

# 992 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® C32B			
Emissions	U.S. EPA Tier 4 Final, U.S. EPA Tier 2 Equivalent			
Rated Speed	1,750 rpm			
Gross Power – SAE J1995 @ 1,750 rpm				
Tier 4/HRC (Highly Regulated Country) – Standard	671 kW	900 hp		
Tier 4/HRC – High Ambient	699 kW	937 hp		
Tier 2/LRC (Less Regulated Country) – Standard	676 kW	907 hp		
Tier 2/LRC – High Ambient	704 kW	944 hp		
Gross Power – ISO 14396 @ 1,750 rpm				
Tier 4/HRC – Standard	659 kW	884 hp		
Tier 4/HRC – High Ambient	687 kW	921 hp		
Tier 2/LRC – Standard	666 kW	893 hp		
Tier 2/LRC – High Ambient	694 kW	931 hp		
Net Power – SAE J1349 @ 1,750 rpm				
Tier 4/HRC – Standard	607 kW	814 hp		
Tier 4/HRC – High Ambient	607 kW	814 hp		
Tier 2/LRC – Standard	614 kW	823 hp		
Tier 2/LRC – High Ambient	614 kW	823 hp		
Bore	145 mm	5.7 in		
Stroke	162 mm	6.4 in		
Displacement	32.1 L	1,963.5 in <sup>3</sup>		
Peak Torque – SAE J1995				
Tier 4/HRC – Standard @ 1,200 rpm	4765 N·m	3,514 lbf-ft		
Tier 4/HRC – High Ambient @ 1,300 rpm	4820 N·m	3,555 lbf-ft		
Tier 2/LRC – Standard @ 1,200 rpm	4796 N·m	3,537 lbf-ft		
Tier 2/LRC – High Ambient @ 1,350 rpm	4841 N·m	3,570 lbf-ft		

<b>Operating Specifications</b>				
Operating Weight	105 882 kg	233,430 lb		
Rated Payload – Standard	23.1 tonnes	25.5 tons		
Rated Payload – Standard	27.2 tonnes	30 tons		
(Material Handler)				
Rated Payload – High Lift	20.4 tonnes	22.5 tons		
Rated Payload – High Lift (Material Handler)	24.5 tonnes	27 tons		
Bucket Capacity Range	11.5-24.5 m <sup>3</sup>	15-32 yd <sup>3</sup>		
Cat Truck Match – Standard	775/777			
Cat Truck Match – High Lift	785			
Transmission				
Transmission Type	Cat Planetar	y Powershift		
Forward 1	7 km/h	4.3 mph		
Forward 2	11.9 km/h	7.4 mph		
Forward 3	20.5 km/h	12.7 mph		
Direct Drive – Forward 1	Disabled	Disabled		
Direct Drive – Forward 2	12.9 km/h	8 mph		
Direct Drive – Forward 3	22.6 km/h	14 mph		
Reverse 1	7.5 km/h	4.7 mph		
Reverse 2	13 km/h	8.1 mph		
Reverse 3	22.4 km/h	13.9 mph		
Direct Drive – Reverse 1	8 km/h	5 mph		
Direct Drive – Reverse 2	14.2 km/h	8.8 mph		
Direct Drive – Reverse 3	24.7 km/h	15.3 mph		
Hydraulic System – Lift/Tilt				
Lift/Tilt System – Circuit	Positive Flow	v Control		
Lift/Tilt System – Pumps Variable Displac Piston				
Maximum Flow @ 2,165 rpm	950 L/min	250 gal/min		
Relief Valve Setting – Lift/Tilt	34 500 kPa	5,000 psi		
Lift Cylinder – Bore	235.0 mm	9.3 in		
Lift Cylinder – Stroke	1613 mm	63.5 in		
Tilt Cylinder – Bore	292 mm	11.5 in		
Tilt Cylinder – Stroke	1055 mm	41.5 in		

Hydraulic Cycle Time	
Rack Back	
Standard	2.3 seconds
High Lift	2.3 seconds
Raise	
Standard	9.0 seconds
High Lift	9.0 seconds
Dump	
Standard	2.6 seconds
High Lift	2.6 seconds
Float Down	
Standard	3.2 seconds
High Lift	3.2 seconds
Total Cycle Time	17.1 seconds

