

994K 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® 3516E	
Emissions	U.S. EPA Tier 4 Final/ EU Stage V or U.S. EPA Tier 1 equivalent	
Rated Speed	1,600 rpm	
Engine Power – ISO 14396:2002	1377 kW	1,847 hp
Gross Power – SAE J1995:2014	1394 kW	1,870 hp
Net Power – SAE J1349:2011		
Standard Ambient	1297 kW	1,739 hp
High Ambient	1265 kW	1,696 hp
Bore	170 mm	6.7 in
Stroke	215 mm	8.5 in
Displacement	78.1 L	4,766 in ³
Peak Torque @ 1,200 rpm – SAE J1995	11 591 N·m	8,549 lbf-ft
Torque Rise	39%	

- The power ratings apply when tested under the reference conditions for the specified standard.
- The net power advertised is the power available at the flywheel when the engine is equipped with fan, alternator, air cleaner and muffler.
- The gross power advertised is with the fan at maximum speed.

Operating Specifications		
Operating Weight – Standard	240 018 kg	529,149 lb
Operating Weight – High Lift	240 598 kg	530,428 lb
Rated Payload – Standard		
Moderate to High Digging Resistance	40.8 tonnes	45 tons
Low to Moderate Digging Resistance*	54.4 tonnes	60 tons
Rated Payload – High Lift		
Moderate to High Digging Resistance	38.1 tonnes	42 tons
Low to Moderate Digging Resistance*	49.9 tonnes	55 tons
Bucket Capacity Range	17.2-43.6 m ³	22.3-57 yd ³

^{*}Please contact your local dealer to determine if your application is suitable for this increased rated payload.

Transmission			
Transmission Type	Cat Planetary	Power Shift	
Forward 1	7.4 km/h	4.6 mph	
Forward 2	12.9 km/h	8.0 mph	
Forward 3	21.9 km/h	13.6 mph	
Reverse 1	8.1 km/h	5.0 mph	
Reverse 2	14.1 km/h	8.8 mph	
Reverse 3	24.0 km/h	14.9 mph	
Direct Drive – Forward 1	Lock-up disa	p disables	
Direct Drive – Forward 2	14.0 km/h	8.7 mph	
Direct Drive – Forward 3	24.5 km/h	15.2 mph	
Direct Drive – Reverse 1	Lock-up disa	bles	
Direct Drive – Reverse 2	15.5 km/h	9.6 mph	
Direct Drive – Reverse 3	27.0 km/h	16.8 mph	

[•] Travel speeds based on 58/85-57 tires.

Hydraulic System – Lift/Tilt		
Lift/Tilt System – Circuit	Positive Flow Control	
Lift/Tilt System – Pumps	Variable Displacement Piston	
Maximum Flow at 1,700 rpm Engine Speed	2047 L/min	541 gal/min
Relief Valve Setting – Lift/Tilt	32 500 kPa	4,587 psi
Cylinders, Double Acting		
Lift, Bore and Stroke	370 ×	14.6 ×
	1713 mm	67.4 in
Tilt, Bore and Stroke	310 ×	12.2 ×
	1086 mm	42.8 in
Pilot System	Open Loop and Pressure Reducing	

Hydraulic Cycle Time	
Rack Back	4.9 seconds
Raise	12.6 seconds
Dump	3.1 seconds
Lower Float Down	4.2 seconds
Total Hydraulic Cycle Time (empty bucket)	23.5 seconds

Complete System Fill		
Fuel Tank (standard)	3445 L	910 gal
Fuel Tank (with 24 hr attachment)	5678 L	1,500 gal
Cooling System	520 L	138 gal
Engine Crankcase	288 L	76 gal
Diesel Exhaust Fluid (DEF) (Tier 4 Final/Stage V)	519 L	137 gal
Transmission	416 L	110 gal
Differentials and Final Drives – Front	833 L	220 gal
Differentials and Final Drives – Rear	757 L	200 gal
Hydraulic Tank (implement and hydraulic fan)	1022 L	270 gal
Hydraulic Tank (steering and braking)	379 L	100 gal
Oil Renewal System (ORS)*	75.7 L	20 gal

^{*}Not available on Tier 4 Final/Stage V machines. Not available in all regions.

