

990K Wheel Loader

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

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Engine		
Engine Model	Cat C27	
Rated Speed	1,800 rpm	
Gross – ISO 14396	561 kW	752 hp
Gross – SAE J1995	571 kW	766 hp
Net Power – SAE J1349 (Standard Ambient)	521 kW	699 hp
Net Power – SAE J1349 (High Ambient)	483 kW	648 hp
Bore	137.2 mm	5.4 in
Stroke	152.4 mm	6.0 in
Displacement	27.03 L	1,649.5 in ³
Peak Torque (1,200 rpm)	3557 N·m	2,624 lbf-ft
Torque Rise	18%	

Two engine emission options are available:

- 1. Meets U.S. EPA Tier 4 Final and EU Stage V emission standards.
- 2. Equivalent to U.S. EPA Tier 2 and EU Stage II.

Transmission		
Transmission Type	Cat planetar	ry power shift
Forward 1	7.3 km/h	4.5 mph
Forward 2	13.3 km/h	8.3 mph
Forward 3	22.9 km/h	14.2 mph
Reverse 1	7.9 km/h	4.9 mph
Reverse 2	14.7 km/h	9.1 mph
Reverse 3	24.9 km/h	15.5 mph
Direct Drive Forward 1	Lock-up dis	abled
Direct Drive Forward 2	13.7 km/h	8.5 mph
Direct Drive Forward 3	24.5 km/h	15.2 mph
Direct Drive Reverse 1	8.7 km/h	5.4 mph
Direct Drive Reverse 2	15.4 km/h	9.6 mph
Direct Drive Reverse 3	26.4 km/h	16.4 mph

[•] Travel speeds based on Michelin 45/65R39 LD D2**L5 tires.

Operating Specifications		
Operating Weight	80 974 kg	178,517 lb
Rated Payload – Standard	15.9 tonnes	17.5 tons
Rated Payload – High Lift	15.9 tonnes	17.5 tons
Bucket Capacity Range	8.6 m ³ - 10.0 m ³	11.25 yd³- 13.0 yd³
Cat Truck Match – Standard	773-775	
Cat Truck Match – High Lift	775-777	

Hydraulic System – Lift/Tilt		
Lift/Tilt System – Circuit	Positive flow control	
Lift/Tilt System	Variable displacement piston	
Maximum Flow at 1,800 rpm	817 L/min	216 gal/min
Relief Valve Setting – Lift/Tilt	33 000 kPa	4,786 psi
Cylinders, Double Acting: Lift, Bore and Stroke	235 mm x 1287 mm	9.3 in x 50.7 in
Cylinders, Double Acting: Tilt, Bore and Stroke	292.1 mm x 820 mm	11.5 in x 32.3 in
Pilot System	Open loop and pressure reducing	
Relief Valve Setting	3500 kPa	507 psi

Hydraulic Cycle Time			
Rack Back	4.3 Seconds		
Raise	8.2 Seconds		
Dump	2.9 Seconds		
Lower	3.7 Seconds		
Lower Float Down	3.6 Seconds		
Total Hydraulic Cycle Time (empty bucket)	13.8 Seconds		

Hydraulic System – Steering		
Steering	ISO 5010:20	07
Steering System – Circuit	Pilot, load sensing	
Steering System – Pump	Variable displacement piston	
Maximum Flow at 1,400 rpm	358 L/min	94.5 gal/min
Relief Valve Setting – Steering	32 000 kPa	4,641 psi
Total Steering Angle	70°	

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.7 kg of refrigerant which has a $\rm CO_2$ equivalent of 3.861 metric tonnes.

Axles	
Front	Fixed
Rear	Trunnion
Oscillation Angle	8.5°
Brakes	
Brakes	ISO 3450:2011
Operator Cab	
ROPS/FOPS	ROPS/FOPS meet ISO 3471:2008 and ISO 3449:2005 Level II standards

Service Refill Capacities				
Fuel Tank	1114 L	294.3 gal		
Cooling System	208 L	54.9 gal		
Engine Crankcase	75.7 L	20.0 gal		
Transmission	110 L	29.1 gal		
Differentials and Final Drives – Front	271 L	71.6 gal		
Differentials and Final Drives – Rear	261 L	68.9 gal		
Hydraulic System Factory Fill	795 L	210.0 gal		
Hydraulic Tank	261 L	68.9 gal		
(Implement and Hydraulic Fan)				
Hydraulic Tank (Steering and Braking)	132 L	34.9 gal		

