



990K

Wheel Loader

Technical Specifications

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

Table of Contents

Specifications	2
Engine	2
Transmission	2
Operating Specifications	2
Hydraulic System – Lift/Tilt	2
Hydraulic Cycle Time	3
Hydraulic System – Steering	3
Air Conditioning System	3
Axles	3
Brakes	3
Operator Cab	3
Service Refill Capacities	3
Sound Performance – Tier 4 Final/Stage V	3
Sound Performance – Tier 2/Stage II Equivalent	3
Dimensions	4
Bucket Capacity/Material Density Selection Guide	5
Aggregate Package Operating Specifications – Standard Lift	6
Aggregate Package Operating Specifications – High Lift	7
Operating Specifications – Standard Lift	8
Operating Specifications – High Lift	9
Standard and Optional Equipment	10
990K Environmental Declaration	12

990K Wheel Loader Specifications

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 planetary 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 disabled	
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 yd ³ - 13.0 yd ³
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 5010:2007	
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 CO₂ equivalent of 3.861 metric tonnes.

Axles

Front	Fixed
Rear	Trunnion
Oscillation Angle	8.5°

Brakes

Brakes	ISO 3450:2011
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Operator Cab

ROPS/FOPS	ROPS/FOPS meet ISO 3471:2008 and ISO 3449:2005 Level II standards
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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 (Implement and Hydraulic Fan)	261 L	68.9 gal
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-ULS™ 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/cda/files/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)

Sound Performance – Tier 2/Stage II Equivalent

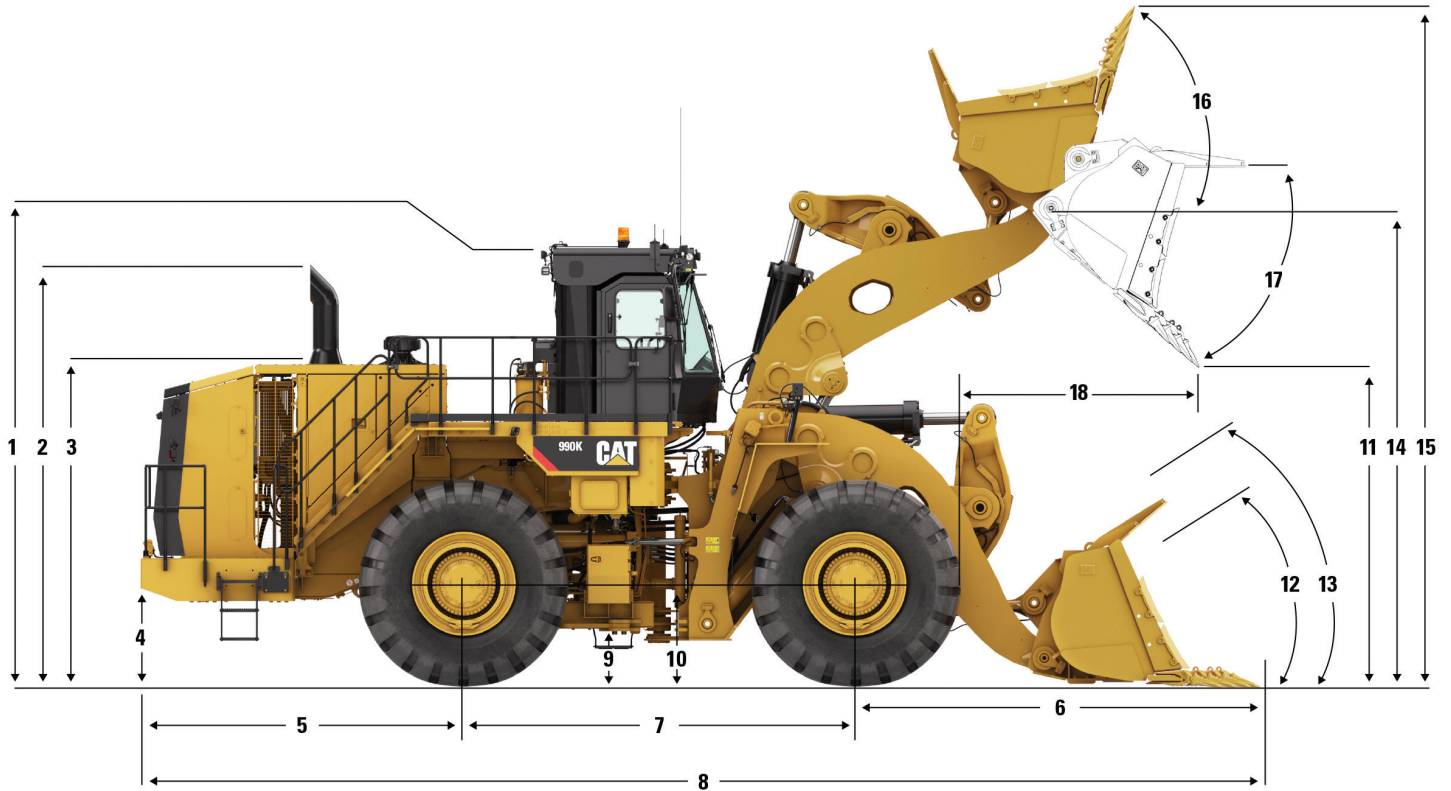
	Standard	Suppression
Operator Sound Level (ISO 6396:2008)	69 dB(A)	69 dB(A)
Machine Sound Level (ISO 6395:2008)	115 dB(A)	113 dB(A)