Service Refill Capacities		
Fuel Tank	1460 L	385.7 gal
Cooling System	225 L	59.4 gal
Crankcase	120 L	31.7 gal
Transmission	195 L	51.5 gal
Differentials and Final Drives – Front	365 L	96.4 gal
Differentials and Final Drives – Rear	365 L	96.4 gal
Hydraulic System Factory Fill (Implement)	394 L	104.1 gal
Hydraulic Tank (Implement Tank Only)	228 L	60.2 gal
Hydraulic Factory Fill (Steering)	123 L	32.5 gal
Hydraulic Tank (Steering Tank Only)	99.5 L	26.3 gal

Axles	
Front	Fixed
Rear	Trunnion
Oscillation Angle	<u>+</u> 9°

Brakes	
Brakes	ISO 3450:2011
Hydraulic System – Steering	
Steering System – Circuit	Pilot, Load Sensing
Steering System – Pump	Piston, Variable Displacement
Maximum Flow @ 1,400-1,850 rpm	265 L/min 70 gal/min
Steering Cut-Off Pressure	31 000 kPa 4,500 psi
Total Steering Angle	80°
Steering Cycle Time (Low Idle)	4.9 seconds
Steering Cycle Time (High Idle)	3.1 seconds
<b>Cooling System</b>	

Ambient Capability, Hydraulically	Driven Demand F	an
Standard	43° C	109.4° F
High	55° C	131° F

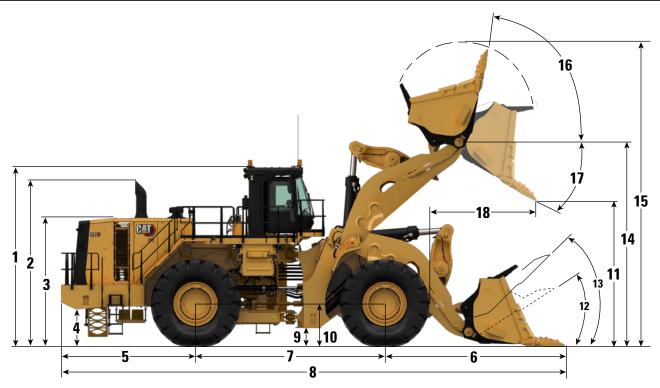
Sound Performance								
Sound Levels	Standard	Suppression						
Operator Sound Level (ISO 6396:2008)	70 dB(A)	70 dB(A)						
Machine Sound Level (ISO 6396:2008)	116 dB(A)	113 dB(A)						

#### **Air Conditioning System**

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. See the label or instruction manual for identification of the gas. The system contains  $2.0~\mathrm{kg}$  of refrigerant which has a  $CO_2$  equivalent of  $2.860~\mathrm{metric}$  tonnes.

#### **Dimensions**

All dimensions are approximate.



	Standa 13 m³ (17 yd		High 11.5 m³ (15 y	
1 Ground to Top of Rollover Protective Structure (ROPS)	5571 mm	18.3 ft	5571 mm	18.3 ft
<b>2</b> Ground to Top of Exhaust Stacks	5169 mm	17.0 ft	5169 mm	17.0 ft
<b>3</b> Ground to Top of Hood	3983 mm	13.1 ft	3983 mm	13.1 ft
4 Ground to Bumper Clearance	1145 mm	3.8 ft	1145 mm	3.8 ft
<b>5</b> Rear Axle Center Line to Bumper	4119 mm	13.5 ft	4119 mm	13.5 ft
<b>6</b> Front Axle Center Line to Bucket Tip	5480 mm	18.0 ft	5724 mm	18.8 ft
7 Wheel Base	5890 mm	19.3 ft	5890 mm	19.3 ft
8 Maximum Overall Length	15 489 mm	50.8 ft	15 733 mm	51.6 ft
<b>9</b> Ground to Lower Hitch Clearance	666 mm	2.2 ft	666 mm	2.2 ft
<b>0</b> Ground to Center of Axles	1308 mm	4.3 ft	1308 mm	4.3 ft
1 Clearance at Maximum Lift, at 45° Dump	4630 mm	15.2 ft	5256 mm	17.2 ft
2 Rack Back Angle at Ground Level	40.2 degrees		42.5 degrees	
3 Rack Back Angle at Carry	48.9 de	egrees	51.6 de	egrees
4 B-Pin Height at Maximum Lift	6948 mm	22.8 ft	7465 mm	24.5 ft
5 Maximum Overall Height, Bucket Raised	9390 mm	30.8 ft	9759 mm	32.0 ft
6 Rack Angle at Maximum Lift	56.9 de	56.9 degrees		egrees
7 Dump Angle at Maximum Lift	-49.5 d	-49.5 degrees		egrees
<b>18</b> Reach at Maximum Lift, at 45° Dump	2503 mm	8.2 ft	2319 mm	7.6 ft
Tread Width	3302 mm	10.83 ft	3302 mm	10.83 ft
Width Over Tires (with bulge)	4493 mm	14.74 ft	4495 mm	14.75 ft

