

**Caterpillar 988K Wheel Loader EL019**



<b>Make</b>	Caterpillar		<b>Model</b>	988K		
<b>Year</b>	2018	<b>Hours</b>	5582		As at	01/12/2019
<b>Mileage</b>				km	As at	
<b>Serial/VIN</b>	CAT0988KKL8X00228			<b>Engine Serial</b>	TXW04407	
<b>Details</b>	Caterpillar 988K Wheel Loader / Tool Carrier Asset no EL019. Offered for sale via online auction ex Site Nifty Copper Mine via Telfer Western Australia, running to drive on to buyers transport. See Google Maps link: <a href="https://goo.gl/maps/Xvaa3uBAFso9MP7A8">https://goo.gl/maps/Xvaa3uBAFso9MP7A8</a>					
<b>Asking price</b>	AUD	Under review - call for pricing				
<b>Ex site</b>	Australia, Western Australia, Telfer					

<b>Service history</b>	
------------------------	--

**For further details, to make an offer or book an inspection, contact  
Global Equipment Solutions on Office: 08 9201 1142**



















**5.1.7 EL019 CATERPILLAR 988K LOADER**

- Sandvik lip and GET (new)
- Main Rom loader
- Purchased new December 2018

<b>Asset Number</b>	<b>Model</b>	<b>Serial Number</b>	<b>Current SMU reading (hrs)</b>	<b>All-time SMU</b>
EL019	988K	L8X00228	5582	5582
<b>Work Order</b>	<b>Description</b>	<b>Start Date</b>	<b>Status</b>	<b>Key/Section</b>
4174778	Replace fast fill.	24/11/2019	I	ENGINE

**5.1.8 EL019 SUMMARY**

Front line loader - ROM.



# 988K

## Wheel Loader



### Engine

Engine Model	Cat® C18 ACERT™	
Emissions	U.S. EPA Tier 4 Final/EU Stage IV OR Tier 3/Stage IIIA Equivalent OR Tier 2/Stage II Equivalent	
Gross (ISO 14396)	432 kW	580 hp
Net Power – SAE J1349	403 kW	541 hp

### Buckets

Bucket Capacities	4.7-13 m <sup>3</sup>	6.2-17 yd <sup>3</sup>
<b>Operating Specifications</b>		
Rated Payload – Quarry Face	11.3 tonnes	12.5 tons
Rated Payload – Loose Material	14.5 tonnes	16 tons
Operating Weight	51 062 kg	112,574 lb



# 988K Wheel Loader Specifications

## Engine

Engine Model	Cat C18 ACERT	
Emissions	Tier 4 Final/Stage IV OR Tier 3/Stage IIIA Equivalent OR Tier 2/ Stage II Equivalent	
Rated Speed	1,700 rpm	
Peak Power Speed	1,500 rpm	
Gross – ISO 14396	432 kW	580 hp
Gross – SAE J1995	439 kW	588 hp
Net Power – SAE J1349	403 kW	541 hp
Bore	145 mm	5.7 in
Stroke	183 mm	7.2 in
Displacement	18.1 L	1,105 in <sup>3</sup>
Peak Torque @ 1,200 rpm	2852 N·m	2,104 lb-ft
Torque Rise	58%	

## Operating Specifications

Operating Weight	51 062 kg	112,574 lb
Rated Payload – Quarry Face	11.3 tonnes	12.5 tons
Rated Payload – Loose Material	14.5 tonnes	16 tons
Bucket Capacity Range	4.7-13 m <sup>3</sup>	6.2-17 yd <sup>3</sup>
Cat Truck Match – Standard	770-772	
Cat Truck Match – High Lift	773-775	

## Transmission

Transmission Type	Cat planetary power shift	
Forward 1	6.5 km/h	4.0 mph
Forward 2	11.6 km/h	7.2 mph
Forward 3	20.4 km/h	12.7 mph
Forward 4	34.7 km/h	21.6 mph
Reverse 1	7.5 km/h	4.7 mph
Reverse 2	13.3 km/h	8.3 mph
Reverse 3	23.2 km/h	14.4 mph
Direct Drive Forward 1	Lock-up disabled	
Direct Drive Forward 2	12.5 km/h	7.8 mph
Direct Drive Forward 3	22.3 km/h	13.9 mph
Direct Drive Forward 4	39.3 km/h	24.4 mph
Direct Drive Reverse 1	8.0 km/h	5.0 mph
Direct Drive Reverse 2	14.3 km/h	8.9 mph
Direct Drive Reverse 3	25.5 km/h	15.8 mph

- Travel speeds based on 35/65-R33 tire.

