



320 GC

Hydraulic Excavator

Technical Specifications

Engine

Engine Model	Cat® C4.4 ACERT™
Net Power (ISO 9249)	90 kW/121 hp/165 ps
Net Power (SAE J1349)	90 kW/121 hp/165 ps
Gross Power (ISO 14396/SAE J1995)	91 kW/122 hp/166 ps
Bore	105 mm
Stroke	127 mm
Displacement	4.4 L

- The 320 GC meets EU Stage IV emission standards.
- Recommended for use up to 4500 m altitude with engine power derate above 3000 m.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- Rating at 2,000 rpm.

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1 kg of refrigerant which has a CO₂ equivalent of 1.43 metric tonnes.

Engine rpm

Operation	1,700 rpm
Travel	2,000 rpm

Swing Mechanism

Swing Speed	11.6 rpm
Maximum Swing Torque	74 kN·m

Weights

Operating Weight	21 500 kg
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- Reach boom, R2.9 stick, GD 1.0 m³ bucket and 700 mm triple grouser shoes, 4.2 mt counterweight.

Track

Standard Track Shoes Width	600 mm
Optional Track Shoes Width	700 mm
Number of Shoes (each side)	45
Number of Track Rollers (each side)	8
Number of Carrier Rollers (each side)	2

Drive

Maximum Gradeability	35°/70%
Maximum Travel Speed	5.9 km/h
Maximum Drawbar Pull – Standard Undercarriage	205 kN

Hydraulic System

Main System – Maximum Flow (Implement)	442 L/min (221 × 2 pumps)
Swing System – Maximum Flow	No swing pump
Maximum Pressure – Equipment – Normal	35 000 kPa
Maximum Pressure – Equipment – Lift Mode	38 000 kPa
Maximum Pressure – Travel	34 300 kPa
Maximum Pressure – Swing	26 800 kPa
Boom Cylinder – Bore	120 mm
Boom Cylinder – Stroke	1260 mm
Stick Cylinder – Bore	135 mm
Stick Cylinder – Stroke	1504 mm
Bucket Cylinder – Bore	115 mm
Bucket Cylinder – Stroke	1104 mm

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Service Refill Capacities

Fuel Tank Capacity	345 L
Cooling System	35 L
Engine Oil	15 L
Swing Drive (each)	7 L
Final Drive (each)	6 L
Hydraulic System (including tank)	240 L
Hydraulic Tank	128 L
DEF Tank	40 L

Standards

Brakes	ISO 10265:2008
Cab/FOGS	ISO 10262:1998
Cab/ROPS	ISO 12117-2:2008

Sound Performance

ISO 6395 (external)	101 dB(A)
ISO 6396 (inside cab)	70 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 Weight and Ground Pressure

	600 mm Triple Grouser Shoes		700 mm Triple Grouser Shoes	
	Weight kg	Ground Pressure kPa	Weight kg	Ground Pressure kPa
4.2 mt Counterweight Base Machine				
Reach Boom + R2.5 Stick + 1.0 m ³ GD Bucket	21 300	49.1	21 500	42.4

All operating weights include a 90% fuel tank with 75 kg operator.