Note: Assumes loaded 45/65-45 58 tires, tires at a static loaded radius of 1308 mm (4.29 ft), 538-7980 13 m³ (17 yd³) bucket, Advansys 170 General Duty Teeth: 368-3880 tips.

#### **Bucket Selection Guide**

When sizing the bucket, it is important to consider the Maximum Swung Load. The Maximum Swung Load is defined as the maximum allowed combined weight of the bucket and payload. Large Wheel Loader Payload Policy is that 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 tables 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

**Note:** The default Target Payload (90% of maximum payload) is intended to accommodate variation in payload without exceeding the Maximum Swung Load. Target payload can be higher with less variation.

The rated capacity of the tires should always be considered.

#### **Face Application**

andard Lift: Rated Payload 23.1 tonnes (25.5 tons), Maximum Swung Load 36.5 tonnes (40.2 tons)											
Bucket Volume		Example Bucket 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
11.5	15	10 378	22,873	23.6	26.0	26.2	28.9	2056	3,465	2284	3,850
13.0	17	10 872	23,961	23.1	25.5	25.7	28.3	1780	3,000	1978	3,333
14.5	19	11 355	25,026	22.7	25.0	25.2	27.8	1563	2,634	1736	2,926

#### High Lift: Rated Payload 20.4 tonnes (22.5 tons), Maximum Swung Load 33.0 tonnes (36.4 tons)

Bucket Volume		Example Bucket Weight		Target Payload at Example Bucket Weight		Maximum at Exa Bucket	mple	Target Density at Example Bucket Weight		at Exa	n Density ample Weight
m³	yd³	kg	lb	tonnes	tons	tonnes	tons	kg/m³	lb/yd³	kg/m³	lb/yd³
11.5	15	10 378	22,873	20.4	22.5	22.7	25.0	1780	3,000	1978	3,333
13.0	17	10 872	23,962	20.0	22.0	22.2	24.5	1536	2,589	1707	2,877
14.5	19	11 355	25,026	19.5	21.5	21.7	23.9	1345	2,266	1494	2,518

#### Loose/Rehandled Application (Requires optional material handler counterweight)

Standard Lift Material Handler: Rated Payload 27.2 tonnes (30 tons), Maximum Swung Load 39.7 tonnes (43.8 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
11.5	15	11 512	25,372	26.8	29.5	28.2	31.1	2213	3,730	2459	4,145
17.6	23	11 172	24,623	27.1	29.9	28.5	31.5	1461	2,462	1623	2,736
24.5	32	13 483	29,717	24.9	27.5	26.2	28.9	965	1,626	1072	1,807

#### High Lift Material Handler: Rated Payload 24.5 tonnes (27 tons), Maximum Swung Load 37 tonnes (40.8 tons)

Bucket Volume		Example Bucket Weight		at Example		at Exa	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	
11.5	15	11 512	25,372	24.2	26.7	25.5	28.1	2000	3,372	2223	3,746	
16.1	21	10 718	23,622	25.0	27.5	26.3	29.0	1473	2,483	1637	2,759	
24.5	32.	13 483	29.717	22.3	24.6	23.5	25.9	865	1.458	961	1.620	

