



# 322

## Hydraulic Excavator

# Technical Specifications

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

### Table of Contents

<b>Specifications</b> .....	<b>2</b>
Engine .....	2
Swing Mechanism .....	2
Weights .....	2
Track .....	2
Drive .....	2
Hydraulic System .....	2
Service Refill Capacities .....	3
Standards .....	3
Sound Performance .....	3
Operating Weights and Ground Pressures .....	3
Major Component Weights .....	4
Dimensions .....	5
Working Ranges .....	6
Reach Boom Lift Capacities – Medium Undercarriage .....	7
Reach Boom Lift Capacities – Long Undercarriage .....	7
Bucket Specifications and Compatibility .....	8
Attachments Offering Guide .....	8
<b>Standard and Optional Equipment</b> .....	<b>9</b>
<b>Dealer Installed Kit and Attachments</b> .....	<b>11</b>

# 322 Hydraulic Excavator Specifications

Engine		
Engine Model	Cat® C3.6	
Net Power		
ISO 9249	96 kW	129 hp
ISO 9249 (DIN)	131 hp (metric)	
Engine Power		
ISO 14396	100 kW	134 hp
ISO 14396 (DIN)	136 hp (metric)	
Bore	98 mm	4 in
Stroke	120 mm	5 in
Displacement	3.6 L	220 in <sup>3</sup>
Biodiesel Capability	Up to B20 <sup>(1)</sup>	

- Noncertified emission engine.
- Recommended for use up to 4000 m (13,120 ft) altitude with engine power derate above 3000 m (9,840 ft).
- Advertised power is tested per the specified standard in effect at the time of manufacture.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air intake system, exhaust system and alternator.
- Engine speed at 2,000 rpm.

<sup>(1)</sup>Cat engines 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 (hydrogenated 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.

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

\*\*Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.

Swing Mechanism		
Swing Speed	11.5 rpm	
Maximum Swing Torque	69 kN·m	50,560 lbf·ft

Weights		
Operating Weight	20 700 kg	45,700 lb
<ul style="list-style-type: none"> <li>• 4.25 m (13'11") Medium undercarriage, 5.7 m (18'8") Reach boom, Heavy Duty (HD) R2.5 m (8'2") stick, 1.10 m<sup>3</sup> (1.44 yd<sup>3</sup>) Severe Duty (SD) bucket, 600 mm (24") triple grouser track shoes and 4000 kg (8,820 lb) counterweight.</li> </ul>		

Operating Weight	20 900 kg	46,200 lb
<ul style="list-style-type: none"> <li>• 4.45 m (14'7") Long undercarriage, 5.7 m (18'8") Reach boom, HD R2.5 m (8'2") stick, 1.10 m<sup>3</sup> (1.44 yd<sup>3</sup>) SD bucket, 600 mm (24") triple grouser track shoes and 4000 kg (8,820 lb) counterweight.</li> </ul>		

Track		
<b>Medium Undercarriage</b>		
Track Shoes Width	600 mm	24 in
Number of Shoes (each side)	47	
Number of Track Rollers (each side)	7	
Number of Carrier Rollers (each side)	2	

<b>Long Undercarriage</b>		
Track Shoes Width	600 mm	24 in
Number of Shoes (each side)	49	
Number of Track Rollers (each side)	8	
Number of Carrier Rollers (each side)	2	

## Drive

Medium Undercarriage		
Gradeability	35°/70%	
Maximum Travel Speed	6.0 km/h	3.7 mph
Maximum Drawbar Pull	223 kN	50,222 lbf

Long Undercarriage		
Gradeability	35°/70%	
Maximum Travel Speed	6.0 km/h	3.7 mph
Maximum Drawbar Pull	223 kN	50,177 lbf

## Hydraulic System

Main System – Maximum Flow – Implement	442 L/min (221 L/min × 2 pumps)	117 gal/min (58.5 gal/min × 2 pumps)
Maximum Pressure – Equipment – Implement	35 000 kPa	5,075 psi
Maximum Pressure – Travel	35 000 kPa	5,075 psi
Maximum Pressure – Swing	27 500 kPa	3,990 psi
Pilot System – Maximum Pressure	3900 kPa	566 psi
Boom Cylinder – Bore	120 mm	5 in
Boom Cylinder – Stroke	1260 mm	50 in
Stick Cylinder – Bore	135 mm	5 in
Stick Cylinder – Stroke	1504 mm	59 in
Bucket Cylinder – Bore	115 mm	5 in
Bucket Cylinder – Stroke	1104 mm	43 in