• All nonroad U.S. EPA Tier 4 Final/Stage V diesel engines are required to use only Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less. Biodiesel blends up to B20 (20% blend by volume) are acceptable when blended with 15 ppm (mg/kg) sulfur or less ULSD. B20 should meet ASTM D7467 specification (biodiesel blend stock should meet Cat biodiesel spec, ASTM D6751 or EN 14214. Cat DEO-ULSTM or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specification are required. For further fluid specifications and guidelines, visit: http://parts.cat.com/cdalfiles/3244668/7/SEBU6250-19.pdf.

Sound Performance – Tier 4 Final/Stage V			
	Standard	Suppression	
Operator Sound Level (ISO 6396:2008)	69 dB(A)	69 dB(A)	
Machine Sound Level (ISO 6395:2008)	115 dB(A)	113 dB(A)	

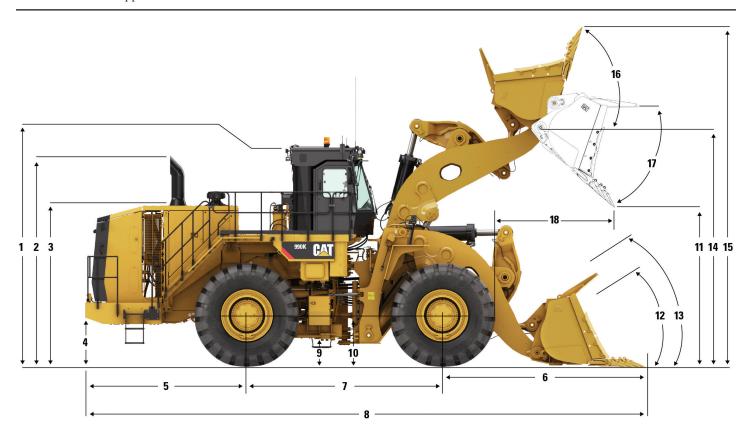
Journal Criofinanoc Tiol 2/otage if Equivalent			
	Standard	Suppression	
Operator Sound Level (ISO 6396:2008)	69 dB(A)	69 dB(A)	
Machine Sound Level (ISO 6395:2008)	115 dB(A)	113 dB(A)	

Sound Performance - Tier 2/Stage II Equivalent

- The machine sound power level was measured according to the test procedures and conditions specified in ISO 6395:2008. The measurement was conducted at 70 percent of the maximum engine cooling fan speed.
- The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at 70 percent of the maximum engine cooling fan speed.
- 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.

Dimensions

All dimensions are approximate.



		Standar	Standard Lift		Lift	
1	Ground to Top of ROPS	5240 mm	17.2 ft	5240 mm	17.2 ft	
2	Ground to Top of Exhaust Stacks	5049 mm	16.6 ft	5049 mm	16.6 ft	
3	Ground to Top of Hood	3862 mm	12.7 ft	3862 mm	12.7 ft	
4	Ground to Bumper Clearance	1079 mm	3.5 ft	1079 mm	3.5 ft	
5	Rear Axle Centerline to Bumper	3795 mm	12.5 ft	3795 mm	12.5 ft	
6	Front Axle Centerline to Bucket Tip	4677 mm	15.3 ft	5416 mm	17.8 ft	
7	Wheelbase	4600 mm	15.1 ft	4600 mm	15.1 ft	
8	Maximum Overall Length	13 072 mm	42.9 ft	13 811 mm	45.3 ft	
9	Ground to Lower Hitch Clearance	596 mm	2.0 ft	596 mm	2.0 ft	
10	Ground to Center of Front Axle	1290 mm	4.2 ft	1290 mm	4.2 ft	
11	Clearance at Maximum Lift	4060 mm	13.3 ft	4521 mm	14.8 ft	
12	Rack Back Angle at Ground Level	40.4 de	40.4 degrees		39.9 degrees	
13	Rack Back Angle at Carry	48.8 de	grees	49.3 de	grees	
14	B-Pin Height at Maximum Lift	6009 mm	19.7 ft	6470 mm	21.2 ft	
15	Maximum Overall Height, Bucket Raised	8293 mm	27.2 ft	8754 mm	28.7 ft	
16	Rack Angle at Maximum Lift	63.7 de	grees	60.6 degrees		
17	Dump Angle at Maximum Lift	45 deg	grees	51 degrees		
18	Reach at Maximum Lift	2194 mm	7.2 ft	2583 mm	8.5 ft	

Note: Specifications are calculated with 9.0 m^3 (11.8 yd^3) rock bucket and Bridgestone 45/65R39 VSDL One Star tires.