### **Operating Specifications – Standard Lift**

	Standard Lift					
Bucket Type			Rock			
Ground Engaging Tool			Teeth & Segmen	t		
Cutting Edge Type			Spade			
Bucket Part Number		536-3340	538-7980	557-8090		
Struck Capacity	$m^3$	9.0	10.0	12.0		
	$yd^3$	11.8	13.0	15.7		
Heaped Capacity (Rated)	m <sup>3</sup>	11.5	13	14.5		
	$yd^3$	15	17	19		
Width	mm	4824	4824	4824		
	ft	15.8	15.8	15.8		
Dump Clearance at Full Lift and 45° Discharge (Edge)	mm	4985	4847	4752		
	ft	16.4	15.9	15.6		
Dump Clearance at Full Lift and 45° Discharge (With Teeth)	mm	4740	4630	4513		
	ft	15.6	15.2	14.8		
Reach at Lift and 45° Discharge (Edge)	mm	2160	2298	2379		
	ft	7.1	7.5	7.8		
Reach at Lift and 45° Discharge (With Teeth)	mm	2393	2503	2608		
	ft	7.9	8.2	8.6		
Reach with Lift Arms Horizontal and Bucket Level	mm	4939	5095	5252		
	ft	16.2	16.7	17.2		
Digging Depth	mm	206	206	217		
	in	8.1	8.1	8.5		
Overall Length	mm	15 334	15 490	15 654		
	ft	50.3	50.8	51.4		
Overall Height with Bucket at Full Raise	mm	9242	9390	9519		
	ft	30.3	30.8	31.2		
Loader Clearance Turning Radius (SAE Carry with Teeth)	mm	10 973	11 018	11 068		
	ft	36.0	36.1	36.3		
Full Dump Angle	degree	-50	-50	-50		

### Operating Specifications – Standard Lift (continued)

			Standard Lift			
Bucket Type			Rock			
Ground Engaging Tool			Teeth & Segmen	t		
Cutting Edge Type			Spade			
Bucket Part Number		536-3340	538-7980	557-8090		
Struck Capacity	$m^3$	9.0	10.0	12.0		
	$yd^3$	11.8	13.0	15.7		
Heaped Capacity (Rated)	$m^3$	11.5	13	14.5		
	$yd^3$	15	17	19		
Static Tipping Load Straight (No Tire Squash)	kg	71 085	70 108	69 128		
	1b	156,716	154,562	152,402		
Static Tipping Load Straight (With Tire Squash)	kg	68 295	67 298	66 304		
	1b	150,564	148,366	146,175		
Static Tipping Load – Full Turn (Articulated 40°) (No Tire Squash)	kg	61 829	60 901	59 970		
	1b	136,309	134,263	132,211		
Static Tipping Load – Full Turn (Articulated 40°) (With Tire Squash)	kg	56 943	55 984	55 030		
	1b	125,538	123,424	121,321		
Breakout Force	kN	699	638	602		
	1b	157,125	143,422	135,298		
Operating Weight	kg	105 394	105 882	106 366		
	1b	232,354	233,430	234,497		
Weight Distribution at SAE Carry (Unloaded)						
Front	kg	59 137	59 994	60 865		
	lb	130,374	132,265	134,185		
Rear	kg	46 257	45 888	45 501		
	lb	101,980	101,165	100,312		
Weight Distribution at SAE Carry (Loaded)						
Front	kg	95 598	96 592	97 605		
	lb	210,758	212,949	215,182		
Rear	kg	32 929	32 423	31 894		
	lb	72,595	71,481	70,314		