Axles	
Front	Fixed
Rear	Trunnion
Oscillation Angle	9°

Brakes	
Brakes	ISO 3450:2011

Cooling System		
Ambient Capability Hydraulically	Driven Demand F	an
Standard	43° C	109.4° F
High (Tier 1 equivalent)	55° C	131° F
High (Tier 4 Final)	53° C	127.4° F

Sound Performance			
	Standard	Suppression	
Operator Sound Level (ISO 6396:2008)			
Tier 1 Equivalent	72 dB(A)	71 dB(A)	
Tier 4 Final/EU Stage V	72 dB(A)	71 dB(A)	
Machine Sound Level (ISO 6395:2008)	119 dB(A)	117 dB(A)	

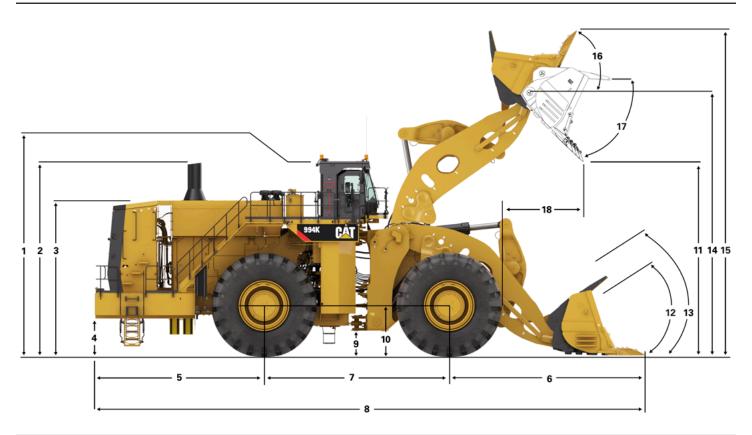
Sound Performance

• 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.

Hydraulic System – Steer	ring
Steering System – Circuit	Pilot, Load Sensing
Steering System – Pump	Piston, Variable Displacement
Maximum Flow @ 1,700 rpm Engine Speed	980 L/min 259 gal/min
Relief Valve Setting – Steering	31 000 kPa 4,496 psi
Total Steering Angle	80 degrees
Steering Cycle Time (low idle)	7.6 seconds
Steering Cycle Time (high idle)	4.3 seconds

Dimensions

All dimensions are approximate.



		Standar	rd Lift	High	Lift	
1	Ground to Top of ROPS	7119 mm	23.4 ft	7119 mm	23.4 ft	
2	Ground to Top of Exhaust Stacks	7067 mm	23.2 ft	7067 mm	23.2 ft	
3	Ground to Top of Hood	5682 mm	18.6 ft	5682 mm	18.6 ft	
4	Ground to Bumper Clearance	1355 mm	4.4 ft	1355 mm	4.4 ft	
5	Rear Axle Center Line to Bumper	6205 mm	20.4 ft	6205 mm	20.4 ft	
6	Front Axle Center Line to Bucket Tip	6503 mm	21.3 ft	7097 mm	23.3 ft	
7	Wheel Base	6800 mm	22.3 ft	6800 mm	22.3 ft	
8	Maximum Overall Length	19 508 mm	64.0 ft	20 102 mm	66.0 ft	
9	Ground to Lower Hitch Clearance	898 mm	2.9 ft	898 mm	2.9 ft	
10	Ground to Center of Axles	1830 mm	6.0 ft	1830 mm	6.0 ft	
11	Clearance at Maximum Lift	6167 mm	20.2 ft	7095 mm	23.3 ft	
12	Rack Back Angle at Ground Level	39.7 de	39.7 degrees		45.0 degrees	
13	Rack Back Angle at Carry	47.7 de	47.7 degrees		53.7 degrees	
14	B-Pin Height at Maximum Lift	8790 mm	28.8 ft	9647 mm	31.7 ft	
15	Maximum Overall Height, Bucket Raised	11 771 mm	38.6 ft	12 545 mm	41.2 ft	
16	Rack Angle at Maximum Lift	59.5 de	egrees	59.4 de	egrees	
17	Dump Angle at Maximum Lift	−50.0 d	-50.0 degrees		-50.0 degrees	
18	Reach at Maximum Lift	2821 mm	9.3 ft	2688 mm	8.8 ft	
	Tread Width	4300 mm	14.1 ft	4300 mm	14.1 ft	
	Width Over Tires (with bulge)	5758 mm	18.8 ft	5760 mm	18.8 ft	

Note: Assumes 22.9 m³ (30 yd³) bucket for standard lift, and 21.4 m³ (28 yd³) bucket for high lift, fitted with Cat Advansys™ heavy-duty tips. Assumes tire size 58/85-57.