# 322 Hydraulic Excavator Specifications

## Service Refill Capacities

Fuel Tank Capacity	370 L	97.7 gal
Cooling System	22 L	5.8gal
Engine Oil (with filter)	11 L	2.9 gal
Swing Drive	6 L	1.6 gal
Final Drive (each)	5 L	1.3 gal
Hydraulic System (including tank)	218 L	57.6 gal
Hydraulic Tank	115 L	30.4 gal

## Standards

Brakes	ISO 10265: 2008
Cab/Rollover Protective Structure (ROPS) (optional)	ISO 12117-2: 2008
Cab	ISO 10262: 1998 – Level I
Operator Protective Guards (OPG) (optional)	ISO 10262: 1998 – Level II

## Sound Performance

ISO 6395:2008 (external)	102 dB(A)
ISO 6396:2008 (inside cab)	72 dB(A)

- 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.

## Operating Weights and Ground Pressures

	600 mm (24") Triple Grouser Track Shoes			
	Weight		Ground Pressure	
	kg	(lb)	kPa	(psi)
<b>Base Machine Configurations</b>				
<b>Base Frame with Track Rollers and Carrier Rollers</b>				
<b>Base Machine with 4000 kg (8,820 lb) Counterweight and 4.25 m (13'11") Medium Undercarriage</b>				
5.7 m (18'8") Reach boom, HD R2.5 m (8'2") stick, 1.10 m <sup>3</sup> (1.44 yd <sup>3</sup> ) SD bucket	20 700	(45,700)	45.4	(6.6)
<b>Base Machine with 4000 kg (8,820 lb) Counterweight and 4.45 m (14'7") Long Undercarriage</b>				
5.7 m (18'8") Reach boom, HD R2.5 m (8'2") stick, 1.10 m <sup>3</sup> (1.44 yd <sup>3</sup> ) SD bucket	20 900	(46,200)	43.6	(6.3)

All operating weights include a 90% fuel tank with 75 kg (165 lb) operator.