### **Operating Specifications – High Lift**

			High Lift			
Bucket Type			Rock			
Ground Engaging Tool		,	Teeth & Segmen	t		
Cutting Edge Type			Spade			
Bucket Part Number		536-3340	538-7980	557-8090		
Struck Capacity	m <sup>3</sup>	9.0	10.0	12.0		
	$yd^3$	11.8	13.0	15.7		
Heaped Capacity (Rated)	m <sup>3</sup>	11.5	13	14.5		
	$yd^3$	15	17	19		
Width	mm	4824	4824	4824		
	ft	15.8	15.8	15.8		
Dump Clearance at Full Lift and 45° Discharge (Edge)	mm	5501	5363	5268		
	ft	18.0	17.6	17.3		
Dump Clearance at Full Lift and 45° Discharge (With Teeth)	mm	5256	5146	5029		
	ft	17.2	16.9	16.5		
Reach at Lift and 45° Discharge (Edge)	mm	2086	2225	2305		
	ft	6.8	7.3	7.6		
Reach at Lift and 45° Discharge (With Teeth)	mm	2319	2430	2535		
	ft	7.6	8.0	8.3		
Reach with Lift Arms Horizontal and Bucket Level	mm	5266	5422	5579		
	ft	17.3	17.8	18.3		
Digging Depth	mm	213	213	224		
	in	8.4	8.4	8.8		
Overall Length	mm	15 733	15 889	16 053		
	ft	51.6	52.1	52.7		
Overall Height with Bucket at Full Raise	mm	9759	9906	10 036		
	ft	32.0	32.5	32.9		
Loader Clearance Turning Radius (SAE Carry with Teeth)	mm	11 129	11 174	11 224		
,	ft	36.5	36.7	36.8		
Full Dump Angle	degree	-48	-48	-48		

### Operating Specifications – High Lift (continued)

			High Lift			
Bucket Type			Rock			
Ground Engaging Tool			Teeth & Segment	t		
Cutting Edge Type			Spade			
Bucket Part Number		536-3340	538-7980	557-8090		
Struck Capacity	$m^3$	9.0	10.0	12.0		
	yd³	11.8	13.0	15.7		
Heaped Capacity (Rated)	$m^3$	11.5	13	14.5		
	$yd^3$	15	17	19		
Static Tipping Load Straight (No Tire Squash)	kg	64 263	63 375	62 482		
	lb	141,675	139,718	137,750		
Static Tipping Load Straight (With Tire Squash)	kg	61 929	61 023	60 116		
	1b	136,529	134,533	132,534		
Static Tipping Load – Full Turn (Articulated 40°) (No Tire Squash)	kg	55 718	54 869	54 017		
	1b	122,836	120,966	119,086		
Static Tipping Load – Full Turn (Articulated 40°) (With Tire Squash)	kg	51 499	50 622	49 747		
	1b	113,535	111,602	109,673		
Breakout Force	kN	672	613	578		
	1b	151,028	137,811	129,968		
Operating Weight	kg	105 934	106 422	106 906		
	1b	233,545	234,621	235,688		
Weight Distribution at SAE Carry (Unloaded)						
Front	kg	60 723	61 605	62 500		
	1b	133,870	135,816	137,788		
Rear	kg	45 212	44 817	44 407		
	1b	99,675	98,805	97,900		
Weight Distribution at SAE Carry (Loaded)						
Front	kg	94 150	95 139	96 143		
	1b	207,564	209,744	211,960		
Rear	kg	32 197	31 696	31 175		
	lb	70,981	69,877	68,729		