- 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.

990K Wheel Loader Specifications

Dimensions

All dimensions are approximate.



	Standard Lift		High 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 degrees		39.9 degrees	
13 Rack Back Angle at Carry	48.8 degrees		49.3 degrees	
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 degrees		60.6 degrees	
17 Dump Angle at Maximum Lift	45 degrees		51 degrees	
18 Reach at Maximum Lift	2194 mm	7.2 ft	2583 mm	8.5 ft

Note: Specifications are calculated with 9.0 m³ (11.8 yd³) 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/m ³	lb/yd ³	tonnes/m ³	tons/yd ³	m ³	yd ³
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/m ³	lb/yd ³	tonnes/m ³	tons/yd ³	m ³	yd ³
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.

990K Wheel Loader Specifications

Aggregate Package Operating Specifications – Standard Lift

For machines equipped with Bridgestone 45/65R39 VSDL One Star 6.7 bar (97 psi) pressure.

Bucket Type	990K Std Agg		
		General Purpose	Coal
		Bolt-on Cutting Edges	Bolt-on Cutting Edges
Ground Engaging Tools		Straight	Straight
Cutting Edge Type		548-9350	451-5410
Bucket Part Number (Group Level)			
Struck Capacity (ISO)	m ³	10.0	12.0
	yd ³	13.1	15.7
Heaped Capacity (ISO)	m ³	13.0	15.0
	yd ³	17.0	19.6
Bucket Width – Overall	mm	4480	4450
	ft	13.1	15.7
Clearance at 45° Dump (Edge)	mm	4091	4108
	ft	13.4	13.5
Reach at 45° Dump (Edge)	mm	2123	2109
	ft	7.0	6.9
Horizontal Arm and Level Bucket Reach (Edge)	mm	4247	4225
	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
	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
	lb	109,844	111,993
Tipping Load – Straight (Tire Squash)*	kg	46 940	47 424
	lb	103,485	104,552
Tipping Load at Operating Weight (Articulated 35°)*	kg	44 309	45 222
	lb	97,685	99,698
Tipping Load at Operating Weight (Articulated 35°) (Tire Squash)*	kg	40 189	40 575
	lb	88,601	89,452
Breakout Force (SAE Rated)**	kN	544.1	550.4
	lbf	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	37 158
	lb	81,333	81,919
Loaded Machine Weight	kg	101 208	100 882
	lb	223,125	222,407
Weight Distribution at SAE Carry (Loaded)			
Front	kg	77 694	77 050
	lb	171,285	169,866
Rear	kg	23 514	23 832
	lb	51,840	52,542

*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 Specifications

Aggregate Package Operating Specifications – High Lift

For machines equipped with Bridgestone 45/65R39 VSDL One Star 6.7 bar (97 psi) pressure.