Bucket Selection Guide

When sizing the bucket, it is important to consider the Maximum Swung Load. The Maximum Swung Load is the maximum allowed combined weight of the bucket and payload. The Maximum Swung Load should never be exceeded.

"Example Bucket Weight" includes spade edge, heavy-duty tips, half arrow segments, and two sidebar protectors.

If a bucket weight other than the weight specified in the table below is chosen, the bucket size can be evaluated using the following equations:

Maximum Payload = Maximum Swung Load - Bucket Weight

Maximum Density = (Maximum Swung Load – Bucket Weight)/Bucket Volume

Target Payload = 90% of Maximum Payload

NOTE: The default Target Payload (90% of Maximum Payload) is intended to accommodate variation in payload without exceeding the Maximum Swung Load.

The rated capacity of the tires should always be considered.

Moderate to High Digging Resistance

Standard L	ift: Rated Pa	yload 40.8 to	nnes (45 tons), Maximum S	wung Load	69 tonnes (76	tons)					
Bucket Volume			Example Bucket Weight		Target Payload at Example Bucket Weight		Maximum Payload at Example Bucket Weight		Target Density at Example Bucket Weight		Maximum Density at Example Bucket Weight	
m³	yd³	kg	lb	tonnes	tons	tonnes	tons	kg/m³	lb/yd³	kg/m³	lb/yd³	
17.2	22.5	21 993	48,473	42.3	46.6	47.0	51.8	2459	4,144	2732	4,604	
19.1	25	21 595	47,595	42.7	47.0	47.4	52.2	2231	3,761	2479	4,179	
21.4	28	22 479	49,544	41.9	46.1	46.5	51.3	1955	3,296	2172	3,662	
22.9	30	23 090	50,890	41.3	45.5	45.9	50.6	1801	3,035	2001	3,373	
24.5	32	23 626	52,072	40.8	45.0	45.4	50.0	1669	2,813	1854	3,125	
32.1	42	23 207	51,148	41.2	45.4	45.8	50.5	1283	2,163	1426	2,403	
39.8	52	25 281	55,719	39.3	43.4	43.7	48.2	989	1,668	1099	1,853	

High Lift: Rated Payload 38.1 tonnes (42 tons), Maximum Swung Load 65.4 tonnes (72.1 tons)

Bucket	Volume		mple Weight	Target F at Exa Bucket	•	Maximum at Exa Bucket	ımple	at Exa	Density ample Weight	at Exa	n Density ample Weight
m³	yd³	kg	lb	tonnes	tons	tonnes	tons	kg/m³	lb/yd³	kg/m³	lb/yd³
17.2	22.5	21 993	48,473	39.1	43.1	43.4	47.9	2272	3,830	2525	4,256
19.1	25	21 595	47,595	39.4	43.5	43.8	48.3	2064	3,479	2293	3,865
21.4	28	22 479	49,544	38.7	42.6	42.9	47.3	1806	3,043	2006	3,381
22.9	30	23 090	50,890	38.1	42.0	42.3	46.7	1661	2,800	1846	3,111
24.5	32	23 626	52,072	37.6	41.5	41.8	46.1	1538	2,592	1708	2,880
32.1	42	23 207	51,148	38.0	41.9	42.2	46.5	1183	1,994	1315	2,216
39.8	52	25 281	55,719	36.1	39.8	40.1	44.3	909	1,532	1010	1,702

Low to Moderate Digging Resistance*

Standard Li	ft: Rated Pa	ayload 54.4 to	nnes (60 tons), Maximum S	wung Load	83 tonnes (91	.4 tons)				
Bucket Volume		Example sket Volume Bucket Weight		Target Payload at Example Bucket Weight		Maximum Payload at Example Bucket Weight		Target Density at Example Bucket Weight		Maximum Density at Example Bucket Weight	
m³	yd³	kg	lb	tonnes	tons	tonnes	tons	kg/m³	lb/yd³	kg/m³	lb/yd³
21.4	28	22 479	49,544	54.4	60.0	60.5	66.7	2543	4,286	2825	4,762
22.9	30	23 090	50,890	53.9	59.4	59.9	66.0	2349	3,960	2610	4,400
24.5	32	23 626	52,072	53.4	58.9	59.3	65.4	2183	3,679	2425	4,088
29.1	38	26 919	59,329	50.4	55.6	56.0	61.8	1736	2,926	1929	3,251
43.6	57	25 545	56,301	51.7	57.0	57.4	63.3	1186	1,999	1317	2,221