# 322 Hydraulic Excavator Specifications

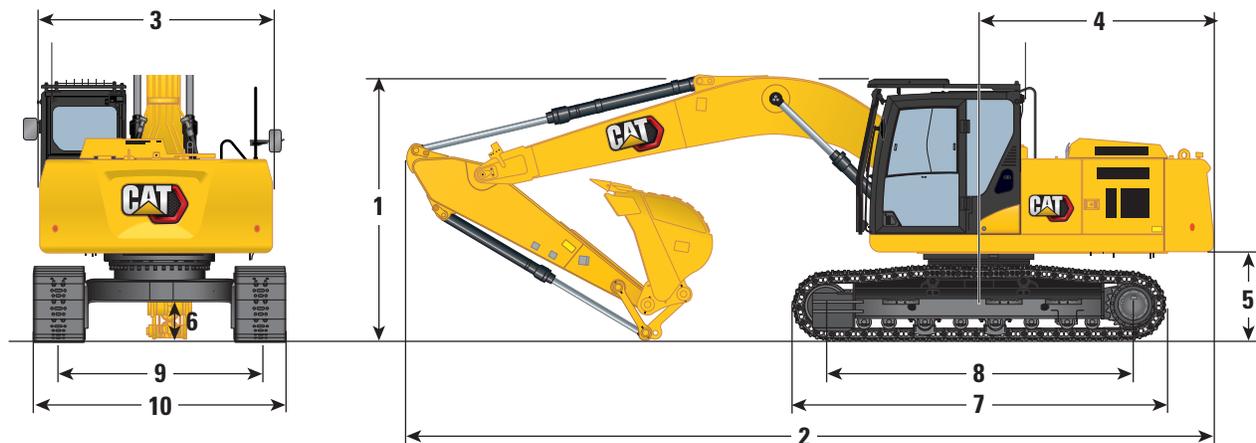
## Major Component Weights

	kg	lb
Base Machine Weight (with counterweight, undercarriage, swing frame, base frame with track rollers and carrier rollers, two boom cylinders, pins, fuel tank and 75 kg (165 lb) operator – does not include boom, stick, bucket, boom cylinders, stick cylinder, bucket cylinder, tracks).		
With 4000 kg (8,820 lb) Counterweight and 4.25 m (13'11") Medium Undercarriage	14 300	31,520
With 4000 kg (8,820 lb) Counterweight and 4.45 m (14'7") Long Undercarriage	14 420	31,800
Track Shoes:		
600 mm (24") Wide, 10 mm (0.39") Thick, Triple Grouser Track Shoes for 4.25 m (13'11") Medium Undercarriage	2710	5,970
600 mm (24") Wide, 10 mm (0.39") Thick, Triple Grouser Track Shoes for 4.45 m (14'7") Long Undercarriage	2820	6,210
Two Boom Cylinders	360	790
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	350	770
Counterweight:		
4000 kg (8,820 lb) Counterweight	4000	8,820
Swing Frame:		
Standard Swing Frame	5150	11,350
Undercarriages:		
Base Frame with Standard Track Rollers and Carrier Rollers for 4.25 m (13'11") Medium Undercarriage	4440	9,780
Base Frame with Standard Track Rollers and Carrier Rollers for 4.45 m (14'7") Long Undercarriage	4560	10,060
Boom (including lines, pins, stick cylinder):		
5.7 m (18'8") Reach Boom	1690	3,730
Stick (including lines, pins, bucket cylinder, bucket linkage):		
2.5 m (8'2") HD Reach Stick	1080	2,380
Bucket (without linkage):		
1.10 m <sup>3</sup> (1.44 yd <sup>3</sup> ) SD Bucket	930	2,050

# 322 Hydraulic Excavator Specifications

## Dimensions

All dimensions are approximate and may vary depending on bucket selection.



### Boom Option

Reach Boom  
5.7 m (18'8")

### Stick Option

HD Reach Stick  
R2.5 m (8'2")

### Undercarriage Options

Medium  
4.25 m (13'11")

Long  
4.45 m (14'7")

#### 1 Machine Height:

Cab Height (without shoe lug height)

2950 mm 9'8" 2950 mm 9'8"

Shipping Height (including shoe lug height)

3360 mm 11'0" 3360 mm 11'0"

Handrail Height

3030 mm 9'11" 3030 mm 9'11"

#### 2 Machine Length:

With Boom/Stick/Bucket Installed

9520 mm 31'3" 9520 mm 31'3"

#### 3 Upperframe Width

2760 mm 9'1" 2760 mm 9'1"

#### 4 Tail Swing Radius

2830 mm 9'3" 2830 mm 9'3"

#### 5 Counterweight Clearance (without shoe lug)

1030 mm 3'5" 1030 mm 3'5"

#### 6 Ground Clearance (without shoe lug)

440 mm 1'5" 440 mm 1'5"

#### 7 Track Length

4250 mm 13'11" 4450 mm 14'7"

#### 8 Track Length – Length to Center of Rollers

3450 mm 11'4" 3650 mm 12'0"

#### 9 Track Gauge

2380 mm 7'10" 2380 mm 7'10"

#### 10 Transportation Width

600 mm (24") Shoes

2980 mm 9'9" 2980 mm 9'9"