Bucket Type	990K HL Agg		
	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
	yd ³	13.1	15.7
Heaped Capacity (ISO)	m ³	13.0	15.0
	yd ³	17.0	19.6
Bucket Width – Overall	mm	4480	4450
	ft	13.1	15.7
Clearance at 45° Dump (Edge)	mm	4552	4569
	ft	14.9	15.0
Reach at 45° Dump (Edge)	mm	2512	2498
	ft	8.2	8.2
Horizontal Arm and Level Bucket Reach (Edge)	mm	4847	4825
	ft	15.9	15.8
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
Rack Back Angle at SAE Carry	degrees	49.5	49.4
Full Dump at Maximum Lift	degrees	-51.1	-51.1
Tipping Load Straight*	kg	50 149	50 936
	lb	110,560	112,296
Tipping Load – Straight (Tire Squash)*	kg	47 551	47 886
	lb	104,832	105,570
Tipping Load at Operating Weight (Articulated 35°)*	kg	44 205	44 946
	lb	97,455	99,089
Tipping Load at Operating Weight (Articulated 35°) (Tire Squash)*	kg	40 153	40 409
	lb	88,522	89,086
Breakout Force (SAE Rated)**	kN	513.0	519.0
	lbf	115,321	116,673
Operating Weight	kg	88 691	88 365
	lb	195,529	194,812
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)			
Front	kg	81 288	80 586
	lb	179,210	177,661
Rear	kg	27 360	27 737
	lb	60,319	61,150

*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 Specifications

Operating Specifications – Standard Lift

For machines equipped with Bridgestone 45/65R39 VSDL One Star 6.7 bar (97 psi) pressure.

		990K Std Lift Tires: 45/65R39 VSDL, SLR: 1203 mm			
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	7.0
	yd ³	9.1	9.9	10.5	9.1
Heaped Capacity (ISO)	m ³	8.5	9.0	10.0	8.5
	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	4044	3997	3976	4023
	ft	13.3	13.1	13.0	13.2
Clearance at 45° Dump (Edge)	mm	4217	4169	4148	4217
	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	2027	2074	2095	2027
	ft	6.6	6.8	6.9	6.6
Horizontal Arm and Level Bucket Reach (Tooth)	mm	4330	4397	4427	4347
	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	13 084	13 151	13 181	13 102
	ft	42.9	43.1	43.2	43.0
Overall Height	mm	8281	8346	8375	8281
	ft	27.2	27.4	27.5	27.2
Loader Clearance Circle (SAE carry with teeth)	mm	20 898	20 933	20 949	20 886
	ft	68.6	68.7	68.7	68.5
Rack Back Angle at SAE Carry	degrees	48.8	48.8	48.8	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
	lb	101,546	101,002	101,089	99,122
Tipping Load – Straight (Tire Squash)*	kg	43 583	43 319	43 318	42 507
	lb	96,084	95,502	95,500	93,712
Tipping Load at Operating Weight (Articulated 35°)*	kg	41 029	40 790	40 810	39 928
	lb	90,453	89,927	89,970	88,025
Tipping Load at Operating Weight (Articulated 35°) (Tire Squash)*	kg	37 499	37 240	37 211	36 425
	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
	lb	174,233	174,526	174,848	176,521
Weight Distribution at SAE Carry (Unloaded)					
Front	kg	45 350	45 608	45 851	47 087
	lb	99,979	100,548	101,085	103,809
Rear	kg	33 681	33 556	33 458	32 982
	lb	74,254	73,979	73,763	72,713
Loaded Machine Weight	kg	94 906	95 039	95 185	95 944
	lb	209,231	209,525	209,847	211,520
Weight Distribution at SAE Carry (Loaded)					
Front	kg	71 467	71 773	71 996	73 186
	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.

990K Wheel Loader Specifications

Operating Specifications – High Lift

For machines equipped with Bridgestone 45/65R39 VSDL One Star 6.7 bar (97 psi) pressure.