# 988K Wheel Loader Specifications

## Hydraulic System – Lift/Tilt

Lift/Tilt System – Circuit	EH- Positive Flow Control, Flow Sharing	
Lift/Tilt System	Variable displacement piston	
Maximum Flow at 1,400-1,860 rpm	580 L/min	153 gal/min
Relief Valve Setting – Lift/Tilt	32 800 kPa	4,757 psi
Cylinders, Double Acting: Lift, Bore and Stroke	210 mm × 1050 mm	8.7 in × 41.3 in
Cylinders, Double Acting: Tilt, Bore and Stroke	269 mm × 685 mm	8.7 in × 27 in
Pilot System	Variable displacement piston	
Maximum Flow	52 L/min	13.7 gal/min
Relief Valve Setting	3800 kPa	551 psi

## Hydraulic Cycle Time (1,400-1,860 rpm)

Rackback	4.5 Seconds
Raise	8.0 Seconds
Dump	2.2 Seconds
Lower Float Down	3.5 Seconds
Total Hydraulic Cycle Time (empty bucket)	18.2 Seconds

## Hydraulic System – Steering

Steering System – Circuit	Pilot, load sensing	
Steering System – Pump	Piston, variable displacement	
Maximum Flow	270 L/min	71.3 gal/min
Relief Valve Setting – Steering	30 000 kPa	4,351 psi
Total Steering Angle	86°	
Steering Cycle Time (high idle)	3.4 sec	
Steering Cycle Time (low idle)	5.6 sec	

## Service Refill Capacities

Fuel Tank	712 L	188 gal
Cooling System	120 L	31.7 gal
Coolant (validated by test cell fill quantities)	125 L	33 gal
Crankcase	60 L	15.9 gal
Diesel Exhaust Fluid Tank (for Tier 4 Final/Stage IV only)	33 L	8.7 gal
Transmission	120 L	31.7 gal
Transmission (validated by test cell fill quantities)	110 L	29 gal
Differentials and Final Drives – Front	186 L	49.1 gal
Differentials and Final Drives – Rear	186 L	49.1 gal
Hydraulic System Factory Fill	475 L	125.5 gal
Hydraulic System (tank only)	240 L	63.4 gal

- All non-road Tier 4 Final/Stage IV, and Japan 2014 (Tier 4 Final) diesel engines are required to use:
  - Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less. Biodiesel blends up to B20 are acceptable when blended with 15 ppm (mg/kg) sulfur or less ULSD and when the biodiesel feedstock meets ASTM D7467 specifications.
  - Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specifications are required.
  - Only use DEF that meets ISO 22241-1 standards.

## Axles

Front	Fixed
Rear	Trunnion
Oscillation Angle	13°

## Brakes

Brakes	SAE J1473 OCT90, ISO 3450:1992
--------	--------------------------------

## Sound Performance – Tier 4 Final/Stage IV

	Standard	Suppression
Operator Sound Level (ISO 6396)	72 dB(A)	72 dB(A)
Machine Sound Level (ISO 6395)	111 dB(A)	109 dB(A)

## Sound Performance – Tier 2 Equivalent/Stage II

	Standard	Suppression
Operator Sound Level (ISO 6396)	73 dB(A)	72 dB(A)
Machine Sound Level (ISO 6395)	112 dB(A)	110 dB(A)

- 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.
- 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.



# 988K Wheel Loader Specifications

## Dimensions

All dimensions are approximate.