### Operating Specifications – Standard Lift Material Handler/High Lift Material Handler

		Standard Lift N	laterial Handler	High Lift Material Handler		
Bucket Type		Rock	Coal	Rock	Coal	
Ground Engaging Tool		BC	CE	BOCE		
Cutting Edge Type		Stra	aight	Stra	ight	
Bucket Part Number		557-8050	557-8020	557-8050	557-8020	
Struck Capacity	$m^3$	14.0	20.0	14.0	20.0	
	$yd^3$	18.3	26.2	18.3	26.2	
Heaped Capacity (Rated)	$m^3$	17.6	24.5	17.6	24.5	
	$yd^3$	23	32	23	32	
Width	mm	4995	6090	4995	6090	
	ft	16.4	20.0	16.4	20.0	
Dump Clearance at Full Lift and 45° Discharge (Edge)	mm	4873	4710	5389	5226	
	ft	16.0	15.5	17.7	17.1	
Dump Clearance at Full Lift and 45° Discharge (With Teeth)	mm	_	_	_	_	
	ft	_	_	_	_	
Reach at Lift and 45° Discharge (Edge)	mm	2301	2451	2227	2377	
	ft	7.5	8.0	7.3	7.8	
Reach at Lift and 45° Discharge (With Teeth)	mm	_	_		_	
	ft	_	_		_	
Reach with Lift Arms Horizontal and Bucket Level	mm	4780	5001	5107	5328	
	ft	15.7	16.4	16.8	17.5	
Digging Depth	mm	186	195	193	202	
	in	7.3	7.7	7.6	8.0	
Overall Length	mm	15 160	15 388	15 561	15 788	
	ft	49.7	50.5	51.1	51.8	
Overall Height with Bucket at Full Raise	mm	9678	9835	10 194	10 351	
	ft	31.8	32.3	33.4	34.0	
Loader Clearance Turning Radius (SAE Carry with Teeth)	mm	11 157	11 751	11 311	11 898	
	ft	36.6	38.6	37.1	39.0	
Full Dump Angle	degree	-50	-50	-48	-48	

### **Operating Specifications – Standard Lift Material Handler/High Lift Material Handler** *(continued)*

		Standard Lift M	laterial Handler	High Lift Material Handler	
Bucket Type		Rock	Coal	Rock	Coal
Ground Engaging Tool		BOCE	BOCE	BOCE	BOCE
Cutting Edge Type		Straight	Straight	Straight	Straight
Bucket Part Number		557-8050	557-8020	557-8050	557-8020
Struck Capacity	m <sup>3</sup>	14.0	20.0	14.0	20.0
	$yd^3$	18.3	26.2	18.3	26.2
Heaped Capacity (Rated)	m <sup>3</sup>	17.6	24.5	17.6	24.5
	$yd^3$	23	32	23	32
Static Tipping Load Straight (No Tire Squash)	kg	74 070	70 667	67 126	63 913
	1b	163,296	155,794	147,987	140,905
Static Tipping Load Straight (With Tire Squash)	kg	70 958	67 574	64 519	61 316
	1b	156,435	148,975	142,239	135,177
Static Tipping Load – Full Turn (Articulated 40°)	kg	64 158	60 888	57 956	54 854
(No Tire Squash)	1b	141,443	134,235	127,770	120,933
Static Tipping Load – Full Turn (Articulated 40°)	kg	58 598	55 356	53 136	50 052
(With Tire Squash)	1b	129,187	122,038	117,145	110,345
Breakout Force	kN	640	572	614	549
	1b	143,788	128,559	138,121	123,370
Operating Weight	kg	108 182	110 493	108 722	111 033
	1b	238,501	243,595	239,692	244,786
Weight Distribution at SAE Carry (Unloaded)					
Front	kg	59 125	62 912	60 753	64 672
	1b	130,348	138,696	133,937	142,576
Rear	kg	49 057	47 581	47 969	46 362
	1b	108,153	104,899	105,754	102,210
Weight Distribution at SAE Carry (Loaded)					
Front	kg	102 525	106 661	101 271	105 481
	1b	226,029	235,147	223,263	232,546
Rear	kg	32 873	31 048	31 946	30 046
	1b	72,473	68,449	70,428	66,241

#### **Standard and Optional Equipment**

	Standard	Optional
POWER TRAIN		
Engine, C32B	✓	
Fuel priming pump (electric)	✓	
Ground-level engine shutdown	✓	
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	✓	
Rimpull control system	✓	
Planetary powershift, 3F/3R electronic control transmission	✓	
Delayed engine shutdown	✓	
Oil-cooled, multi-disc, service brakes	✓	
Electro-hydraulic parking brake	✓	
Auto retarding controls	✓	
Advanced auto retarding controls with engine brake		✓
Brake temp estimator	✓	
Autoshift	✓	
LINKAGE		
Standard lift (23 tonnes/25.5 tons face, 27.2 tonnes/30 tons loose)	✓	
High lift (20.5 tonnes/22.5 tons face, 24.5 tonnes/27 tons loose)		✓
EFFICIENCY		
Variable displacement implement pumps	✓	
Variable displacement load-sensing steering	✓	
Variable displacement cooling fan pump	✓	
Torque converter lock-up clutch	✓	
Bucket float	✓	
Automatic bucket controls:  - Lift kickout  - Return-to-dig kickout	✓	
Default on-demand throttle (economy mode) with HP+ mode button	<b>√</b>	
Engine idle shutdown	<b>√</b>	