Bucket Capacity/Material Density Selection Guide

Standard Lift/High Lift Rated Payload (Quarry Face) – 11.3 tonnes/12.5 tons

	Material	Density		Bucket	Volume
kg/m³	lb/yd³	tonnes/m³	tons/yd³	m³	yd³
1590-1750	2,692-2,962	1.59-1.75	1.35-1.48	10.0	13.0
1728-1902	2,917-3,208	1.73-1.90	1.46-1.60	9.2	12.0
1849-2035	3,125-3,438	1.85-2.03	1.56-1.71	8.6	11.2

Standard Lift/High Lift

Rated Payload (Loose Material) – 20 tonnes/22 tons

	Material	Density		Bucket	: Volume
kg/m³	lb/yd³	tonnes/m³	tons/yd³	m³	yd³
1538-1692	2,588-2,847	1.54-1.69	1.29-1.42	13.0	17.0
1342-1477	2,256-2,482	1.34-1.48	1.13-1.24	14.9	19.5

Custom buckets are available upon request. Please work with your dealer for more information. Refer to the Large Wheel Loader Payload Policy.

Aggregate Package Operating Specifications – Standard Lift

		990K Std Agg		
Bucket Type		General Purpose	Coal	
Ground Engaging Tools		Bolt-on Cutting Edges	Bolt-on Cutting Edges	
Cutting Edge Type		Straight	Straight	
Bucket Part Number (Group Level)		548-9350	451-5410	
Struck Capacity (ISO)	m ³	10.0	12.0	
	yd³	13.1	15.7	
Heaped Capacity (ISO)	m^3	13.0	15.0	
	yd³	17.0	19.6	
Bucket Width – Overall	mm	4480	4450	
C1 (450 D) (F1)	ft	13.1	15.7	
Clearance at 45° Dump (Edge)	mm ft	4091 13.4	4108 13.5	
Reach at 45° Dump (Edge)		2123	2109	
Reacti at 45 Dunip (Edge)	mm ft	7.0	6.9	
Horizontal Arm and Level Bucket Reach (Edge)	mm	4247	4225	
Tronzontar i ini ana Bever Backet reach (Eage)	ft	13.9	13.9	
Digging Depth (Segment)	mm	151	149	
	in	6.0	5.9	
Overall Length – Bucket Level Ground	mm	13 018	12 994	
	ft	42.7	42.6	
Overall Height	mm	8541	8575	
	ft	28.0	28.1	
Loader Clearance Circle – Corner SAE Carry	mm	21 015	21 001	
D 1 D 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ft	68.9	68.9	
Rack Back Angle at SAE Carry	degrees	49.1	49.1	
Full Dump at Maximum Lift	degrees	-45.0	-45.0	
Tipping Load – Straight*	kg	49 825	50 799	
T' ' I 1 C' ' 1 (T' C 1)*	<u>lb</u>	109,844	111,993	
Tipping Load – Straight (Tire Squash)*	kg lb	46 940 103,485	47 424 104,552	
Tipping Load at Operating Weight (Articulated 35°)*	kg	44 309	45 222	
Tipping Load at Operating Weight (Articulated 33.)	lb	97,685	99,698	
Tipping Load at Operating Weight (Articulated 35°) (Tire Squash)*	kg	40 189	40 575	
Tipping Zoud at operating (Figure 1) (The squash)	lb	88,601	89,452	
Breakout Force (SAE Rated)**	kN	544.1	550.4	
	1bf	122,314	123,741	
Operating Weight	kg	81 250	80 924	
	lb	179,125	178,408	
Weight Distribution at SAE Carry (Unloaded)				
Front	kg	44 358	43 767	
	lb	97,793	96,489	
Rear	kg	36 892 81,333	37 158	
	lh.	01.333	81,919	
Looded Machine Weight	lb lsa			
Loaded Machine Weight	kg	101 208	100 882	
Weight Distribution at SAE Carry (Loaded)	kg lb	101 208 223,125	100 882 222,407	
Loaded Machine Weight Weight Distribution at SAE Carry (Loaded) Front	kg lb	101 208 223,125 77 694	100 882 222,407 77 050	
Weight Distribution at SAE Carry (Loaded)	kg lb	101 208 223,125	100 882 222,407	

^{*}Static tipping loads and operating weights include full fluids and 80 kg (176 lb) operator.