	Standard Lift		High Lift	
<b>1</b> Ground to Top of ROPS	4187 mm	13.7 ft	4187 mm	13.7 ft
<b>2</b> Ground to Top of Exhaust Stack (Tier 4)	4498 mm	14.8 ft	4498 mm	14.8 ft
Ground to Top of Exhaust Stack (LRC)	4199 mm	13.8 ft	4199 mm	13.8 ft
<b>3</b> Ground to Top of Hood	3334 mm	10.9 ft	3334 mm	10.9 ft
<b>4</b> Ground to Bumper Clearance	933 mm	3.1 ft	933 mm	3.1 ft
<b>5</b> Rear Axle Center Line to Bumper	3187 mm	10.5 ft	3187 mm	10.5 ft
<b>6</b> Front Axle Center Line to Bucket Tip	4467 mm	14.7 ft	4854 mm	15.9 ft
<b>7</b> Wheelbase	4550 mm	14.9 ft	4550 mm	14.9 ft
<b>8</b> Maximum Overall Length	12 204 mm	40.0 ft	12 582 mm	41.3 ft
<b>9</b> Ground to Lower Hitch Clearance	568 mm	1.9 ft	568 mm	1.9 ft
<b>10</b> Ground to Center of Front Axle	978 mm	3.2 ft	978 mm	3.2 ft
<b>11</b> Clearance at Maximum Lift	3445 mm	11.3 ft	3882 mm	12.7 ft
<b>12</b> B-Pin Height at Maximum Lift	5479 mm	18.0 ft	5881 mm	19.3 ft
<b>13</b> Maximum Overall Height, Bucket Raised	7455 mm	24.5 ft	7849 mm	25.8 ft
<b>14</b> Reach at Maximum Lift	2074 mm	6.8 ft	2130 mm	7.0 ft

Note: Specs are calculated with 6.9 m<sup>3</sup> (9.0 yd<sup>3</sup>) rock bucket.

## 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 <sup>3</sup>	lb/yd <sup>3</sup>	tonnes/m <sup>3</sup>	tons/yd <sup>3</sup>	m <sup>3</sup>	yd <sup>3</sup>
1468-1614	2,500-2,750	1.47-1.61	1.25-1.38	7.6	10.00
1638-1801	2,778-3,056	1.64-1.80	1.39-1.53	6.9	9.00
1766-1942	3,001-3,300	1.77-1.94	1.50-1.65	6.4	8.33

### Standard Lift/High Lift

#### Rated Payload (Loose Material) – 14.5 tonnes/16 tons

Material Density				Bucket Volume	
kg/m <sup>3</sup>	lb/yd <sup>3</sup>	tonnes/m <sup>3</sup>	tons/yd <sup>3</sup>	m <sup>3</sup>	yd <sup>3</sup>
1510-1667	2,560-2,816	1.51-1.67	1.28-1.41	9.6	12.5
1726-1905	2,909-3,200	1.73-1.90	1.45-1.60	8.4	11
1908-2105	3,200-3,520	1.91-2.11	1.60-1.76	7.6	10

Note: Rated Payload is the material weight in the bucket that the loader is designed to carry, excluding the weight of the bucket, GET, and wear material. Rated Payloads are published at 100%, even though Caterpillar does allow 110%. These values are given in terms of mass. There is no consideration to loose density weights of various materials since they are so diverse.



# 988K Wheel Loader Specifications

## Aggregate Package Operating Specifications – Standard Lift

For machines equipped with 35/65 R33 XLDD1 tires – see additional tables for other tire sizes.