	Standard	Optional
ELECTRICAL AND LIGHTING		
150-amp alternator	✓	
Four 1400 CCA batteries	✓	
10/15 amp, 24V to 12V converter	✓	
Battery – single pole (master disconnect) isolator	✓	
Emergency jump-start receptacle	✓	
Starter and transmission lockout in bumper	✓	
24V starting and charging system	✓	
Electric starters	✓	
Dual pole battery isolator		✓
Live line indicators in service center	✓	
LED warning lights (pattern selectable)	✓	
LED lighting system:  - Two front- and rear-mounted LED turn signals  - Four forward-facing running lights  - Three forward-facing flood lights  - Four platform-mounted flood lights  - Two forward-facing high beams  - Four rear-facing floods  - Four stairway lights  - Two engine bay service lights	<b>√</b>	
Six service lights		✓
Two hitch-mounted lights		✓

#### Standard and Optional Equipment (continued)

	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 two-way thigh support adjustment	✓	
Bonded glass, tinted	✓	
Rubber-mounted, high-impact resistant solar control glass		✓
Trainer seat	✓	
Trainer seat with suspension		✓
Dual-lever lift and tilt function controls	✓	
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 with configurable widgets:  - Status indicators  - Wheel rev counter  - Simplified payload  - TPMS (optional)  - Bucket angle	<b>√</b>	

- Coolant temperature
- Hydraulic oil temperature
- Fuel level
- Power train oil temperature
- Engine speed (tachometer)
- Transmission gear
- Ground speed
- Engine hour meter

	Standard	Optional
OPERATOR ENVIRONMENT (continued)		
Powered cab precleaner	✓	
Operator presence status	✓	
Starting/charging system malfunction	✓	
Electronic OMM	✓	
Operator controls help	✓	
Bluetooth®-enabled machine security		✓
Two USB charging ports	✓	
CB mounting, 12V/24V power and antenna	✓	
14-pin service port	✓	
12V power	✓	
Selectable application profiles	✓	
Entertainment radio mute	✓	
Push-To-Start (PTS)	✓	
Warning/indicator instrumentation	✓	
Keypad control with indicator lights	✓	
Dome light in cab	✓	
Lunchbox and beverage holders	✓	
Electro-hydraulic force feedback steering	✓	
Sun screen, pull down (front and rear)		✓
Vital Information Management System	✓	
(VIMS <sup>TM</sup> ) with information display:		
external data port, cycle timer		
AM/FM/AUX radio		✓
AM/FM/AUX/USB/BT/CD/SAT radio		✓
Coat hook	✓	

#### Standard and Optional Equipment (continued)

	Standard Optional			
SAFETY				
Ground-access ladders	✓			
Powered ground-access stairs		✓		
Rear-vision camera	✓			
Side-vision cameras (270 degree)		✓		
Cat Detect (rear object detection)		✓		
Front walkway around cab	✓			
Tie-offs on ROPS	✓			
Steering frame lock	✓			
Wheel chocks		✓		
Stairways on both sides of the machine	✓			
Platform toe kicks	✓			
Retractable seatbelt, operator and trainer seat	✓			
Back-up alarm	✓			
Secondary steering		✓		
Electric disc horns	<b>√</b>			
Electric trumpet field horn plus electric shop horn		<b>√</b>		
Fire suppression ready (tank mounting provision and provision for integration with machine electronics for monitoring faults or activation)		<b>√</b>		
Emergency stop system		✓		
Implement lock switch	✓			
Seatbelt warning	✓			
Entertainment radio mute	✓			
COLD WEATHER				
Cold-weather cooling fan bypass (recommended for temperatures below -29° C [-20° F])		✓		
120V or 240V coolant heating elements (recommended in conditions from -18° C to -30° C [0° F to -22° F])		✓		
Fuel heater (heated by recirculation using engine heat and a heat exchanger) (recommended in conditions from -18° C to -30° C [0° F to -22° F])		<b>√</b>		
Heated mirrors		✓		

