temperature
  - Fuel level
  - Hydraulic oil temperature
  - Power train oil temperature
  - Tachometer
- Light, cab, dome
- Lunchbox, beverage and manual holders
- Mirrors, rearview (externally mounted)
- Rimpull Control System
- Seat, Cat Comfort (cloth), air suspension, six-way adjustable
- Seat, trainer with lap belt, 76 mm (3 in) wide
- Seat belt, retractable, 76 mm (3 in) wide
- STIC Control System
- Transmission gear indicator
- Vital Information Management System (VIMS) with Advisor Display: External Data Port, Customizable Operator Profiles, Cycle Timer, Integrated Payload Control System
- Wet-Arm wipers/washers (front and rear)
  - Intermittent front and rear wipers

POWER TRAIN

- Brakes, oil-cooled, multi-disc, service/secondary
- Case drain filters
- Demand fan
- Driveline parking brake
- Engine, Cat C32 ACERT
- Fuel priming pump (electric)
- Ground level engine shutoff
- Precleaner, engine air intake (above hood)
- Radiator
- Starting aid, ether, automatic
- Throttle lock, electronic
- Torque converter, Impeller Clutch (ICTC) with Rimpull Control System
- Transmission, planetary powershift, 3F/3R electronic control

OTHER

- Automatic bucket leveler
- Automatic lift and lower bucket kickout
- Axle ecology drain
- Bumper service center
- Deluxe filtration
- Emergency platform egress
- Front walkway
- Fuel, fast fill system
- Grouped hydraulic pressure ports
- Guards, crankcase and power train
- Hitch, drawbar with pin
- Implement and steering ecology drains
- Implement lock lever, cab
- Linkage pins, maintenance free
- Oil sampling valves
- Positive Flow Control implement system
- Product Link™
- Rims
- Service center with ground level electrical and fluid connections
- Sight gauges for steering, implement and transmission oil
- Stairway, left and right rear access
- Starter lockout, bumper
- Steering and transmission lock lever, cab
- Steering, load sensing
- Toe kicks
- Transmission lockout, bumper

993K Optional Equipment

Optional Equipment

With approximate changes in operating weights. Optional equipment may vary. Consult your Cat dealer for specifics.

POWER TRAIN
- –50° C (–58° F) antifreeze
- Engine coolant heater (120V)
- Engine coolant heater (240V)

ELECTRICAL
- LED warning strobe
- Object detection (radar)
- Power converter
- Rear vision camera

OPERATOR ENVIRONMENT
- AM/FM/CD/MP3 radio
- Cab precleaner
- Satellite Sirius radio with bluetooth
- Sun screen

MACHINE CONTROL AND GUIDANCE
- Cat Terrain ready

SPARE RIMS
- 40.00×51 spare rim

MISCELLANEOUS ATTACHMENTS
- Axle oscillation limit stop
- Egress, powered rear access
- Rear roading fenders

993K Mandatory Attachments

Mandatory Attachments

Select one from each group. Mandatory and optional equipment may vary. Consult your Cat dealer for specifics.

LINKAGE
- Standard
- High

POWER TRAIN
- Standard cooling
- High ambient cooling

- Standard engine
- Engine with brake

- Standard ICTC
- ICTC with lock up clutch

- Standard steering
- Secondary steering

ELECTRICAL
- Halogen lights
- HID lights
- Product Link (Cellular)
- Product Link (Satellite)

OPERATOR ENVIRONMENT
- Access steps
- Powered Access

- Standard glass
- Rubber mounted glass

- Standard mirror
- Heated mirror

- Standard seat
- Heated seat

FUEL SYSTEM
- Fuel heater
- Standard fuel

OTHER
- Brake lines

- Grease lines
- Centromatic autolube

- No Ride Control
- Ride Control

- No sound suppression
- Sound suppression

993K Wheel Loader

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