#### Bucket Type

SD

SD

#### Bucket Capacity

1.10 m<sup>3</sup> 1.44 yd<sup>3</sup> 1.10 m<sup>3</sup> 1.44 yd<sup>3</sup>

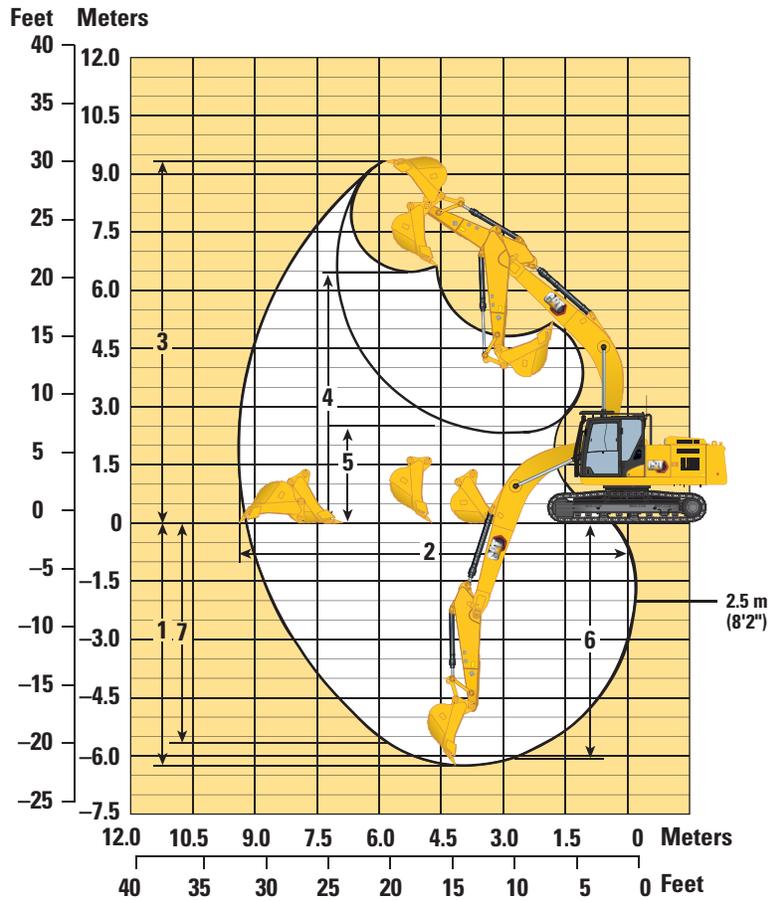
#### Bucket Tip Radius

1580 mm 5'2" 1580 mm 5'2"

# 322 Hydraulic Excavator Specifications

## Working Ranges

All dimensions are approximate and may vary depending on bucket selection.

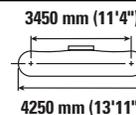
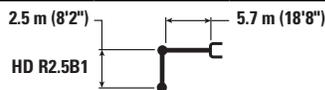


Boom Option	Reach Boom 5.7 m (18'8")			
Stick Option	HD Reach Stick R2.5 m (8'2")			
Undercarriage Options	Medium 4.25 m (13'11")		Long 4.45 m (14'7")	
1 Maximum Digging Depth	6310 mm	20'8"	6310 mm	20'8"
2 Maximum Reach at Ground Line	9470 mm	31'1"	9470 mm	31'1"
3 Maximum Cutting Height	9330 mm	30'7"	9330 mm	30'7"
4 Maximum Loading Height	6280 mm	20'7"	6280 mm	20'7"
5 Minimum Loading Height	2580 mm	8'6"	2580 mm	8'6"
6 Maximum Depth Cut for 2440 mm (8 ft) Level Bottom	6120 mm	20'1"	6120 mm	20'1"
7 Maximum Vertical Wall Digging Depth	5630 mm	18'6"	5630 mm	18'6"
Bucket Digging Force (ISO)	128 kN	28,710 lbf	128 kN	28,710 lbf
Stick Digging Force (ISO)	109 kN	24,500 lbf	109 kN	24,500 lbf
Bucket Type	SD		SD	
Bucket Capacity	1.10 m <sup>3</sup>	1.44 yd <sup>3</sup>	1.10 m <sup>3</sup>	1.44 yd <sup>3</sup>
Bucket Tip Radius	1580 mm	5'2"	1580 mm	5'2"

# 322 Hydraulic Excavator Specifications

## Reach Boom Lift Capacities – Counterweight: 4000 kg (8,820 lb) – without Bucket

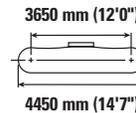
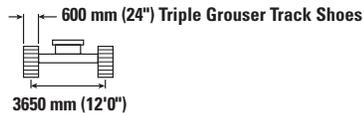
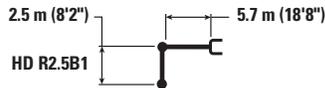
4250 mm (13'11") Medium Undercarriage



Reach mm ft/in	kg lb	3000 mm/10'0"		4500 mm/15'0"		6000 mm/20'0"		7500 mm/25'0"		mm ft/in		
7500 mm 25'0"	kg lb									*4450 *9,900	*4450 *9,900	5590 17'92"
6000 mm 20'0"	kg lb					*5250 *11,600	4950 10,600			*4100 *9,000	*3950 *8,850	6830 22'19"
4500 mm 15'0"	kg lb			*6650 *14,350	*6650 *14,350	*5700 *12,400	4800 10,300	*4500	3350	*4000 *8,800	3300 7,300	7570 24'74"
3000 mm 10'0"	kg lb			*8400 *18,050	6950 15,000	*6450 *14,000	4550 9,850	4700 10,100	3250 7,000	*4100 *9,000	3000 6,550	7960 26'08"
1500 mm 5'0"	kg lb			*9900 *21,350	6500 14,000	6400 13,800	4350 9,350	4600 9,900	3150 6,800	*4150 *9,000	2850 6,300	8050 26'41"
0 mm 0'0"	kg lb			9750 20,950	6300 13,500	6250 13,450	4200 9,050	4550 9,750	3100 6,650	4250 9,350	2900 6,400	7860 25'77"
-1500 mm -5'0"	kg lb	*10 450 *23,800	*10 450 *23,800	9750 20,850	6250 13,450	6200 13,350	4150 8,950			4650 10,250	3200 7,000	7350 24'08"
-3000 mm -10'0"	kg lb	*13 100 *28,400	12 400 26,500	*9500 *20,500	6350 13,650	6300 13,500	4250 9,100			5650 12,550	3850 8,550	6460 21'08"
-4500 mm -15'0"	kg lb			*7050 *14,800	6600 14,300					*6100 *13,350	5750 13,050	4980 16'03"