		990K High Lift Tires: 45/65R39 VSDL, SLR: 1203 mm			
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	7.0
	yd ³	9.1	9.9	10.5	9.1
Heaped Capacity (ISO)	m ³	8.5	9.0	10.0	8.5
	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	4505	4458	4437	4484
	ft	14.8	14.6	14.6	14.7
Clearance at 45° Dump (Edge)	mm	4678	4630	4609	4678
	ft	15.3	15.2	15.1	15.3
Reach at 45° Dump (Tooth Tip)	mm	2583	2631	2651	2587
	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
	in	6.8	6.8	6.8	6.8
Overall Length – Bucket Level Ground	mm	13 820	13 887	13 917	13 838
	ft	45.3	45.6	45.7	45.4
Overall Height	mm	8742	8807	8836	8742
	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
	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
	lb	88,632	88,061	87,951	86,304
Tipping Load at Operating Weight (Articulated 35°)*	kg	37 248	37 010	36 973	36 172
	lb	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
	lb	75,312	74,754	74,596	72,988
Breakout Force (SAE Rated)**	kN	555.3	536.3	527.8	552.0
	lbf	124,828	120,565	118,647	124,092
Operating Weight	kg	83 656	83 789	83 935	84 694
	lb	184,429	184,722	185,044	186,717
Weight Distribution at SAE Carry (Unloaded)					
Front	kg	47 067	47 347	47 615	48 980
	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
	lb	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		Standard	Optional
ELECTRICAL			OPERATOR ENVIRONMENT (CONTINUED)		
Alarm, back-up	✓		Keypad control with indicator lights	✓	
Alternator, 150 amp	✓		LED warning strobe		✓
Batteries, maintenance free (2 – 1,400 CCA)	✓		Light, cab, dome	✓	
Converter, 10/15 amp, 24V to 12V	✓		Lights, HID and LED		✓
Deutsch component connectors	✓		Lunchbox, beverage holders	✓	
Electrical system, 24V	✓		Mirrors, heated		✓
Electronic transmission control	✓		Mirrors, rearview (externally mounted)	✓	
Lighting system, halogen (front and rear) lighting, access stairway, engine compartment	✓		Radio, AM/FM/CD/MP3, Bluetooth® with Satellite Sirius		✓
Starter, electric	✓		Seat belt minder	✓	
Starter lockout in bumper	✓		Seat, leather/cloth, air suspension, heated/cooled	✓	
Starter receptacle for emergency start	✓		Seat belt, retractable, 76 mm (3 in) wide	✓	
Transmission lockout in bumper	✓		STIC™ System with steering lock	✓	
OPERATOR ENVIRONMENT			Tinted glass	✓	
Air conditioner and heater with automatic heater control	✓		Trainer seat with lap belt	✓	
Cab precleaner, powered	✓		Vital Information Management System (VIMS™) with graphical information display: external data port, customizable operator profiles, cycle timer, integral Cat Production Measurement	✓	
Cab, sound suppressed and pressurized, protective structure (ROPS/FOPS)	✓		Wet-arm wipers/washers (front, rear, and corner) intermittent front wiper	✓	
Cat Detect, object detection system		✓	Window pull-down visor		✓
Cat Vision, rear vision camera system	✓		POWER TRAIN		
CB radio ready		✓	Antifreeze, -50° C (-58° F)		✓
Cigar lighter and ashtray	✓		Autolube – linkage, cylinder, and hitch pins		✓
Coat hook	✓		Axle oil cooling		✓
Electro-hydraulic tilt and lift controls (seat mounted)	✓		Axle-shift oil-disc service brake	✓	
Flip-up armrest	✓		Brakes, oil-disc, full hydraulic, enclosed	✓	
Heater and defroster	✓		Case drain screens	✓	
Horn, electric	✓		Cat clean emission module (CEM) – Tier 4 only	✓	
Implement hydraulic lockout	✓		Deluxe hydraulic filtration		✓
Instrumentation, gauges: engine coolant temperature, fuel level, ground speed, gear, hydraulic oil temperature, speedometer/tachometer, torque converter temperature	✓		Demand fan	✓	
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	✓		Electro hydraulic parking brake	✓	
			Engine, C27	✓	
			Engine block heater 120V or 240V		✓
			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)		✓
			Mufflers (under hood) – Tier 2 equivalent only	✓	