**Breakout force is measured 102 mm (4 in) behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C. Full compliance to ISO 14397-1:2007.

Aggregate Package Operating Specifications – High Lift

Bucket Type General Purpose Rol+- Cutting Edges Cotuning Edges (Found Engaging Tools) Bolt Cutting Edges Rol- Cutting Edges Cutting Edge Type Straight Straight Bucket Part Number (Group Level) " 10.0 12.0 Struck Capacity (ISO) m" 10.0 12.0 Bucket Width Overall mm 418.0 445.0 Bucket Width Overall mm 455.2 456.0 Bucket Width Overall mm 455.2 456.0 Clearance at 45° Dump (Edge) mm 455.2 456.0 Reach at 45° Dump (Edge) mm 481.7 482.2 45.0 Reach at 45° Dump (Edge) mm 481.7 482.2 48.2 Horizontal Arm and Level Bucket Reach (Edge) mm 484.7 482.2 82.2 Horizontal Arm and Level Bucket Reach (Edge) mm 193.9 13.8 191.1 13.9 13.8 191.1 14.9 19.1 14.9 19.1 13.0 19.1 18.1 19.1 19.1 19.1 19.1 19.1			990K HL Agg		
Lotting Edge Type Straight Straight Straight Bucket Part Number (Group Level) m² 10.0 22.0 yd² 13.1 15.7 15.0 2.0 yd² 13.1 15.7 Heaped Capacity (ISO) m² 13.0 15.0 yd² 17.0 19.6 15.0 yd² 17.0 19.6 Bucket Width - Overall mm 4480 4450 15.0 yd² 17.0 19.6 15.0 yd² 17.0 19.6 Bucket Width - Overall mm 4480 4450 15.1 15.7 15.7 Clearance at 45° Dump (Edge) mm 4552 4560 ft 14.9 15.0 15.0 yd² 15.0 yd² 15.0 Reach at 45° Dump (Edge) mm 2512 2498 pt 18.2 yd² 15.0 yd² 15.0 yd² 15.8 8.2 8.2 yd² 15.0 yd² 15.0 yd² 15.8 Horizontal Arm and Level Bucket Reach (Edge) mm 4847 yd² 15.9 15.8 yd² 15.	Bucket Type		General Purpose		
Select Part Number (Group Level)	Ground Engaging Tools		Bolt-on Cutting Edges	Bolt-on Cutting Edges	
Struck Capacity (ISO) m² 10.0 12.0 m² 13.1 15.7 15.7 14.20 15.0 m² 13.0 15.0 15.0 m² 13.0 15.0 15.0 m² 13.0 15.0 15.0 m² 13.0 15.0 15.0 mm 4480 4450 4450 mm 4480 4450 mm 4480 4450 mm 4480 4450 mm 4450 15.0 mm 4450 45.0 mm 4552 4569 ft 14.9 15.0 15.	Cutting Edge Type		Straight	Straight	
Meaped Capacity (ISO)	Bucket Part Number (Group Level)		548-9350	451-5410	
Heaped Capacity (ISO)	Struck Capacity (ISO)		10.0	12.0	
March Marc		yd³	13.1	15.7	
Bucket Width Overall	Heaped Capacity (ISO)	m^3			
Clearance at 45° Dump (Edge)		yd³			
Clearance at 45° Dump (Edge)	Bucket Width – Overall				