320 GC Hydraulic Excavator Specifications

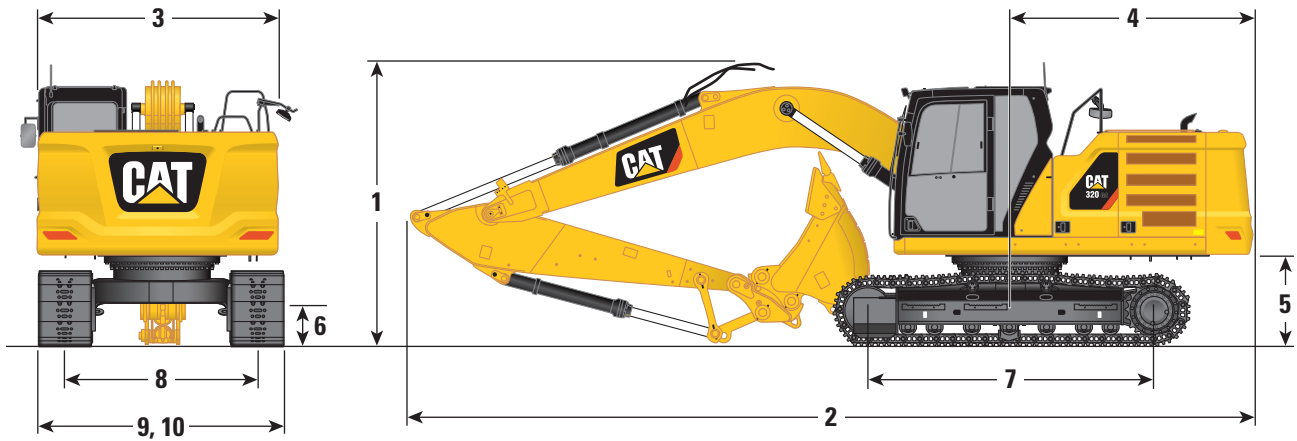
Major Component Weights

	kg
Base Machine (with 4.2 mt counterweight, semi-HD swing frame, standard base frame with HD track rollers and standard carrier rollers for standard undercarriage, with boom cylinder – does not include 90% fuel and 75 kg operator)	14 600
Track Shoes:	
600 mm Width, 8.5 mm Thick Triple Grouser Track Shoes	2580
700 mm Width, 10 mm Thick Triple Grouser Track Shoes	2790
Two Boom Cylinders	340
Weight of 90% Fuel Tank and 75 kg Operator	310
Counterweight:	
4.2 mt Counterweight	4200
Swing Frame:	
Semi-HD Swing Frame, for C4.4 ACERT	1910
Standard Undercarriage without Track Shoes:	
Standard Base Frame with HD Track Rollers and Standard Carrier Rollers for Standard Undercarriage	4110
Booms (including lines, pins, stick cylinder):	
Reach Boom 5.7 m	1690
Sticks (including lines, pins, bucket cylinder, bucket linkage):	
Reach Stick (R2.9B1)	980
Buckets (without linkage):	
1.0 m ³ GD	760
Quick Couplers:	
CW Dedicated QC	230
Pin Grabber QC	390

320 GC Hydraulic Excavator Specifications

Dimensions

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

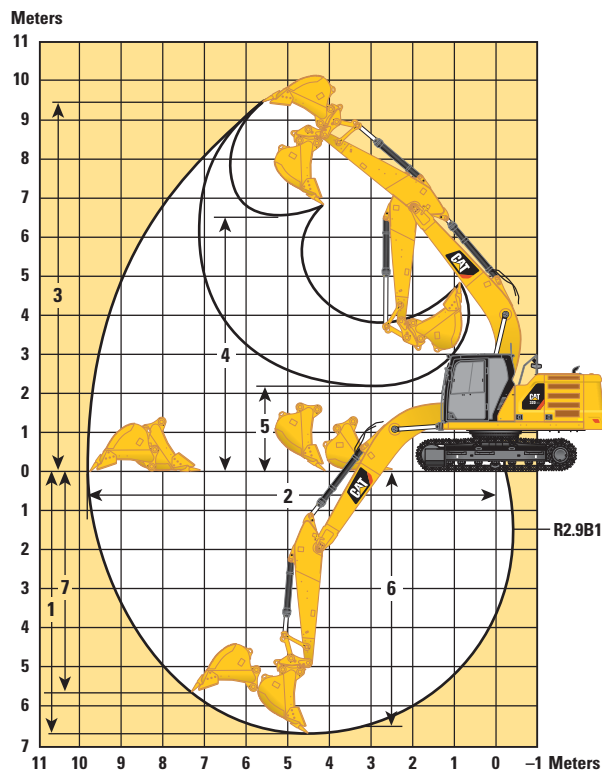


Boom Option	Reach Boom
	5.7 m
Stick Option	Reach Stick
	R2.9B1
1 Machine Height:	
Top of Cab Height	2960 mm
Top of FOGS Height	3100 mm
Handrails Height	2950 mm
With Boom/Stick/Bucket Installed	3160 mm
With Boom/Stick Installed	2910 mm
With Boom Installed	2480 mm
2 Machine Length:	
With Boom/Stick/Bucket Installed	9530 mm
With Boom/Stick Installed	9500 mm
With Boom Installed	8450 mm
3 Upperframe Width without Walkways	2780 mm
4 Tail Swing Radius	2830 mm
5 Counterweight Clearance	1050 mm
6 Ground Clearance	470 mm
7 Track Length – Length to Center of Rollers	3270 mm
8 Track Gauge – Extended	2200 mm
9 Track Width:	
600 mm Shoes	2800 mm
700 mm Shoes	3080 mm
10 Undercarriage Width (with steps/without steps):	
600 mm Shoes	2800 mm
700 mm Shoes	3080 mm
Bucket Type	GD
Bucket Capacity	1.0 m ³
Bucket Tip Radius	1570 mm