High Lift: Rated Payload 49.9 tonnes (55 tons), Maximum Swung Load 77.9 tonnes (85.9 tons)

Bucket	Volume		mple Weight	Target F at Exa Bucket	•	Maximum at Exa Bucket	ımple	at Exa	Density ample Weight	at Ex	n Density ample Weight
m³	yd³	kg	lb	tonnes	tons	tonnes	tons	kg/m³	lb/yd³	kg/m³	lb/yd³
19.1	25	21 595	47,595	50.7	55.9	56.3	62.1	2652	4,470	2947	4,967
21.4	28	22 479	49,544	49.9	55.0	55.4	61.1	2331	3,929	2590	4,365
22.9	30	23 090	50,890	49.3	54.4	54.8	60.4	2151	3,626	2390	4,029
24.5	32	23 626	52,072	48.9	53.9	54.3	59.8	1997	3,366	2219	3,740
29.1	38	26 919	59,329	45.9	50.6	51.0	56.2	1580	2,663	1755	2,959
43.6	57	25 545	56,301	47.1	52.0	52.4	57.7	1082	1,823	1202	2,026

^{*}Please contact your local dealer to determine if your application is suitable for this increased rated payload.

Operating Specifications – Standard Lift

For machines equipped with 58/85-57 tires (SLR: 1820 mm/6 ft) – see additional tables for other tire sizes.

Bucket Type			Ro	ck	
Ground Engaging Tools			Teeth &	Segment	
Cutting Edge Type			Spa	ade	
Bucket Part No. (Group Level)		389-4420	389-4430	389-4440	389-4450
Bucket Load at Rated Capacity	kg lb	40 823 90,000	40 823 90,000	40 823 90,000	40 823 90,000
P + 10 - 14	-				
Rated Capacity	$\frac{m^3}{yd^3}$	19.1 25	21.4 28	22.9 30	24.5 32
C+1- C'+- ICO*					
Struck Capacity – ISO*	m³ yd³	15 19.6	18 23.5	19 24.9	20 26.2
Heaped Capacity – ISO*	m ³	19.0	21.3	23	24
Heaped Capacity – ISO	yd^3	24.9	27.5	30.0	31.4
Bucket Width – Overall	mm	6240	6240	6240	6240
Bucket Width Overall	ft	20.5	20.5	20.5	20.5
Clearance at 45° Dump (Tooth Tip)	mm	6347	6238	6167	6100
	ft	20.8	20.5	20.2	20.0
Reach at 45° Dump (Tooth Tip)	mm	2641	2750	2821	2888
	ft	8.7	9.0	9.3	9.5
Bucket Pin at Maximum Lift	mm	8790	8790	8790	8790
	ft	28.8	28.8	28.8	28.8
Horizontal Arm and Level Bucket Reach	mm	5583	5737	5837	5932
	ft	18.3	18.8	19.1	19.5
Digging Depth (Segment)	mm	232	232	232	232
	ft	0.8	0.8	0.8	0.8
Overall Length – Bucket Level Ground	mm	19 254	19 408	19 508	19 603
	ft	63.2	63.7	64.0	64.3
Front Axle to Bucket Tip Ground	mm	6249	6403	6503	6598
	ft	20.5	21.0	21.3	21.6
Overall Height	mm	11 541	11 688	11 771	11 874
	ft	37.9	38.3	38.6	39.0
Turning Radius – Corner SAE Carry	mm	13 727	13 771	13 800	13 828
	ft	45.0	45.2	45.3	45.4
Reach at 45° Dump and 2.13 m (7 ft) Height (with Teeth)	mm	4349	4454	4522	4585
	ft	14.3	14.6	14.8	15.0
Rack Back Angle at SAE Carry	degree	47.7	47.7	47.7	47.7
Full Dump at Maximum Lift	degree	-50.0	-50.0	-50.0	-50.0

^{*}Full compliance to ISO 14397-1:2007 Sections 1 through 6, which requires 2% verification between calculations and testing.

 $(chart\ continued\ on\ next\ page)$

Operating Specifications – Standard Lift (continued)

For machines equipped with 58/85-57 tires (SLR: 1820 mm/6 ft) – see additional tables for other tire sizes.