Reach at 45° Dump (Edge) ft 14.9 15.0 Reach at 45° Dump (Edge) mm 2512 2498 Horizontal Arm and Level Bucket Reach (Edge) mm 4847 4825 Digging Depth (Segment) mm 193 191 in 7.6 7.5 Overall Length – Bucket Level Ground mm 13 751 13 728 ft 45.1 45.0 Overall Height mm 9002 9036 ft 29.5 29.6 Loader Clearance Circle – Corner SAE Carry mm 21 698 21 682 ft 71.2 71.1 71.1 71.2 71.1 Rack Back Angle at SAE Carry degrees -51.1 -51.1 -51.1 151.1	Cl. (F1.)				
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Operating Weight kg lb 88 691 195,529 88 365 194,812 Weight Distribution at SAE Carry (Unloaded) Front kg 44 600 43 954 195,529 Rear kg 44 091 44 412 195,529 44 412 195,529 Loaded Machine Weight kg 108 649 108 323 195,529 238,811 Weight Distribution at SAE Carry (Loaded) Front kg 81 288 80 586 15 179,210 177,661 Rear kg 27 360 27 737	Breakout Force (SAE Rated)**			519.0	
Big 195,529 194,812		lbf		<u> </u>	
Weight Distribution at SAE Carry (Unloaded) Front kg 44 600 43 954 lb 98,326 96,901 Rear kg 44 091 44 412 lb 97,204 97,911 Loaded Machine Weight kg 108 649 108 323 lb 239,529 238,811 Weight Distribution at SAE Carry (Loaded) kg 81 288 80 586 Front kg 81 288 80 586 lb 179,210 177,661 Rear kg 27 360 27 737	Operating Weight				
Front kg lb 44 600 98,326 43 954 96,901 Rear kg 44 091 44 412 lb 97,204 97,911 Loaded Machine Weight kg 108 649 108 323 lb 108 323 238,811 Weight Distribution at SAE Carry (Loaded) 81 288 80 586 lb 80 586 lb Front kg 81 288 lb 80 586 lb Rear kg 27 360 27 737		lb	195,529	194,812	
B 98,326 96,901					
Rear kg lb 44 091 97,204 97,911 Loaded Machine Weight kg l08 649 108 323 lb 108 649 239,529 238,811 Weight Distribution at SAE Carry (Loaded) kg 81 288 80 586 lb 80 586 lb 179,210 177,661 Rear kg 27 360 27 737	Front				
Bo 97,204 97,911 Loaded Machine Weight kg 108 649 108 323 Ib 239,529 238,811 Weight Distribution at SAE Carry (Loaded) kg 81 288 80 586 Ib 179,210 177,661 Rear kg 27 360 27 737	n.				
Loaded Machine Weight kg lb 108 649 239,529 108 323 238,811 Weight Distribution at SAE Carry (Loaded) kg 81 288 80 586 lb 80 586 lb 179,210 177,661 Rear kg 27 360 27 737	Kear				
B 239,529 238,811	Loaded Machine Weight				
Weight Distribution at SAE Carry (Loaded) Front kg 81 288 80 586 1b 179,210 177,661 Rear kg 27 360 27 737	Loaded Machine Weight				
Front kg 81 288 80 586 lb 179,210 177,661 Rear kg 27 360 27 737	Weight Distribution at SAF Carry (Loaded)	10	457,349	250,011	
Ib 179,210 177,661 Rear kg 27 360 27 737		kσ	81 288	80 586	
Rear kg 27 360 27 737	1 IOIII				
	Rear				