320 GC Hydraulic Excavator Specifications

Working Ranges

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



Boom Option

**Reach Boom
5.7 m**

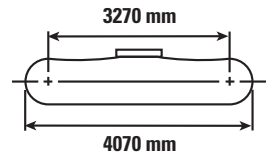
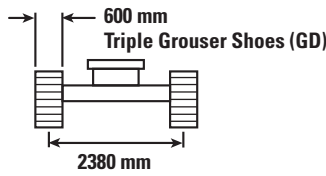
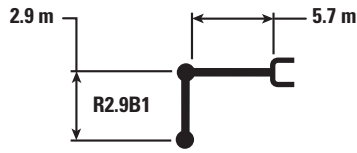
Stick Option

**Reach Stick
R2.9B1**

1 Maximum Digging Depth	6720 mm
2 Maximum Reach at Ground Line	9860 mm
3 Maximum Cutting Height	9450 mm
4 Maximum Loading Height	6490 mm
5 Minimum Loading Height	2170 mm
6 Maximum Depth Cut for 2440 mm Level Bottom	6550 mm
7 Maximum Vertical Wall Digging Depth	5690 mm
Bucket Digging Force (SAE)	115 kN
Bucket Digging Force (ISO)	129 kN
Stick Digging Force (SAE)	96 kN
Stick Digging Force (ISO)	99 kN
Bucket Type	GD
Bucket Capacity	1.0 m ³
Bucket Tip Radius	1570 mm

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Reach Boom Lift Capacities – Counterweight: 4.2 mt – without Bucket



		1500 mm		3000 mm		4500 mm		6000 mm		7500 mm		mm		
														mm
7500 mm	kg							*4350	*4350			*3750	*3750	6150
6000 mm	kg							*4950	4950			*3500	*3500	7290
4500 mm	kg							*5450	4800	4900	3400	*3450	3050	7990
3000 mm	kg					*7950	6900	*6250	4550	4800	3300	*3500	2800	8360
1500 mm	kg					*9600	6400	6450	4350	4700	3200	*3700	2700	8450
0 mm	kg			*5800	*5800	9650	6150	6300	4150	4600	3100	4000	2750	8260
-1500 mm	kg	*6200	*6200	*10 000	*10 000	9600	6050	6200	4100	4550	3100	4350	2950	7780
-3000 mm	kg	*10 600	*10 600	*14 100	11 600	9650	6150	6250	4150			5100	3450	6950
-4500 mm	kg			*11 250	*11 250	*8100	6350					*6100	4750	5600



ISO 10567



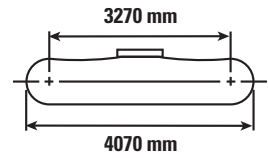
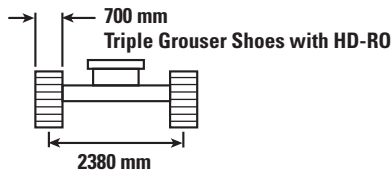
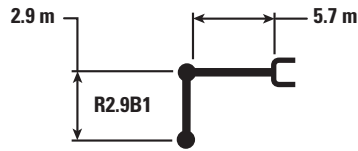
*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories 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 $\pm 5\%$ for all available track shoes.

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

320 GC Hydraulic Excavator Specifications

Reach Boom Lift Capacities – Counterweight: 4.2 mt – without Bucket



		1500 mm		3000 mm		4500 mm		6000 mm		7500 mm		mm		
7500 mm	kg							*4350	*4350			*3750	*3750	6150
6000 mm	kg							*4950	*4950			*3500	*3500	7290
4500 mm	kg							*5450	4850	4950	3450	*3450	3100	7990
3000 mm	kg					*7950	6950	*6250	4600	4850	3350	*3500	2800	8360
1500 mm	kg					*9600	6500	6550	4400	4750	3250	*3700	2700	8450
0 mm	kg			*5800	*5800	9800	6250	6350	4250	4650	3150	4050	2750	8260
-1500 mm	kg	*6200	*6200	*10 000	*10 000	9700	6150	6300	4150	4600	3100	4400	3000	7780
-3000 mm	kg	*10 600	*10 600	*14 100	11 750	9800	6200	6300	4200			5200	3500	6950
-4500 mm	kg			*11 250	*11 250	*8100	6400					*6100	4800	5600



ISO 10567



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Lift capacity stays with $\pm 5\%$ for all available track shoes.