## Reach Boom Lift Capacities – Counterweight: 4000 kg (8,820 lb) – without Bucket

4450 mm (14'7") Long Undercarriage



Reach mm ft/in	kg lb	3000 mm/10'0"		4500 mm/15'0"		6000 mm/20'0"		7500 mm/25'0"		mm ft/in		
7500 mm 25'0"	kg lb									*4450 *9,900	*4450 *9,900	5590 17'92"
6000 mm 20'0"	kg lb					*5300 *11,600	5000 10,700			*4100 *9,000	*4000 *8,950	6830 22'19"
4500 mm 15'0"	kg lb			*6650 *14,350	*6650 *14,350	*5700 *12,400	4850 10,400	*4500	3400	*4000 *8,800	3350 7,350	7570 24'74"
3000 mm 10'0"	kg lb			*8400 *18,050	7000 15,150	*6450 *14,000	4600 9,950	4800 10,300	3300 7,100	*4100 *9,000	3000 6,600	7960 26'08"
1500 mm 5'0"	kg lb			*9900 *21,350	6550 14,150	6500 14,000	4400 9,450	4700 10,050	3200 6,900	*4200 *9,250	2900 6,350	8050 26'41"
0 mm 0'0"	kg lb			9950 21,300	6350 13,650	6350 13,350	4250 9,000	4600 9,900	3150 6,750	4300 9,500	2950 6,500	7860 25'77"
-1500 mm -5'0"	kg lb	*10 450 *23,800	*10 450 *23,800	9900 21,200	6300 13,600	6300 13,550	4200 9,050			4750 10,450	3250 7,100	7350 24'08"
-3000 mm -10'0"	kg lb	*13 100 *28,400	12 500 26,750	*9500 *20,500	6400 13,800	6400 13,750	4300 9,250			5750 12,800	3900 8,650	6460 21'08"
-4500 mm -15'0"	kg lb			*7050 *14,800	6700 14,450					*6100 *13,350	5800 13,150	4980 16'03"



ISO 10567:2007



\* Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Lift capacity stays with ±5% for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

# 322 Hydraulic Excavator Specifications

## Bucket Specifications and Compatibility

	Linkage	Width		Capacity		Weight		Fill %	4.25 m (13'11") Medium Undercarriage	4.45 m (14'7") Long Undercarriage
		mm	in	m <sup>3</sup>	yd <sup>3</sup>	kg	lb		Reach Boom	Reach Boom
									HD R2.5 m (8'2") Stick	HD R2.5 m (8'2") Stick
<b>Pin-On (No Quick Coupler)</b>										
General Duty	B	1200	45	1.20	1.57	895	1,973	95	⊙	⊙
General Duty	B	1420	45	1.14	1.49	876	1,931	95	⊙	⊙
Severe Duty	B	1250	50	1.10	1.44	886	1,953	95	⊙	⊙
Maximum load with pin-on (payload + bucket)										
								kg	3052	3096
								lb	6,728	6,824

The above loads are in compliance with hydraulic excavator standard EN474-5:2006+A3:2013, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled.

Capacity based on ISO 7451:2007.

Bucket weight with General Duty tips.

**Maximum Material Density:**

⊙ 1800 kg/m<sup>3</sup> (3,000 lb/yd<sup>3</sup>)

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

## Attachments Offering Guide

Not all Attachments are available in all regions. Consult your Cat dealer for configurations available in your region.