Bucket Type			Ro	ck	
Ground Engaging Tools			Teeth &	Segment	
Cutting Edge Type			Spa	ade	
Bucket Part No. (Group Level)		389-4420	389-4430	389-4440	389-4450
Bucket Load at Rated Capacity	kg	40 823	40 823	40 823	40 823
	1b	90,000	90,000	90,000	90,000
Rated Capacity	m^3 yd^3	19.1 25	21.4 28	22.9 30	24.5 32
Struck Capacity – ISO	$\frac{\text{yd}}{\text{m}^3}$	15	18	19	20
Struck Capacity – 150	yd^3	19.6	23.5	24.9	26.2
Heaped Capacity – ISO	m ³	19	21	23	24
	yd^3	24.9	27.5	30.0	31.4
Tipping Load at Operating Weight – Straight	kg lb	159 823 352,348	158 190 348,749	157 062 346,263	156 085 344,107
Tipping Load at Operating Weight – Straight*	kg	150 697	149 006	147 840	146 825
	1b	332,230	328,502	325,931	323,693
Tipping Load at Operating Weight – Articulated 40°	kg	137 845	136 286	135 207	134 275
	1b	303,896	300,459	298,081	296,025
Tipping Load at Operating Weight – Articulated 40°*	kg	123 391	121 745	120 610	119 624
	1b	272,030	268,401	265,899	263,725
Tipping Load at Operating Weight – Bucket Level Ground	kg	135 113	130 634	127 808	125 353
	1b	297,872	287,997	281,768	276,356
Tipping Load at Operating Weight – Bucket Level Ground*	kg	126 010	121 984	119 430	117 209
	lb	277,804	268,928	263,298	258,401
Breakout Force – SAE Rated	kN lbf	1401.1 314,980	1307.7 293,992	1252.7 281,617	1206.2 271,160
Operating Weight	kg	238 466	239 371	240 018	240 554
Operating weight	kg lb	525,727	527,723	529,149	530,329
Weight Distribution at SAE Carry – Front	kg	124 673	126 336	127 518	128 511
Worght Distribution at SAE Curry Tront	lb	274,858	278,522	281,129	283,319
Weight Distribution at SAE Carry – Rear	kg	113 792	113 036	112 500	112 042
,	1b	250,869	249,200	248,020	247,010
Loaded Machine Weight	kg	279 289	280 194	280 841	281 377
	lb	615,726	617,722	619,148	620,329
Weight Distribution at SAE Carry – Front	kg	192 099	193 989	195 324	196 461
	1b	423,505	427,672	430,615	433,121
Weight Distribution at SAE Carry – Rear	kg	87 190	86 205	85 518	84 916
	1b	192,220	190,050	188,534	187,208

^{*}With Tire Squash.

Operating Specifications – High Lift

For machines equipped with 58/85-57 tires (SLR: 1820 mm/6 ft) – see additional tables for other tire sizes.

Bucket Type			Ro	ock	
Ground Engaging Tools			Teeth &	Segment	
Cutting Edge Type			Spa	ade	
Bucket Part No. (Group Level)		389-4420	389-4430	389-4440	389-4450
Bucket Load at Rated Capacity	kg	38 102	38 102	38 102	38 102
	lb	84,000	84,000	84,000	84,000
Rated Capacity	m³	19.1	21.4	22.9	24.5
	yd³	25	28	30	32
Struck Capacity – ISO	m^3	15	18	19	20
	yd³	19.6	23.5	24.9	26.2
Heaped Capacity – ISO	m^3	19	21	23	24
	yd³	24.9	27.5	30.0	31.4
Bucket Width – Overall	mm	6240	6240	6240	6240
	ft	20.5	20.5	20.5	20.5
Clearance at 45° Dump (Tooth Tip)	mm	7204	7095	7024	6957
	ft	23.6	23.3	23.0	22.8
Reach at 45° Dump (Tooth Tip)	mm	2579	2688	2758	2826
	ft	8.5	8.8	9.0	9.3
Bucket Pin at Maximum Lift	mm	9647	9647	9647	9647
	ft	31.6	31.6	31.6	31.6
Horizontal Arm and Level Bucket Reach	mm	6149	6303	6403	6498
	ft	20.2	20.7	21.0	21.3
Digging Depth (Segment)	mm	239	239	239	239
	ft	0.8	0.8	0.8	0.8
Overall Length – Bucket Level Ground	mm	19 948	20 102	20 202	20 297
	ft	65.4	66.0	66.3	66.6
Front Axle to Bucket Tip Ground	mm	6943	7097	7197	7292
	ft	22.8	23.3	23.6	23.9
Overall Height	mm	12 398	12 545	12 628	12 731
	ft	40.7	41.2	41.4	41.8
Turning Radius – Corner SAE Carry	mm	13 976	14 017	14 045	14 071
	ft	45.9	46.0	46.1	46.2
Reach at 45° Dump and 2.13 m (7 ft) Height (with Teeth)	mm	4916	5021	5088	5152
	ft	16.1	16.5	16.7	16.9
Rack Back Angle at SAE Carry	degree	53.5	53.5	53.5	53.5
Full Dump at Maximum Lift	degree	-50.0	-50.0	-50.0	-50.0