		988K Std Lift Tires: 35/65 R33 XLDD1, PN 339-8790, SLR: 978 mm			
Bucket Type		General Purpose			
Ground Engaging Tool		Adapters or BOCE			
Cutting Edge Type		Straight			
Bucket Part Number		472-0120	435-4029	347-4990	347-4980
Struck Capacity	m <sup>3</sup>	8.0	7.0	6.0	5.5
	yd <sup>3</sup>	10.5	9.2	7.8	7.2
Heaped Capacity (Rated)	m <sup>3</sup>	9.6	8.4	7.6	6.9
	yd <sup>3</sup>	12.5	11.0	10.0	9.0
Bucket Width	mm	3897	3897	3897	3897
	ft	12.8	12.8	12.8	12.8
Dump Clearance at Full Lift and 45° Discharge (Bare)	mm	3642	3741	3818	3902
	ft	11.9	12.3	12.5	12.8
Reach at Lift and 45° Discharge (Bare)	mm	1898	1787	1722	1645
	ft	6.2	5.9	5.7	5.4
Digging Depth (Segment)	mm	200	208	200	195
	in	7.9	8.2	7.9	7.7
Overall Length (Bucket Level Ground)	mm	11 965	11 822	11 716	11 598
	ft	39.3	38.8	38.4	38.1
Overall Height with Bucket at Full Raise	mm	7830	7688	7591	7487
	ft	25.7	25.2	24.9	24.6
Loader Clearance Circle (SAE Carry Bare)	mm	17 382	17 303	17 240	17 173
	ft	57.0	56.8	56.6	56.3
Full Dump Angle	degrees	-49.8	-49.8	-49.8	-49.8
Static Tipping Load – Straight (Rigid Tire)	kg	39 436	39 922	40 321	40 726
	lb	86,941	88,013	88,892	89,785
Static Tipping Load – Straight (Tire Squash)	kg	37 085	37 603	38 008	38 428
	lb	81,758	82,900	83,793	84,719
Static Tipping Load – Full Turn (Articulated 35°) (Rigid Tire)	kg	35 173	35 641	36 031	36 423
	lb	77,543	78,575	79,435	80,299
Static Tipping Load – Full Turn (Articulated 35°) (Tire Squash)	kg	31 461	31 981	32 383	32 799
	lb	69,360	70,506	71,392	72,309
Static Tipping Load – Full Turn (Articulated 43°) (Rigid Tire)	kg	33 104	33 563	33 949	34 334
	lb	72,982	73,994	74,845	75,693
Static Tipping Load – Full Turn (Articulated 43°) (Tire Squash)	kg	29 003	29 519	29 918	30 327
	lb	63,941	65,078	65,958	66,860
Breakout Force	kN	381	413	437	468
	lbf	85,652	92,846	98,241	105,211
Operating Weight	kg	53 379	53 104	52 816	52 576
	lb	117,681	117,074	116,439	115,909
Weight Distribution at SAE Carry (Unloaded)					
Front	kg	27 257	26 781	26 290	25 875
	lb	60,090	59,042	57,960	57,044
Rear	kg	26 123	26 323	26 526	26 701
	lb	57,591	58,033	58,479	58,865
Weight Distribution at SAE Carry (Loaded)					
Front	kg	50 724	50 137	49 596	49 103
	lb	111,828	110,533	109,341	108,253
Rear	kg	17 170	17 482	17 735	17 988
	lb	37,853	38,542	39,098	39,656

# 988K Wheel Loader Specifications

## Operating Specifications – Standard Lift

For machines equipped with 35/65 R33 XLDD1 tires – see additional tables for other tire sizes.