Match

### PIN-ON ATTACHMENTS

Boom Type	Reach Boom
Stick Length	HD R2.5 m (8'2") Stick
Hydraulic Hammers	H120GC S ✓

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>ENGINE</b>			<b>CAB</b>		
Cat C3.6 single turbo diesel engine	✓		Sound suppressed cab with viscous mounts	✓	
Three selectable modes: Power, Smart, Eco	✓		Rollover Protective Structure (ROPS)		✓
One-touch low idle with automatic engine speed control (AEC)	✓		Operator Protective Guards (OPG)		✓
Two stage fuel filtration system with water separator and indicator	✓		Front windshield guard (wire mesh)		✓
4000 m (13,120 ft) altitude capability with derate from 3000 m (9,840 ft)	✓		Mechanical-suspension seat with headrest and armrest angle adjustment	✓	
52 °C (126 °F) high-ambient cooling capacity with derate above 48 °C (118 °F)	✓		High-resolution 203 mm (8") LCD touchscreen monitor	✓	
-10° C (14° F) cold start capability	✓		Keyless push to start engine control	✓	
100 Amp alternator	✓		51 mm (2") orange seat belt	✓	
Radial sealed double element air filter	✓		AM/FM Bluetooth® radio with USB/Auxiliary ports	✓	
Electric fuel priming pump	✓		Auto bi-level air conditioner with pressurized function	✓	
<b>HYDRAULIC SYSTEM</b>			Fixed left-side console	✓	
Electronic main control valve	✓		One-button joysticks	✓	
Hydraulic boom and stick regeneration circuits	✓		24V DC outlet	✓	
Automatic hydraulic warm up	✓		Storage compartments	✓	
Tandem type electronic main pump	✓		Cup holder	✓	
Automatic two speed travel	✓		Coat hook	✓	
High performance hydraulic return filter	✓		Openable skylight	✓	
Hydraulic auxiliary lines (hammer)		✓	Openable tempered front upper windshield	✓	
			Rear window emergency exit	✓	
			Sun visor		✓
			Dome interior lights	✓	
			Washable floor mat	✓	

(continued on next page)

## 322 Standard and Optional Equipment

### Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
<b>UNDERCARRIAGE AND STRUCTURES</b>			<b>CAT TECHNOLOGY</b>		
4.25 m (13'11") Medium undercarriage		✓	VisionLink™	✓ <sup>1</sup>	
4.45 m (14'7") Long undercarriage		✓	<b>SERVICE AND MAINTENANCE</b>		
Grease lubricated track link	✓		Scheduled Oil Sampling (S·O·S <sup>SM</sup> ) ports	✓	
Firewall optimization	✓		Radiator screen for radiator/oil cooler to prevent plugging by debris	✓	
Segmented track guiding guard		✓	<b>SAFETY AND SECURITY</b>		
Center track guiding guard		✓	Rearview mirrors; handrail mounted (one), cab handhold mounted (one)	✓	
Bottom guard	✓		Bolt free service platform with anti-skid plate	✓	
4000 kg (8,820 lb) counterweight	✓		Neutral lever (lock out) for all controls	✓	
600 mm (24") triple grouser track shoes	✓		Ground level accessible secondary engine shutoff switch in cab	✓	
<b>BOOM, STICK AND LINKAGE</b>			Handrail and handhold	✓	
5.7 m (18'8") Reach boom	✓		Signaling/warning horn	✓	
2.5 m (8'2") HD Reach stick	✓		Rearview camera		✓
Bucket linkage, B1 family with lifting eye	✓		Travel alarm		✓
<b>ELECTRICAL SYSTEM</b>					
Two 750 CCA maintenance free batteries	✓				
Simplified electrohydraulic (EH) control system/harness	✓				
Centralized electrical disconnect switch	✓				
LED chassis and cab lights	✓				
LED left-side boom light	✓				
LED right-side boom light		✓			

<sup>1</sup>Provides core telematics data to manage health, maintenance insights, and condition monitoring. Other plans available for more comprehensive data reporting. Consult your Cat dealer for details.

## Dealer Installed Kit and Attachments

Attachments may vary. Consult your Cat dealer for details.

### CAB

- Right Hand (RH) Floor pedal for hammer
- Sun visor

### GUARDS

- Cabin front windshield mesh guard
- Travel motor rear cover

### SAFETY AND SECURITY

- Travel alarm

### OTHER ATTACHMENTS

- Hammer lines kit (HD R2.5 m (8'2") stick)
- Track guiding guard kit
- 1.10 m<sup>3</sup> (1.44 yd<sup>3</sup>) SD bucket reinforcement kit
- 1.20 m<sup>3</sup> (1.57 yd<sup>3</sup>) GD bucket reinforcement kit
- Ground Engaging Tools (GET) tip kit
- Adaptor kit

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

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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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AEXQ4528-00 (09-2025)  
Build Number: 05A  
(India)