	Standard	Optional
MACHINE CONTROL AND GUIDANCE		
Cat Payload with Overload Prevention		✓
MineStar Health ready	✓	
MineStar GUIDE ready		
MineStar Edge ready		
New Autodig Components:		$\checkmark$
- Tire slip prevention		
– Lift stall prevention		
- Tire set		
Operator coaching		✓
COOLING		
Standard ambient package	$\checkmark$	
(recommended for site conditions that		
do not exceed 43° C [110° F])		
High ambient package (recommended		$\checkmark$
for site conditions that do not exceed		
55° C [131° F])		
RIMS AND TIRES		
Rims – 914.4 mm (36") $(36 \times 45)$		$\checkmark$
113.3 mm (4.5") flange		
For use with 45/65R45 and 45/65-45 tires		
Tires – 45/65R45		
Tires – 45/65-45		
SPARE RIMS		
914.4 mm (36") (36 × 45)		✓
(4.5") flange		

#### Standard and Optional Equipment (continued)

	Standard	Optional		Standard	Optional
SERVICE			SERVICE (continued)		
Ground-level service center including:	✓		Implement pump efficiency monitoring	✓	
- Implement and cooling fan oil level			Rock guards on linkage grease lines	✓	
indicator  – Steering and brake oil level indicator			Cat O-ring face seal couplings	✓	
Window washer fluid level indicator			Lockable service access doors	✓	
<ul><li>Transmission oil level indicator</li><li>Fuel level indicator</li><li>Engine oil level indicator</li></ul>			Ecology drains for engine, radiator, hydraulic tank, steering and brake tank, brake cooling tank and axles	✓	
<ul> <li>Engine coolant level indicator</li> <li>Automatic lubrication system grease tank level indicator</li> <li>Starter lockout and LED</li> <li>Heavy-duty battery disconnect switch</li> </ul>			Electronic pressure control of the automatic lubrication system eliminates pressure adjustment and monitors grease thickness for temperature compatibility	✓	
- Stairway light switch			Ground-level fast-fill fuel system	✓	
<ul> <li>Service lighting switch (if equipped)</li> </ul>			Transmission and engine guards		✓
- Fuel shutoff engine shutdown switch			Drawbar hitch with pin	✓	
<ul><li>Engine oil fast-fill port</li><li>Transmission oil fast-fill port</li></ul>			Cat XT <sup>TM</sup> hoses	✓	
- Steering and brake hydraulic oil			Left-side service center	✓	
fast-fill port			Oil sampling valves	✓	
- Steering and brake hydraulic oil drain port			Diagnostic lines for easy troubleshooting access		✓
<ul> <li>Engine coolant fast-fill port</li> <li>Implement and cooling fan hydraulic oil fast-fill port</li> <li>Implement and cooling fan hydraulic</li> </ul>			Premixed 50% concentration of extended-life coolant with freeze protection to -34° C (-29° F)	✓	
oil drain port			Rear access to cab and service platform	✓	
- Automatic lubrication system grease			Load-sensing steering	✓	
tank fill port  – 24V jump-start receptacle			Vandalism protection caplocks	✓	
- 24v jump-start receptacie - 12V power port			Cooling cleanout service access	✓	
<ul> <li>120V jacket water plug (if equipped)</li> <li>240V jacket water plug (if equipped)</li> </ul>			Telematics and Cat Electronic Technician service port in bumper	✓	
– VIMS key switch			Product Link <sup>TM</sup> cellular		✓
- 14-pin service port - Transmission lockout and LED			Product Link (dual mode – satellite/cellular)		✓
In-tank mounted cartridge-type case drain filters with in-line magnetic plugs	✓		Automatic Autolube filling shutoff valve	✓	
on implement, cooling fan, brake and			SOUND		
steering pumps			Sound-suppression package		✓
High-pressure screens on the output side	✓		LOAD AND CARRY OR EXTENSIVE TRAMMING		
of implement, cooling fan, brake and steering pumps			Ride control		✓

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