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

320 GC Hydraulic Excavator Specifications

Bucket Specifications and Compatibility

	Linkage	Width mm	Capacity m ³	Weight kg	Fill %	4.2 mt Counterweight
						Reach Boom R2.9
Pin-On (No Quick Coupler)						
General Duty (GD)	B	600	0.46	551	100	●
	B	750	0.64	622	100	●
	B	900	0.81	668	100	●
	B	1200	1.19	803	100	⊖
	B	1300	1.30	835	100	○
	B	1400	1.43	870	100	X
Heavy Duty (HD)	B	1200	1.19	907	100	⊖
	B	1300	1.30	962	100	○
Ditch Cleaning (DC)	B	2000	1.22	869	100	⊖
Ditch Cleaning – Tilt (DCT)	B	2000	1.23	1096	100	○
General Duty (GD)	312	900	0.53	403	100	
Ditch Cleaning (DC) Long Reach	312	1200	0.57	386	100	
Maximum load with pin-on (payload + bucket)					kg	2735
With Cat Pin Grabber Coupler						
Utility Duty (UD) (No Adjuster)	B	600	0.46	564	100	●
	B	1000	0.93	735	100	⊖
	B	1400	1.43	914	100	◇
General Duty (GD)	B	600	0.46	551	100	●
	B	750	0.64	622	100	●
	B	900	0.81	668	100	⊙
	B	1200	1.19	803	100	○
	B	1300	1.30	835	100	◇
	B	1400	1.43	870	100	◇
	B	1400	1.43	870	100	◇
General Duty (GD) (No Adjuster)	B	600	0.46	546	100	●
	B	750	0.64	617	100	●
	B	1000	0.93	710	100	⊖
	B	1200	1.19	799	100	○
	B	1400	1.43	866	100	◇
	B	1500	1.58	906	100	X
Heavy Duty (HD)	B	1050	1.00	880	100	○
	B	1200	1.19	907	100	◇
	B	1300	1.30	962	100	◇
Ditch Cleaning (DC)	B	2000	1.22	869	100	◇
Ditch Cleaning – Tilt (DCT)	B	2000	1.23	1096	100	◇
Maximum load with coupler (payload + bucket)					kg	2313

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:

- 2100 kg/m³
- ⊙ 1800 kg/m³
- ⊖ 1500 kg/m³
- 1200 kg/m³
- ◇ 900 kg/m³
- X Not Recommended

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.

320 GC Hydraulic Excavator Specifications

Bucket Specifications and Compatibility

	Linkage	Width mm	Capacity m ³	Weight kg	Fill %	4.2 mt Counterweight
						Reach Boom R2.9
With CW-40 Quick Coupler						
General Duty (GD)	B	900	0.81	658	100	●
	B	1050	1.00	704	100	⊖
	B	1200	1.19	764	100	○
	B	1300	1.30	804	100	○
Heavy Duty (HD)	B	600	0.46	611	100	●
	B	1200	1.19	877	100	○
	B	1300	1.30	931	100	X
Severe Duty (SD)	B	1200	1.20	985	90	
Ditch Cleaning (DC)	B	2100	1.29	793	100	○
	B	2100	1.46	812	100	◇
	B	1800	1.50	777	100	◇
	B	1800	1.50	826	100	◇
	B	2100	1.76	867	100	X
Ditch Cleaning – Tilt (DCT)	B	2000	1.23	1161	100	◇
Maximum load with coupler (payload + bucket)					kg	2359
With CW-40S Quick Coupler						
General Duty (GD)	B	600	0.46	503	100	●
	B	750	0.64	588	100	●
	B	900	0.81	655	100	●
	B	1200	1.19	770	100	⊖
	B	1300	1.30	801	100	○
	B	1400	1.43	837	100	○
Heavy Duty (HD)	B	600	0.46	584	100	●
	B	1200	1.19	874	100	○
	B	1300	1.30	929	100	X
Ditch Cleaning (DC)	B	2000	1.22	715	100	⊖
	B	2200	1.36	769	100	○
Ditch Cleaning – Tilt (DCT)	B	2000	1.23	1142	100	◇
Maximum load with coupler (payload + bucket)					kg	2504

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:

- 2100 kg/m³
- ⊖ 1500 kg/m³
- 1200 kg/m³
- ◇ 900 kg/m³
- X Not Recommended

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320 GC Hydraulic Excavator Specifications

Work Tool Offering Guide*

Boom Type		Reach Boom
Stick Size		R2.9
Long Undercarriage		4.2 mt Counterweight
Quick Coupler	CW-40s	●
Buckets	General Duty	●
	General Duty, Leveling Edge	●
	Heavy Duty	●
	Ditch Cleaning	●
	Tilting Ditch Cleaning	●
Hydraulic Hammer	B20 (top mount)	●
	H115Es	●
Compactor (Vibratory Plate)	CVP110	●

*Offerings not available in all areas. Matches are dependent on excavator configurations. Consult your Cat dealer to determine what is offered in your area and for proper work tool match.