		988K Std Lift Tires: 35/65 R33 XLDD1, PN: 339-8790, SLR: 978 mm					
Bucket Type		General Purpose		Rock			HD Rock
Ground Engaging Tool		Adapters or BOCE		K130	K130	K130	K130
Cutting Edge Type		Straight	Straight	Spade	Spade	Spade	Spade
Bucket Part Number		347-4990	347-4980	347-4960	347-4950	347-4970	339-1370
Struck Capacity	m <sup>3</sup>	6.0	5.5	6.5	5.5	5.0	5.0
	yd <sup>3</sup>	7.8	7.2	8.5	7.2	6.5	6.5
Heaped Capacity (Rated)	m <sup>3</sup>	7.6	6.9	7.6	6.9	6.4	6.4
	yd <sup>3</sup>	10.0	9.0	10.0	9.0	8.3	8.3
Bucket Width	mm	3897	3855	4020	4020	4020	4080
	ft	12.8	12.6	13.2	13.2	13.2	13.4
Dump Clearance at Full Lift and 45° Discharge (Bare)	mm	3810	3894	3595	3807	3728	3714
	ft	12.5	12.8	11.8	12.5	12.2	12.2
Dump Clearance at Full Lift and 45° Discharge (with Teeth)	mm	—	—	3402	3445	3535	3509
	ft	—	—	11.2	11.3	11.6	11.5
Reach at Lift and 45° Discharge (Bare)	mm	1730	1653	1944	1778	1811	1824
	ft	5.7	5.4	6.4	5.8	5.9	6.0
Reach at Lift and 45° Discharge (with Teeth)	mm	—	—	2127	2074	1994	1998
	ft	—	—	7.0	6.8	6.5	6.6
Reach with Lift Arms Horizontal and Bucket Level (Teeth)	mm	3668	3554	4237	4144	4049	4071
	ft	12.0	11.7	13.9	13.6	13.3	13.4
Digging Depth (Segment)	mm	203	198	204	204	204	204
	in	8	8	8	8	8	8
Overall Length (Bucket Level Ground)	mm	11 714	11 597	12 286	12 204	12 098	12 119
	ft	38.4	38.0	40.3	40.0	39.7	39.8
Overall Height with Bucket at Full Raise	mm	7583	7479	7549	7455	7373	7376
	ft	24.9	24.5	24.8	24.5	24.2	24.2
Loader Clearance Circle (SAE Carry with Teeth)	mm	17 240	17 173	17 400	17 338	17 295	17 317
	ft	56.6	56.3	57.1	56.9	56.7	56.8
Full Dump Angle	degrees	51	51	51	51	51	51
Static Tipping Load – Straight (Rigid Tire)	kg	34 768	35 148	33 811	34 249	34 390	33 331
	lb	76,650	77,488	74,541	75,506	75,817	73,483
Static Tipping Load – Straight (Tire Squash)	kg	32 718	33 116	31 785	32 242	32 399	31 350
	lb	72,131	73,008	70,074	71,081	71,427	69,115
Static Tipping Load – Full Turn (Articulated 35°) (Rigid Tire)	kg	31 139	31 508	30 196	30 625	30 760	29 703
	lb	68,649	69,462	66,571	67,517	67,815	65,484
Static Tipping Load – Full Turn (Articulated 35°) (Tire Squash)	kg	27 990	28 384	27 078	27 532	27 692	26 648
	lb	61,707	62,576	59,697	60,698	61,050	58,749
Static Tipping Load – Full Turn (Articulated 43°) (Rigid Tire)	kg	29 377	29 740	28 441	28 866	28 998	27 941
	lb	64,765	65,566	62,701	63,638	63,930	61,600
Static Tipping Load – Full Turn (Articulated 43°) (Tire Squash)	kg	25 883	26 273	24 980	25 432	25 591	24 549
	lb	57,062	57,922	55,071	56,068	56,418	54,121
Breakout Force	kN	437	468	371	392	410	402
	lbf	98,316	105,297	83,330	88,207	92,170	90,383
Operating Weight	kg	50 306	50 065	50 873	50 530	50 502	51 481
	lb	110,905	110,375	112,155	111,399	111,337	113,496
Weight Distribution at SAE Carry (Unloaded)							
Front	kg	27 450	27 034	28 538	27 979	27 880	29 476
	lb	60,516	59,600	62,916	61,683	61,465	64,982
Rear	kg	22 856	23 031	22 335	22 551	22 622	22 005
	lb	50,388	50,775	49,239	49,716	49,873	48,514
Weight Distribution at SAE Carry (Loaded)							
Front	kg	45 653	45 177	46 776	46 164	46 028	47 629
	lb	100,649	99,599	103,123	101,773	101,474	105,003
Rear	kg	15 992	16 228	15 437	15 706	15 814	15 192
	lb	35,257	35,777	34,032	34,627	34,864	33,493

Michelin XLDD1 2 Star with 6.3 bar (92 psi) pressure.



# 988K Wheel Loader Specifications

## Aggregate Package Operating Specifications – High Lift

For machines equipped with 35/65 R33 XLDD1 tires – see additional tables for other tire sizes.