^{*}Static tipping loads and operating weights include full fluids and 80 kg (176 lb) operator.

^{**}Breakout force is measured 102 mm (4 in) behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C. Full compliance to ISO 14397-1:2007.

Operating Specifications – Standard Lift

		990K Std	Lift Tires: 45/65	R39 VSDL, SLR	
Bucket Type		Rock	Rock	Rock	HD Rock
Ground Engaging Tool		Teeth & Segments	Teeth & Segments	Teeth & Segments	Teeth & Segments
Cutting Edge Type		Spade	Spade	Spade	Spade
Bucket Part Number (Group Level)		499-7550	499-7560	499-7570	499-7580
Struck Capacity (ISO)	m ³	7.0	7.5	8.0 10.5	7.0
Heaped Capacity (ISO)	$\frac{\text{yd}^3}{\text{m}^3}$	9.1 8.5	9.9	10.5	9.1 8.5
Treaped Capacity (150)	yd^3	11.1	11.8	13.0	11.1
Bucket Width - Overall	mm	4610	4610	4610	4610
	ft	15.1	15.1	15.1	15.1
Clearance at 45° Dump (Tooth Tip)	mm ft	4044 13.3	3997 13.1	3976 13.0	4023 13.2
Clearance at 45° Dump (Edge)	mm	4217	4169	4148	4217
Cicarance at 45 Dump (Euge)	ft	13.8	13.7	13.6	13.8
Reach at 45° Dump (Tooth Tip)	mm	2193	2241	2262	2197
	ft	7.2	7.4	7.4	7.2
Reach at 45° Dump (Edge)	mm ft	2027 6.6	2074 6.8	2095 6.9	2027 6.6
Horizontal Arm and Level Bucket Reach (Tooth)	mm	4330	4397	4427	4347
Horizontal Arm and Level Bucket Reach (100th)	ft	14.2	14.4	14.5	14.3
Digging Depth (Segment)	mm	130	130	130	130
	in	5.1	5.1	5.1	5.1
Overall Length – Bucket Level Ground	mm ft	13 084 42.9	13 151 43.1	13 181 43.2	13 102 43.0
Overall Height	mm	8281	8346	8375	8281
Overall Height	ft	27.2	27.4	27.5	27.2
Loader Clearance Circle (SAE carry with teeth)	mm ft	20 898	20 933	20 949	20 886
Rack Back Angle at SAE Carry	degrees	68.6 48.8	68.7 48.8	68.7 48.8	68.5 48.8
Full Dump at Maximum Lift	degrees	-45.0	-45.0	-45.0	-45.0
Tipping Load – Straight*	kg	46 060	45 814	45 853	44 961
Tipping Load – Straight	lb	101,546	101,002	101,089	99,122
Tipping Load – Straight (Tire Squash)*	kg	43 583	43 319	43 318	42 507
	1b	96,084	95,502	95,500	93,712
Tipping Load at Operating Weight (Articulated 35°)*	kg lb	41 029 90,453	40 790 89,927	40 810 89,970	39 928 88,025
Tipping Load at Operating Weight (Articulated 35°) (Tire Squash)*	kg	37 499	37 240	37 211	36 425
Tipping Boad at Operating Weight (Firebalated 35) (The Squash)	lb	82,671	82,100	82,036	80,303
Breakout Force (SAE Rated)**	kN	589.0	569.0	560.0	585.7
	lbf	132,411	127,914	125,896	131,675
Operating Weight	kg	79 031	79 164	79 310	80 069
Weight Distribution at SAE Carry (Unloaded)	lb	174,233	174,526	174,848	176,521
Front	kg	45 350	45 608	45 851	47 087
Hont	lb	99,979	100,548	101,085	103,809
Rear	kg	33 681	33 556	33 458	32 982
	lb lb	74,254	73,979	73,763	72,713
Loaded Machine Weight	kg	94 906	95 039	95 185	95 944
Weight Distribution at SAE Carry (Loaded)	<u>lb</u>	209,231	209,525	209,847	211,520
Front	kg	71 467	71 773	71 996	73 186
1 tont	lb	157,557	158,233	158,724	161,348
Rear	kg	23 439	23 266	23 189	22 758
	lb	51,675	51,292	51,122	50,172

^{*}Static tipping loads and operating weights include full fluids and 80 kg (176 lb) operator.

^{**}Breakout force is measured 102 mm (4 in) behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C. Full compliance to ISO 14397-1:2007.