● Match

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
ENGINE			UNDERCARRIAGE AND STRUCTURES		
Cat C4.4 ACERT single turbo diesel engine	✓		Tie-down points on base frame (ISO 15818:2017 compliant)	✓	
Two selectable power modes	✓		Center track guiding guard	✓	
One-touch low idle with automatic engine speed control	✓		Standard bottom guards	✓	
Automatic engine idle shutdown	✓		Standard travel motor guards	✓	
Work up to 3000 m above sea level without engine power de-rating	✓		Grease lubricated track links	✓	
52° C high-ambient cooling capacity	✓		4.2 mt counterweight	✓	
Cold starting capability for -32° C	✓		Standard swing frame	✓	
Double element air filter with integrated precleaner	✓		Standard swing bearing	✓	
Electric fuel priming pump	✓		Base frame with standard track rollers and standard carrier rollers	✓	
Reversible electric cooling fans	✓		Final drive with bio oil capable travel motor	✓	
Biodiesel capability up to B20	✓		BOOM, STICKS AND LINKAGES		
HYDRAULIC SYSTEM			600 mm triple grouser track shoes	✓	
Boom and stick regeneration circuits	✓		700 mm triple grouser track shoes		✓
Boom/stick lowering check valves (BLCV/SLCV)	✓		5.7 m Reach boom	✓	
SmartBoom™	✓		2.9 m Reach stick	✓	
Electronic main control valve	✓		Bucket linkage, B1-family with lifting eye	✓	
Auto hydraulic oil warm up	✓		Bucket linkage, B1-family without Power Link with lifting eye		✓
Automatic two-speed travel	✓		ELECTRICAL SYSTEM		
Boom and stick drift reduction valve	✓		1,000 CCA maintenance-free batteries (×2)	✓	
Element type main hydraulic filter	✓		Centralized electrical disconnect switch	✓	
Slider joysticks	✓		Programmable time-delay LED working lights	✓	
Tandem type electronic main pump	✓		LED chassis light, LH and RH boom lights for Reach, cab lights – 850 lumens	✓	
Fine swing control	✓		CAT CONNECT TECHNOLOGY		
Simplified combined circuit (two way)		✓	Cat Product Link™	✓	
Quick coupler circuit for Cat Pin Grabber and CW Dedicated		✓			

(continued on next page)

320 GC 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
SERVICE AND MAINTENANCE			SAFETY AND SECURITY		
Sampling ports for Scheduled Oil Sampling (S·O·S SM)	✓		Rear and RH sideview camera	✓	
Grouped location for engine oil and fuel filters	✓		RH side mirror for use with RH sideview camera or 360° visibility		✓
Ground level second dipstick for engine oil	✓		Cab mirror for RH side track edge		✓
Side entry to service platform	✓		Neutral lever (lock out) for all controls	✓	
			Anti-skid plate and countersunk bolts on service platform	✓	
			Ground-level accessible secondary engine shutoff switch in cab	✓	
			Radiator screen		✓
			RH handrail and hand hold (ISO 2867:2011 compliant)	✓	

320 GC Attachments

Dealer Installed Kit and Attachments

Attachments may vary. Consult your Cat dealer for details.

CAB

- Radial lower wiper for 70/30 with washer
- LH/RH electrical pedal for tool control
- Polycarbonate roof hatch

SAFETY AND SECURITY

- Bluetooth® receiver kit for GC

GUARDS

- Standard swivel guard
- FOGS (not compatible with cab light cover, rain protector)
- Mesh guard full front (not compatible with cab light cover, rain protector)
- Mesh guard lower half front

Cab Options

	Comfort
ROPS, standard sound suppression	●
High-resolution 203 mm LCD touch screen monitor	●
Automatic bi-level air conditioner	●
Jog dial and shortcut keys for monitor control	●
Keyless push-to-start engine control	●
Height-adjustable console, three steps with tool	●
Mechanically adjustable seat suspension	●
51 mm seat belt	●
Fixed left-side console	●
Bluetooth integrated radio with USB ports	●
2×12V DC outlets	●
Document storage	●
Cup and bottle holders	●
Two-piece front window, openable	●
Upper radial wiper with 70/30 with washer	●
Openable steel hatch	●
LED dome and lower interior lights	●
Roller front sunscreen	●
Roller rear sunscreen	○
Beacon ready	●
Washable floor mat	●
Straight travel pedal	●

● Standard

○ Optional

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

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AEXQ2215 (09-2017)
Build Number: 07A
(Europe)