		988K Std Lift Tires: 35/65 R33 XLDD1, PN 339-8790, SLR: 978 mm			
Bucket Type		General Purpose			
Ground Engaging Tool		Adapters or BOCE			
Cutting Edge Type		Straight			
Bucket Part Number		472-0120	435-4029	347-4990	347-4980
Struck Capacity	m <sup>3</sup>	8.0	7.0	6.0	5.5
	yd <sup>3</sup>	10.5	9.2	7.8	7.2
Heaped Capacity (Rated)	m <sup>3</sup>	9.6	8.4	7.6	6.9
	yd <sup>3</sup>	12.5	11.0	10.0	9.0
Bucket Width	mm	3897	3897	3897	3897
	ft	12.8	12.8	12.8	12.8
Dump Clearance at Full Lift and 45° Discharge (Bare)	mm	4035	4135	4211	4296
	ft	13.2	13.6	13.8	14.1
Reach at Lift and 45° Discharge (Bare)	mm	1987	1876	1811	1734
	ft	6.5	6.2	5.9	5.7
Digging Depth (Segment)	mm	219	227	219	214
	in	8.6	8.9	8.6	8.4
Overall Length (Bucket Level Ground)	mm	12 371	12 227	12 122	12 005
	ft	40.6	40.1	39.8	39.4
Overall Height with Bucket at Full Raise	mm	8224	8082	7985	7881
	ft	27.0	26.5	26.2	25.9
Loader Clearance Circle (SAE Carry Bare)	mm	17 741	17 660	17 595	17 525
	ft	58.2	57.9	57.7	57.5
Full Dump Angle	degrees	-50.1	-50.1	-50.1	-50.1
Static Tipping Load – Straight (Rigid Tire)	kg	40 171	40 598	40 975	41 343
	lb	88,562	89,503	90,334	91,146
Static Tipping Load – Straight (Tire Squash)	kg	37 906	38 372	38 757	39 143
	lb	83,568	84,596	85,444	86,295
Static Tipping Load – Full Turn (Articulated 35°) (Rigid Tire)	kg	35 665	36 080	36 449	36 806
	lb	78,628	79,543	80,356	81,143
Static Tipping Load – Full Turn (Articulated 35°) (Tire Squash)	kg	31 876	32 351	32 735	33 121
	lb	70,274	71,322	72,168	73,019
Static Tipping Load – Full Turn (Articulated 43°) (Rigid Tire)	kg	33 478	33 886	34 252	34 604
	lb	73,806	74,706	75,513	76,289
Static Tipping Load – Full Turn (Articulated 43°) (Tire Squash)	kg	29 257	29 732	30 114	30 499
	lb	64,501	65,548	66,390	67,239
Breakout Force	kN	350	380	403	431
	lbf	78,683	85,427	90,598	96,893
Operating Weight	kg	56 280	56 005	55 716	55 476
	lb	124,075	123,469	122,834	122,304
Weight Distribution at SAE Carry (Unloaded)					
Front	kg	27 074	26 575	26 061	25 626
	lb	59,688	58,588	57,455	56,497
Rear	kg	29 206	29 429	29 655	29 850
	lb	64,388	64,880	65,378	65,807
Weight Distribution at SAE Carry (Loaded)					
Front	kg	51 789	51 190	50 631	50 125
	lb	114,176	112,854	111,621	110,507
Rear	kg	19 005	19 330	19 601	19 866
	lb	41,899	42,615	43,212	43,796

# 988K Wheel Loader Specifications

## Operating Specifications – High Lift

For machines equipped with 35/65 R33 XLDD1 tires – see additional tables for other tire sizes.