Operating Specifications – High Lift

		990K High Lift Tires: 45/65R39 VSDL, SLR:			
Bucket Type		Rock	Rock	Rock	HD Rock
Ground Engaging Tool		Teeth & Segments	Teeth & Segments	Teeth & Segments	Teeth & Segments
Cutting Edge Type		Spade	Spade	Spade	Spade
Bucket Part Number (Group Level)		499-7550	499-7560	499-7570	499-7580
Struck Capacity (ISO)	m³	7.0	7.5	8.0	7.0
	yd³	9.1	9.9	10.5	9.1
Heaped Capacity (ISO)	m^3	8.5	9.0	10.0	8.5
	yd³	11.1	11.8	13.0	11.1
Bucket Width – Overall	mm ft	4610 15.1	4610 15.1	4610 15.1	4610 15.1
Clearance at 45° Dump (Tooth Tip)		4505	4458	4437	4484
Clearance at 45° Dump (Tooth Tip)	mm ft	4303 14.8	4438 14.6	14.6	4484 14.7
Clearance at 45° Dump (Edge)	mm	4678	4630	4609	4678
Clearance at 43 Dump (Edge)	ft	15.3	15.2	15.1	15.3
Reach at 45° Dump (Tooth Tip)	mm	2583	2631	2651	2587
r (· · · · r)	ft	8.5	8.6	8.7	8.5
Reach at 45° Dump (Edge)	mm	2416	2463	2485	2416
	ft	7.9	8.1	8.2	7.9
Horizontal Arm and Level Bucket Reach (Tooth)	mm	4930	4997	5027	4947
	ft	16.2	16.4	16.5	16.2
Digging Depth (Segment)	mm	172	172	172	172
0 111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	in	6.8	6.8	6.8	6.8
Overall Length – Bucket Level Ground	mm ft	13 820 45.3	13 887 45.6	13 917 45.7	13 838 45.4
Overall Height		8742	8807	8836	8742
Overall Height	mm ft	28.7	28.9	29.0	28.7
Loader Clearance Circle (SAE carry with teeth)	mm	21 551	21 590	21 609	21 535
Education Chairman (Brill carry with teetin)	ft	70.7	70.8	70.9	70.7
Rack Back Angle at SAE Carry	degrees	49.3	49.3	49.3	49.3
Full Dump at Maximum Lift	degrees	-51.1	-51.1	-51.1	-51.1
Tipping Load – Straight*	kg	42 209	41 962	41 939	41 136
	lb	93,054	92,509	92,460	90,690
Tipping Load – Straight (Tire Squash)*	kg	40 203	39 944	39 894	39 147
	1b	88,632	88,061	87,951	86,304
Tipping Load at Operating Weight (Articulated 35°)*	kg	37 248	37 010	36 973	36 172
	1b	82,117	81,593	81,511	79,746
Tipping Load at Operating Weight (Articulated 35°) (Tire Squash)*	kg	34 161	33 908	33 836	33 107
D. L. F. (CAED : 1)th	lb_	75,312	74,754	74,596	72,988
Breakout Force (SAE Rated)**	kN	555.3	536.3	527.8	552.0
Operating Weight	lbf	124,828 83 656	120,565 83 789	118,647 83 935	124,092 84 694
Operating weight	kg lb	83 636 184,429	184,722	83 933 185,044	186,717
Weight Distribution at SAE Carry (Unloaded)	10	104,427	104,722	105,044	100,717
Front	kg	47 067	47 347	47 615	48 980
Tiont	lb	103,765	104,382	104,973	107,982
Rear	kg	36 589	36 442	36 320	35 714
	lb	80,664	80,340	80,071	78,735
Loaded Machine Weight	kg	99 531	99 664	99 810	100 569
	lb	219,427	219,720	220,042	221,716
Weight Distribution at SAE Carry (Loaded)					
Front	kg	75 859	76 187	76 433	77 756
	lb	167,240	167,962	168,506	171,422
Rear	kg	23 672	23 477	23 377	22 813
	1b	52,187	51,758	51,537	50,294

^{*}Static tipping loads and operating weights include full fluids and 80 kg (176 lb) operator.

^{**}Breakout force is measured 102 mm (4 in) behind tip of cutting edge with bucket hinge pin as pivot in accordance with SAE J732C. Full compliance to ISO 14397-1:2007.

990K Wheel Loader Standard and Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional
ELECTRICAL		
Alarm, back-up	\checkmark	
Alternator, 150 amp	✓	
Batteries, maintenance free (2 – 1,400 CCA)	✓	
Converter, 10/15 amp, 24V to 12V	✓	
Deutsch component connectors	✓	
Electrical system, 24V	✓	
Electronic transmission control	√	
Lighting system, halogen (front and rear) lighting, access stairway, engine compartment	✓	
Starter, electric	✓	
Starter lockout in bumper	✓	
Starter receptacle for emergency start	✓	
Transmission lockout in bumper	✓	
OPERATOR ENVIRONMENT		
Air conditioner and heater with automatic heater control	✓	
Cab precleaner, powered	✓	
Cab, sound suppressed and pressurized, protective structure (ROPS/FOPS)	✓	
Cat Detect, object detection system		√
Cat Vision, rear vision camera system	√	
CB radio ready		✓
Cigar lighter and ashtray	✓	
Coat hook	✓	
Eletro-hydraulic tilt and lift controls (seat mounted)	✓	
Flip-up armrest	✓	
Heater and defroster	✓	
Horn, electric	✓	
Implement hydraulic lockout	✓	
Instrumentation, gauges: engine coolant temperature, fuel level, ground speed, gear, hydraulic oil temperature, speedometer/tachometer, torque converter temperature	√	
Instrumentation, warning indicators: action alert system – three category, automatic transmission model enable status, brake malfunction, bucket float status, delayed engine shutdown status, engine idle shutdown status, engine malfunction, fuel economy mode enable status, hydraulic lockout, lockup clutch enable status, low fuel level, parking brake status, rimpull control enable status, seat belt warning, secondary steering (if equipped), throttle lock status, transmission gear	√	