(chart continued on next page)

Operating Specifications – High Lift (continued)

For machines equipped with 58/85-57 tires (SLR: 1820 mm/6 ft) – see additional tables for other tire sizes.

Bucket Type			Ro	ck	
Ground Engaging Tools			Teeth &	Segment	
Cutting Edge Type			Spa	ade	
Bucket Part No. (Group Level)		389-4420	389-4430	389-4440	389-4450
Bucket Load at Rated Capacity	kg	38 102	38 102	38 102	38 102
	lb	84,000	84,000	84,000	84,000
Rated Capacity	m^3	19.1	21.4	22.9	24.5
	yd³	25	28	30	32
Struck Capacity – ISO	m^3	15	18	19	20
	yd ³	19.6	23.5	24.9	26.2
Heaped Capacity – ISO	m^3	19	21	23	24
	yd³	24.9	27.5	30.0	31.4
Tipping Load at Operating Weight – Straight	kg	140 091	138 667	137 676	136 827
	lb	308,847	305,708	303,524	301,651
Tipping Load at Operating Weight – Straight*	kg	132 782	131 300	130 272	129 385
	lb	292,734	289,467	287,200	285,245
Tipping Load at Operating Weight – Articulated 40°	kg	120 292	118 917	117 960	117 141
	1b	265,198	262,168	260,057	258,251
Tipping Load at Operating Weight – Articulated 40°*	kg	108 277	106 814	105 800	104 925
	lb	238,710	235,484	233,249	231,320
Tipping Load at Operating Weight – Bucket Level Ground	kg	117 056	113 375	111 031	108 994
	1b	258,063	249,948	244,782	240,291
Tipping Load at Operating Weight – Bucket Level Ground*	kg	110 225	106 841	104 676	102 794
	lb	243,004	235,544	230,771	226,622
Breakout Force – SAE Rated	kN	1335.0	1245.6	1192.9	1148.3
	lbf	300,129	280,028	268,171	258,148
Operating Weight	kg	239 693	240 598	241 245	241 781
	lb	528,432	530,428	531,854	533,034
Weight Distribution at SAE Carry – Front	kg	129 194	130 922	132 151	133 180
·	lb	284,823	288,633	291,343	293,611
Weight Distribution at SAE Carry – Rear	kg	110 499	109 677	109 094	108 601
	lb	243,609	241,795	240,511	239,423
Loaded Machine Weight	kg	277 795	278 700	279 347	279 883
-	lb	612,432	614,428	615,855	617,035
Weight Distribution at SAE Carry – Front	kg	195 479	197 370	198 709	199 840
· ·	lb	430,958	435,126	438,077	440,571
Weight Distribution at SAE Carry – Rear	kg	82 315	81 330	80 639	80 043
· ·	lb	181,474	179,302	177,777	176,464

^{*}With Tire Squash.

Standard and Optional Equipment

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

	Standard	Optional
POWER TRAIN		
Engine, 3516E High Displacement (HD) Mechanical Electronic Unit Injector (MEUI TM -A), Air-to-Air Aftercooling (ATAAC) diesel, turbocharged/aftercooled	✓	
Engine prelube	✓	
Fuel priming pump (electric)	✓	
Ground-level engine shutoff	✓	
Engine air intake (above hood) precleaner	✓	
Aluminum Modular Radiator (AMR)	✓	
Automatic, ether starting aid	✓	
Electronic throttle lock	✓	
Impeller Clutch Torque Converter (ICTC) with Lock-Up Clutch and rimpull control system	✓	
Rimpull control system	✓	
Planetary powershift, 3F/3R electronic control transmission	✓	
Oil Renewal System (ORS)* (for increased time between oil changes)		✓
Delayed engine shutdown	✓	
Oil-cooled, multi-disc, service brakes	✓	
Electro-hydraulic parking brake	✓	
LINKAGE		
Standard lift (40.8 tonnes/45 tons face, 54.4 tonnes/60 tons loose)	✓	
High lift (38.1 tonnes/42 tons face, 49.9 tonnes/55 tons loose)		✓
ELECTRICAL		
Alternator	✓	
Dry batteries	✓	
10/15 amp, 24V to 12V converter	✓	
Disconnect switch to bumper	✓	
LED warning lights (pattern selectable)	✓	
LED lighting system (working lights, access and service platform lights, turn signals/hazard lights)	✓	
Emergency jump-start receptacle	✓	
Starter and transmission lockout in bumper	✓	
24V starting and charging system	✓	
Electric starters	✓	