		988K HL Tires: 35/65 R33 XLDD1, PN: 339-8790, SLR: 978 mm					
Bucket Type		General Purpose		Rock			HD Rock
Ground Engaging Tool		Adapters or BOCE		K130	K130	K130	K130
Cutting Edge Type		Straight	Straight	Spade	Spade	Spade	Spade
Bucket Part Number		347-4990	347-4980	347-4960	347-4950	347-4970	339-1370
Struck Capacity	m <sup>3</sup>	6.0	5.5	6.5	5.5	5.0	5.0
	yd <sup>3</sup>	7.8	7.2	8.5	7.2	6.5	6.5
Heaped Capacity (Rated)	m <sup>3</sup>	7.6	6.9	7.6	6.9	6.4	6.4
	yd <sup>3</sup>	10.0	9.0	10.0	9.0	8.3	8.3
Bucket Width	mm	3897	3855	4020	4020	4020	4080
	ft	12.8	12.6	13.2	13.2	13.2	13.4
Dump Clearance at Full Lift and 45° Discharge (Bare)	mm	4211	4296	3997	4074	4130	4116
	ft	13.8	14.1	13.1	13.4	13.5	13.5
Dump Clearance at Full Lift and 45° Discharge (with Teeth)	mm	—	—	3804	3882	3937	3911
	ft	—	—	12.5	12.7	12.9	12.8
Reach at Lift and 45° Discharge (Bare)	mm	1811	1734	2024	1947	1892	1905
	ft	5.9	5.7	6.6	6.4	6.2	6.2
Reach at Lift and 45° Discharge (with Teeth)	mm	—	—	2208	2130	2075	2079
	ft	—	—	7.2	7.0	6.8	6.8
Reach with Lift Arms Horizontal and Bucket Level (Teeth)	mm	4007	3893	4576	4466	4388	4410
	ft	13.1	12.8	15.0	14.7	14.4	14.5
Digging Depth (Segment)	mm	219	214	220	220	220	220
	in	9	8	9	9	9	9
Overall Length (Bucket Level Ground)	mm	12 122	12 005	12 692	12 582	12 504	12 525
	ft	39.8	39.4	41.6	41.3	41.0	41.1
Overall Height with Bucket at Full Raise	mm	7985	7881	7951	7849	7775	7778
	ft	26.2	25.9	26.1	25.8	25.5	25.5
Loader Clearance Circle (SAE Carry with Teeth)	mm	17 595	17 525	17 755	17 691	17 647	17 671
	ft	57.7	57.5	58.3	58.0	57.9	58.0
Full Dump Angle	degrees	-50	-50	-50	-50	-50	-50
Static Tipping Load – Straight (Rigid Tire)	kg	32 742	33 084	31 833	32 240	32 352	31 299
	lb	72,183	72,937	70,179	71,077	71,325	69,003
Static Tipping Load – Straight (Tire Squash)	kg	30 959	31 319	30 068	30 494	30 622	29 577
	lb	68,253	69,046	66,289	67,228	67,510	65,206
Static Tipping Load – Full Turn (Articulated 35°) (Rigid Tire)	kg	29 193	29 527	28 296	28 698	28 806	27 754
	lb	64,360	65,096	62,383	63,268	63,507	61,188
Static Tipping Load – Full Turn (Articulated 35°) (Tire Squash)	kg	26 322	26 683	25 449	25 877	26 010	24 970
	lb	58,030	58,826	56,105	57,049	57,342	55,049
Static Tipping Load – Full Turn (Articulated 43°) (Rigid Tire)	kg	27 470	27 801	26 580	26 978	27 085	26 033
	lb	60,562	61,290	58,598	59,477	59,712	57,394
Static Tipping Load – Full Turn (Articulated 43°) (Tire Squash)	kg	24 261	24 619	23 397	23 822	23 954	22 917
	lb	53,486	54,276	51,581	52,518	52,809	50,523
Breakout Force	kN	403	431	341	361	377	370
	lbf	90,535	97,001	76,634	81,154	84,841	83,123
Operating Weight	kg	51 648	51 408	52 216	51 873	51 845	52 824
	lb	113,865	113,335	115,116	114,359	114,298	116,456
Weight Distribution at SAE Carry (Unloaded)							
Front	kg	27 950	27 515	29 086	28 497	28 398	30 082
	lb	61,619	60,660	64,124	62,826	62,608	66,320
Rear	kg	23 698	23 893	23 129	23 375	23 446	22 742
	lb	52,246	52,675	50,991	51,534	51,690	50,137
Weight Distribution at SAE Carry (Loaded)							
Front	kg	47 141	46 651	48 312	47 674	47 542	49 232
	lb	103,928	102,848	106,509	105,104	104,813	108,538
Rear	kg	15 847	16 097	15 244	15 538	15 642	14 931
	lb	34,937	35,487	33,607	34,256	34,485	32,918

Michelin XLDD1 2 Star with 6.3 bar (92 psi) pressure.

## Standard Equipment

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

### ELECTRICAL

- Alarm, back-up
- Alternator, single 150 amp
- Batteries, dry
- Converter, 10/15 amp, 24V to 12V
- Lighting system (halogen, work lights, access and service platform lighting)
- Starting and charging system, 24V
- Starter emergency start receptacle
- Starter lockout in bumper
- Transmission lockout in bumper

### OPERATOR ENVIRONMENT

- Graphical Information Display, displays real time operating information, performs calibrations and customizes operator settings
- Air conditioner
- Cat Detect Vision, rear vision camera system
- Cab, sound suppressed and pressurized, integrated rollover protective structure (ROPS/FOPS) radio ready for entertainment, includes antenna, speakers and converter (12-volt 5-amp) and power port
- Controls, lift and tilt function
- Heater, defroster
- Horn, electric
- Instrumentation, gauges
  - Coolant temperature
  - Engine hour meter
  - Hydraulic oil temperature
  - Power train oil temperature
- Light, cab, dome
- Lunchbox, beverage holders