	Standard	Optional
OPERATOR ENVIRONMENT (CONTINUED)		
Keypad control with indicator lights	✓	
LED warning strobe		✓
Light, cab, dome	✓	
Lights, HID and LED		✓
Lunchbox, beverage holders	✓	
Mirrors, heated		✓
Mirrors, rearview (externally mounted)	✓	
Radio, AM/FM/CD/MP3, Bluetooth® with Satellite Sirius		✓
Seat belt minder	√	
Seat, leather/cloth, air suspension, heated/	√	
cooled		
Seat belt, retractable, 76 mm (3 in) wide	✓	
STIC™ System with steering lock	✓	
Tinted glass	✓	
Trainer seat with lap belt	✓	
Vital Information Management System (VIMS TM) with graphical information display:	✓	
external data port, customizable operator		
profiles, cycle timer, integral Cat Production		
Measurement		
Wet-arm wipers/washers (front, rear, and	✓	
corner) intermittent front wiper		
Window pull-down visor POWER TRAIN		•
. •		
Antifreeze, -50° C (-58° F)		<u> </u>
Autolube – linkage, cylinder, and hitch pins		<u> </u>
Axle oil cooling		· ·
Axle-shift oil-disc service brake	√	
Brakes, oil-disc, full hydraulic, enclosed Case drain screens		
	· · · · · · · · · · · · · · · · · · ·	
Cat clean emission module (CEM) – Tier 4 only Deluxe hydraulic filtration		-/
Demand fan	√	•
Electro hydraulic parking brake		
Engine, C27		
Engine, C27 Engine block heater 120V or 240V		✓
Engine oldck fleater 120 v of 240 v Engine oil change system, high speed, Wiggins		
Fuel lines, heated	-	
Fuel priming pump (electric)		•
Ground level engine shutoff, bumper		
High ambient cooling – software		√
Hydraulic oil, Arctic -40° C (-40° F)		<u>·</u>
Mufflers (under hood) – Tier 2 equivalent only	√	*
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990K Wheel Loader Standard and Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional
POWER TRAIN (CONTINUED)		
Precleaner engine air intake	✓	
Radiator, Aluminum Modular Radiator (AMR)	✓	
Ride control		✓
Secondary steering		✓
Separated cooling system	✓	
Starting aid, ether, manual override	✓	
Throttle lock	✓	
Torque converter, Impeller Clutch (ICTC) with Lock Up Clutch (LUC), Rimpull Control System	✓	
Transmission, 534 mm (21 in) planetary power shift (electronic) (3F/3R)	✓	
OTHER		
Access ladder, powered		✓
Automatic bucket lift kickout/positioner	✓	
Automatic Retarding Control (ARC)		✓
Axle oscillation stop		✓
Axle temperature sensor	✓	
Battery disconnect and jump start receptacle bumper	✓	
Cab mounts, heavy duty		✓
Couplings, Cat O-ring face seals	✓	
Deluxe service center		✓
Economy mode with on demand throttle	✓	
Emergency platform egress	✓	

	Standard	Optional
OTHER CONTINUED		
Engine, crankcase 500-hour interval with CH4	✓	
Engine idle management: auto idle kickdown, delayed engine shutdown, engine idle shutdown	✓	
Fast fill fuel system (Shaw-Aero)		✓
Fenders, front and rear roading		✓
Fenders, steel (front)	✓	
Grouped/labeled lube points	✓	
Guards, crankcase and power train	✓	
Hitch, drawbar with pin	✓	
Hoses, Cat XT TM	✓	
Oil sampling valves	✓	
Positive flow control hydraulic system	✓	
Premixed 50% concentration of extended life coolant with freeze protection to -34° C (-29° F)	✓	
Product Link TM	✓	
Sight gauges: hydraulic tanks, steering/fan and implement/brake, and transmission	✓	
Sound suppression, engine enclosure		✓
Stairway, left and right rear access	✓	
Steering, load sensing	✓	
Tire Pressure Monitoring System		✓
Toe kicks	✓	
Vandalism protection caplocks	✓	
Venturi stack	✓	
Wheel chocks		✓





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