^{*}Not available in all regions.

	Standard	Optional
OPERATOR ENVIRONMENT		
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	✓	
Bonded glass, tinted	✓	
Rubber-mounted, high-impact resistant solar control glass (Complies with AS/NZS 2080)		✓
Dual lever lift and tilt function controls	\checkmark	
Joystick lift and tilt function controls		✓
Implement kickouts	✓	
Air conditioner	✓	
Cab pressure indicator	✓	
Graphical touchscreen information display conveys real-time operating information and payload measurement	✓	
Heater, defroster, auto temperature controls	✓	
Gauge instrumentation: - DEF level, if equipped - Coolant temperature - Hydraulic oil temperature - Fuel level - Power train oil temperature - Engine speed (tachometer) - Transmission gear	→	

- Ground speed – Engine hour meter

(continued on next page)

Standard and Optional Equipment (continued)

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

	Standard	Optional	
OPERATOR ENVIRONMENT (continued)			SAFETY
Warning/indicator instrumentation:	\checkmark		Ground-access ladders
 Low DEF level, if equipped 			Powered ground-access stairs
- Grease tank level			Rear-vision camera
- Three-category action alert system			Cat Detect (Rear Object Detect
Brake malfunctionBucket float status			
– Bucket hoat status– Delayed engine shutdown status			Front frame access with steps
 Engine idle shutdown status 			Front walkway around cab
 Engine malfunction Fuel economy mode enable status 			Pump bay access ladders with and platform
Hydraulic lockout			Tie-offs on ROPS and radiato
 Lockup clutch enable status 			Steering frame lock
– Low fuel level			
 Parking brake status 			Wheel chocks
 Quick-shift enable status 			Stairways on both sides of the
 Rimpull control enable status 			LED stairway and access ligh
– Seat belt warning			Toe kicks
- Secondary steering			Electric (field and shop) horns
- Throttle lock status			
- Transmission gear			Retractable seatbelt, 76 mm (3
Turn signal Keypad control with indicator lights:	✓		Trainer seat with lap belt, 76 mm (3 in) wide
- Fuel economy mode			Back-up alarm
- Implement kickouts			Secondary steering
- Lockup clutch			COLD WEATHER
– Manual lube – Quickshift enable			
- Rimpull control system			Cold-weather cooling fan byp
- Throttle lock			(recommended for temperatus -29° C [-20° F])
- Turn signals			
Dash backlight control			Heavy-duty starter (provides a additional electric starter mot
– Hazard lights			two additional batteries for a
Dome light in cab	✓		three starter motors and six ba
Lunchbox and beverage holders	✓		(recommended for temperatur
Steering and Transmission Integrated	✓		0° C [32° F])
Control (STIC TM) system			240V engine oil and coolant h
Sun screen, pull down (front and rear)	✓		elements (recommended in co
Vital Information Management System	√		from -18° C to -30° C [0° F to
(VIMS TM) with Information Display:			Fuel heater (heated by recircu
external data port, Cycle Timer, integrated			using engine heat and a heat e
Cat Production Measurement (CPM)			(recommended in conditions f
Keypad, messenger, ET, VIMS	✓		-18° C to -30° C [0° F to -22° Heated mirrors (recommended
AM/FM/AUX radio		✓	freezing temperatures)
AM/FM/AUX/USB/BT/CD/SAT radio		✓	,
Coat hook	✓		

(continued on next page)

Standard

✓

√

✓

 \checkmark

✓ ✓ ✓

✓

Optional

✓

✓

Standard and Optional Equipment (continued)