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		Standard	Optional
POWER TRAIN (CONTINUED)			OTHER CONTINUED		
Precleaner engine air intake	✓		Engine, crankcase 500-hour interval with CH4	✓	
Radiator, Aluminum Modular Radiator (AMR)	✓		Engine idle management: auto idle kickdown, delayed engine shutdown, engine idle shutdown	✓	
Ride control		✓	Fast fill fuel system (Shaw-Aero)		✓
Secondary steering		✓	Fenders, front and rear roading		✓
Separated cooling system	✓		Fenders, steel (front)	✓	
Starting aid, ether, manual override	✓		Grouped/labeled lube points	✓	
Throttle lock	✓		Guards, crankcase and power train	✓	
Torque converter, Impeller Clutch (ICTC) with Lock Up Clutch (LUC), Rimpull Control System	✓		Hitch, drawbar with pin	✓	
Transmission, 534 mm (21 in) planetary power shift (electronic) (3F/3R)	✓		Hoses, Cat XT™	✓	
OTHER			Oil sampling valves	✓	
Access ladder, powered		✓	Positive flow control hydraulic system	✓	
Automatic bucket lift kickout/positioner	✓		Premixed 50% concentration of extended life coolant with freeze protection to -34° C (-29° F)	✓	
Automatic Retarding Control (ARC)		✓	Product Link™	✓	
Axle oscillation stop		✓	Sight gauges: hydraulic tanks, steering/fan and implement/brake, and transmission	✓	
Axle temperature sensor	✓		Sound suppression, engine enclosure		✓
Battery disconnect and jump start receptacle bumper	✓		Stairway, left and right rear access	✓	
Cab mounts, heavy duty		✓	Steering, load sensing	✓	
Couplings, Cat O-ring face seals	✓		Tire Pressure Monitoring System		✓
Deluxe service center		✓	Toe kicks	✓	
Economy mode with on demand throttle	✓		Vandalism protection caplocks	✓	
Emergency platform egress	✓		Venturi stack	✓	
			Wheel chocks		✓

990K Environmental Declaration

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit <https://www.caterpillar.com/en/company/sustainability>.

Engine

- The Cat® C27 engine is available in configurations that meet U.S. EPA Tier 4 Final and EU Stage V emission standards or equivalent to U.S. EPA Tier 2 and EU Stage II.
- Cat U.S. EPA Tier 4 Final and EU Stage V diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels up to:
 - ✓ 20% biodiesel FAME (fatty acid methyl ester)*
 - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels
- Cat engines equivalent to U.S. EPA Tier 2 and EU Stage II, are compatible with diesel fuel blended with the following lower-carbon intensity fuels up to:
 - ✓ 100% biodiesel FAME (fatty acid methyl ester)**
 - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.

*Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel.

**For use of blends higher than 20% biodiesel, consult your Cat dealer.

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 (5.9 lb) of refrigerant which has a CO2 equivalent of 4.256 metric tonnes (4.691 tons).

Paint

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
 - Barium < 0.01%
 - Cadmium < 0.01%
 - Chromium < 0.01%
 - Lead < 0.01%

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)
Tier 2/Stage II 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)

- The machine sound power level was measured according to the test 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 operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

Oils and Fluids

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

Features and Technology

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
 - ECO mode minimizes fuel consumption for light applications
 - Load sensing hydraulics produce flow and pressure on-demand and only in amounts necessary to perform the needed functions
 - Reduce fuel burn while idling with engine idle shutdown
 - Extended maintenance intervals reduce fluid and filter consumption

Recycling

- The materials included in machines are categorized as below with approximate weight percentage. Because of variations of product configurations, the following values in the table may vary.

Material Type	Weight Percentage
Steel	69.07%
Iron	11.38%
Nonferrous Metal	1.61%
Mixed Metal	0.63%
Mixed-Metal & Nonmetal	0.00%
Plastic	1.75%
Rubber	10.2%
Mixed Nonmetallic	0.02%
Fluid	2.96%
Other	1.89%
Uncategorized	0.49%
Total	100%

- A machine with higher recyclability rate will ensure more efficient usage of valuable natural resources and enhance End-of-Life value of the product. According to ISO 16714 (Earthmoving machinery – Recyclability and recoverability – Terminology and calculation method), recyclability rate is defined as percentage by mass (mass fraction in percent) of the new machine potentially able to be recycled, reused, or both. All parts in the bill of material are first evaluated by component type based on a list of components defined by the ISO 16714 and Japan CEMA (Construction Equipment Manufacturers Association) standards. Remaining parts are further evaluated for recyclability based on material type. Because of variations of product configurations, the following value in the table may vary.

Recyclability – 98%



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For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com.

AEXQ2601-01 (10-2022)
Global

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

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