- Mirrors, rearview (externally mounted)
- Rimpull Control System
- Seat, Cat Comfort (cloth), air suspension, six-way adjustable
- Seat belt minder
- Seat belt, retractable, 76 mm (3 in) wide
- STIC Control System
- UV glass
- Transmission gear indicator
- Vital Information Management System (VIMS) with Graphical Information Display: External Data Port, Customizable Operator Profiles, Cycle Timer, Integrated Payload Control System
- Wet-Arm wipers/washers (front and rear)
  - Intermittent front and rear wipers
- Lights, directional

### POWER TRAIN

- Brakes, oil-cooled, multi-disc, service/secondary
- Case drain screens
- Crankcase guard
- Electro hydraulic parking brake
- Engine, C18 ACERT MEUI diesel, turbocharged/aftercooled
- Ground level engine shutoff
- Turbine precleaner, engine air intake
- Radiator, Aluminum Modular Radiator (AMR)
- Starting aid, ether, automatic
- Throttle lock, electronic
- Torque converter, Impeller Clutch (ICTC) with Lock up clutch (LUC), Rimpull Control System
- Transmission, planetary powershift, 4F/3R electronic control
- Manual switch and automatic fuel priming
- Cat Production Measurement ready

### OTHER

- Automatic bucket lift kickout/positioner
- Base machine price includes a rim allowance
- Hydraulically driven demand fan
- Couplings, Cat O-ring face seals
- Doors, service access (locking)
- Ecology drains for engine, radiator, hydraulic tank
- Fuel tank, 731 L (188 gal)
- Hitch, drawbar with pin
- Hoses, Cat XT™
- Hydraulic, steering and brake filtration/screening system
- Cat Clean Emission Module
- Oil sampling valves
- Premixed 50% concentration of extended life coolant with freeze protection to -34° C (-29° F)
- Rear access to cab and service platform
- Steering, load sensing
- Toe kicks
- Vandalism protection caplocks



## Optional Equipment

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

### POWER TRAIN

- -50° C (-58° F) antifreeze
- Engine oil change system, high speed, Wiggins
- Engine block heater 120V or 240V
- High ambient cooling – software
- Cat Production Measurement

### OPERATOR ENVIRONMENT

- Cab precleaner
- AM/FM/CD/MP3 radio
- Satellite Sirius radio with bluetooth
- LED warning strobe
- CB radio ready
- Window pull down visor
- Handrail mounted mirrors

### MISCELLANEOUS ATTACHMENTS

- Front and rear roading fenders
- Fast fill fuel system (Shaw-Aero)
- Cold Weather Starting (extra starter plus two batteries)
- Aggregate Handler

# 988K Mandatory Attachments

## Mandatory Attachments

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

### LINKAGE

- Standard with two valves
- Standard with three valves
- High Lift with two valves
- High Lift with three valves
  
- Autolube
- Manual grease pins

### ELECTRICAL

- No Product Link
- Product Link (Satellite)
- Product Link (Cellular)

### STEERING

- Standard steering
- Secondary steering

### POWER TRAIN

- Axle oil cooler
- Standard axles
  
- Standard fuel lines
- Heated fuel lines
  
- Standard axle
- No spin axle
- Extreme temperature axle
  
- Standard engine air turbine precleaner
- Dual stage precleaner
  
- No engine brake
- Engine brake

### LIGHTING

- Standard lighting
- HID lighting
- LED lighting

### OPERATOR ENVIRONMENT

- No suppression arrangement
- Sound suppression
  
- Standard seat
- Heated and ventilated seat
  
- Standard seat belt
- 4 point seat belt
  
- Standard cab glass
- Rubber mounted cab glass
  
- Fixed glass door, standard
- Sliding glass door
  
- Standard cab air cleaner
- RESPA cab air cleaner
  
- Standard mirror
- Heated mirror
  
- Rear vision display
- Rear vision display with Cat Detect (Object Detection)

### HYDRAULICS

- Ride control
- No ride control
  
- Standard hydraulic oil
- Fire resistant (EcoSafe) hydraulic oil
- Cold weather hydraulic oil