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

	Standard	Optional		Sta
MACHINE CONTROL AND GUIDANCE			SERVICE	
CPM Payload Weighing System	\checkmark		Ground-level service center including:	
Cat Terrain ready		✓	- Service center light	
FUEL TANK			 Implement and cooling fan oil level indicator 	
12 hour (3440 L/910 gal)	✓		 Steering and brake oil level indicator 	
24 hour (5700 L/1,506 gal)		✓	 Window washer solvent level indicator 	
COOLING			- Transmission oil level indicator	
Standard ambient package (recommended for site conditions that do not exceed 43° C [110° F])	✓		 DEF level indicator (if equipped) Fuel level indicator Engine oil level indicator Engine coolant level indicator 	
High ambient package (recommended for site conditions that do not exceed 53° C [127° F])		✓	 Automatic lubrication system grease tank level indicator DEF purge indicator lamp 	
RIMS AND TIRES			 Transmission lockout and LED 	
Rims – 1118 mm (44") (44 × 57) 152 mm (6") flange For use with 53.5/85-57 76PR L5 tires		✓	 Starter lockout and LED Heavy-duty battery disconnect switch Stairway light switch Service lighting switch (if equipped) Fuel shutoff engine shutdown switch 	
Rims – 1194 mm (47") (47 × 57) 152 mm (6") flange For use with 58/85-57 84PR L4 tires		√	 Fuel shutoff engine shutdown switch Engine oil fast-fill port Transmission oil fast-fill port Steering and brake hydraulic oil fast-fill port 	
Rims – 1194 mm (47") (47 × 57) 127 mm (5") flange For use with 60/80 R57 L5R XMine D2 SR tires		✓	 Steering and brake hydraulic oil drain port Oil renewal system fast-fill port Engine coolant fast-fill port 	
Tires – 58/85-57 84PR L4 (require 47" rims)		✓	DEF fill port (HRC only)Implement and cooling fan hydraulic	
Tires – 53.5/85-57 FS 76PR L5 (require 44" rims)		✓	oil fast-fill port — Implement and cooling hydraulic oil drain port	
SPARE RIMS			 Automatic lubrication system grease 	
1118 mm (44") 152 mm (44 × 57) (6") flange		√	tank fill port – 24V jump-start receptacle	
1194 mm (47") 152 mm (44 × 57) (6") flange		√	- 240V jacket water and engine oil heater plug (if equipped)	
1194 mm (47") 127 mm (47 × 57) (5") flange		✓	12V power portVIMS key switch14-pin machine data portVIMS Messenger display	

(continued on next page)

Optional

Standard and Optional Equipment (continued)

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

	Standard	Optional
SERVICE (continued)		
In-tank mounted cartridge-type case drain filters with in-line magnetic plugs on implement, cooling fan, brake and steering pumps	✓	
High-pressure screens on the output side of implement, cooling fan, brake and steering pumps	✓	
Pump efficiency monitoring	✓	
Automatic lubrication system greases the linkage, hitch, steering and axle trunnion bearings	✓	
Electronic pressure control of the automatic lubrication system eliminates pressure adjustment and monitors grease thickness for temperature compatibility	✓	
Rock guards on linkage grease lines	✓	
Cat O-ring face seal couplings	✓	
Lockable service access doors	✓	
Ecology drains for engine, radiator, hydraulic tank, steering and brake tank, brake cooling tank and axles	✓	
High-speed engine oil change system	✓	
Ground-level fast-fill fuel system	✓	
Transmission guard	✓	
Drawbar hitch with pin	✓	
Cat XT TM hoses	✓	
Left-side service center	✓	
Oil sampling valves	✓	

	Standard	Optional
SERVICE (continued)	Otunuuru	Optional
Premixed 50% concentration of extended-life coolant with freeze protection to –34° C (–29° F)	✓	
Rear access to cab and service platform	✓	
Load-sensing steering	✓	
Supplemental steering system	✓	
Vandalism protection caplocks	✓	
Cooling cleanout service package	✓	
VIMS download and Cat Electronic Technician service port in bumper	✓	
Product Link™ satellite		✓
Product Link cellular		✓
Product Link (dual mode – satellite/cellular)		✓
Service lights (engine bay, service center)	✓	
Additional service lights (pump bay, front frame and bumper)		✓
EFFICIENCY		
Economy Mode	✓	
Variable displacement implement pumps	✓	
Variable displacement load sensing steering	✓	
Variable displacement cooling fan pump	✓	
Torque converter lock-up clutch	✓	
SOUND		
Sound-suppression package		✓

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AEXQ2519-02 (08-2021) Replaces AEXQ2519-01 (Global)

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