

# 320 GC Hydraulic Excavator

## **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® C4.4	
Net Power (ISO 9249)	107 kW	143 hp
Engine Power (ISO 14396)	108 kW	145 hp
Bore	105 mm	4 in
Stroke	127 mm	5 in
Displacement	4.4 L	269 in <sup>3</sup>

- The C4.4 engine meets U.S. EPA Tier 3/EU Stage IIIA/Brazil Mar-1 equivalent emission standards.
- Recommended for use up to 4500 m (14,764 ft) altitude with engine power derate above 3000 m (9,842.5 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.

Swing Mechanism		
Swing Speed	11.3 rpm	
Maximum Swing Torque	74.4 kN·m	54,900 lb-ft

Weights			
Operating Weight	19 800 kg	43,700 lb	-

• Standard undercarriage, Reach boom, R2.9 (9'6") stick, GD 1.0 m<sup>3</sup> (1.31 yd<sup>3</sup>) bucket, 600 mm (24") triple grouser shoes.

Track		
Standard Track Shoes Width	600 mm	24 in
Optional Track Shoes Width	790 mm	31 in
Number of Shoes each side – STD undercarriage	45	
Number of Track Rollers each side	7	
Number of Carrier Rollers (each side)	2	

Gradeability	35°/70%		
Maximum Travel Speed	5.7 km/h	3.5 mph	
Maximum Drawbar Pull	206 kN	46,311 lbf	
Hydraulic System			
Main System – Maximum Flow – Implement	429 L/min (215 × 2 pumps)	113 gal/min (57 × 2 pumps)	
Maximum Pressure – Equipment	35 000 kPa	5,075 psi	
Maximum Pressure – Travel	34 300 kPa	4,974 psi	
Maximum Pressure – Swing	25 000 kPa	3,625 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	
Service Refill Capacities			
Fuel Tank Capacity	345 L	86.6 gal	
Cooling System	25 L	6.6 gal	
Engine Oil	15 L	4.0 gal	
Swing Drive (each)	12 L	3.2 gal	
Final Drive (each)	4 L	1.1 gal	
Hydraulic System (including tank)	234 L	61.8 gal	
Hydraulic Tank	115 L	30.4 gal	
Standards			
Brakes	ISO 10265:2008		
Cab/ROPS	ISO 12117-2	:2008	
FOGS (optional)	ISO 10262:1	998 (Level II)	
Sound Performance			

ISO 6395:2008 (external) 99 dB(A)
ISO 6396:2008 (inside cab) 70 dB(A)

• Hearing protection may be needed when operating with an open

• 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 Shoes		nm (31") ouser Shoes	
	Weight	Ground Pressure	Weight	Ground Pressure	
	kg (Ib)	kPa (psi)	kg (lb)	kPa (psi)	
3.7 mt (8,200 lb) Counterweight Standard Undercarriage Base Machine					
Reach Boom + R2.9 (9'6") Stick + 1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> ) GD Bucket	19 800 (43,700)	45.6 (6.6)	20 300 (44,800)	35.5 (5.1)	

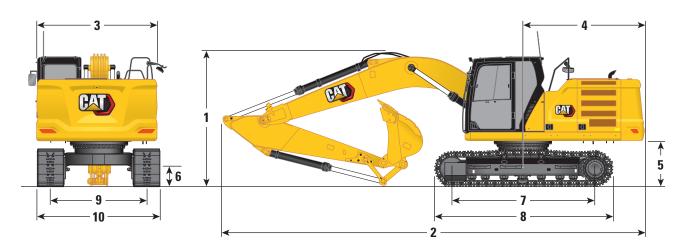
All operating weights include a 90% fuel tank with 75 kg (165 lb) operator.

#### **Major Component Weights**

	kg	lb
Base Machine (with 3.7 mt [8,200 lb] counterweight, standard swing frame, standard base frame with standard track rollers and standard carrier rollers for standard undercarriage, without boom cylinder – does not include 90% fuel and 75 kg [165 lb] operator)	13 200	29,100
Track Shoes:		
600 mm (24") Width, 8.5 mm (0.33") Thick Triple Grouser Track Shoes	2580	5,700
790 mm (31") Width, 10 mm (0.39") Thick Triple Grouser Track Shoes	3080	6,800
Two Boom Cylinders	340	700
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	310	700
Counterweight:		
3.7 mt Counterweight	3700	8,200
Swing Frame:		
Standard Swing Frame	1880	4,150
Undercarriage:		
Standard Base Frame with Standard Track Rollers and Standard Carrier Rollers	4030	8,900
Boom (including lines, pins, stick cylinder):		
Reach Boom (5.7 m/18'8")	1690	3,700
Sticks (including lines, pins, bucket cylinder, bucket linkage):		
Reach Stick (R2.9B1/9'6")	980	2,200
Semi-HD Reach Stick (R2.9B1/9'6")	1070	2,360
Buckets (without linkage):		
1.0 m³ (1.31 yd³) GD	730	1,600
$1.0 \mathrm{m}^3 (1.31 \mathrm{yd}^3) \mathrm{HD}$	860	1,870

#### **Dimensions**

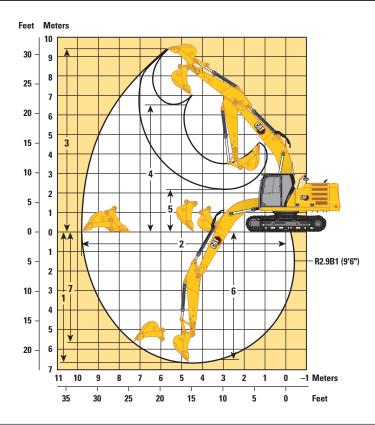
All dimensions are approximate and may vary depending on bucket selection.



Boom Option		Reach Boom 5.7 m (18'8")			
Stick Option	Reach R2.9B1				
1 Machine Height:					
Top of Cab Height	2960 mm	9'9"			
Top of FOGS Height	3100 mm	10'2"			
Handrails Height	2950 mm	9'8"			
With Boom/Stick/Bucket Installed	3160 mm	10'4"			
With Boom/Stick Installed	2910 mm	9'7"			
With Boom Installed	2480 mm	8'2"			
2 Machine Length:					
With Boom/Stick/Bucket Installed	9530 mm	31'3"			
With Boom/Stick Installed	9500 mm	31'2"			
With Boom Installed	8450 mm	27'9"			
<b>3</b> Upperframe Width without Walkways	2780 mm	9'1"			
4 Tail Swing Radius	2830 mm	9'3"			
5 Counterweight Clearance	1050 mm	3'5"			
<b>6</b> Ground Clearance	470 mm	1'7"			
7 Length to Center of Rollers					
Standard Undercarriage	3270 mm	10'9"			
8 Track Length	4070 mm	13'4"			
9 Track Gauge	2200 mm	7'3"			
<b>10</b> Undercarriage Width:					
600 mm (24") Shoes	2800 mm	9'2"			
790 mm (31") Shoes	2990 mm	9'10"			
Bucket Type	G	D			
Bucket Capacity	1.0 m <sup>3</sup>	1.31 yd <sup>3</sup>			
Bucket Tip Radius	1580 mm	5'2"			

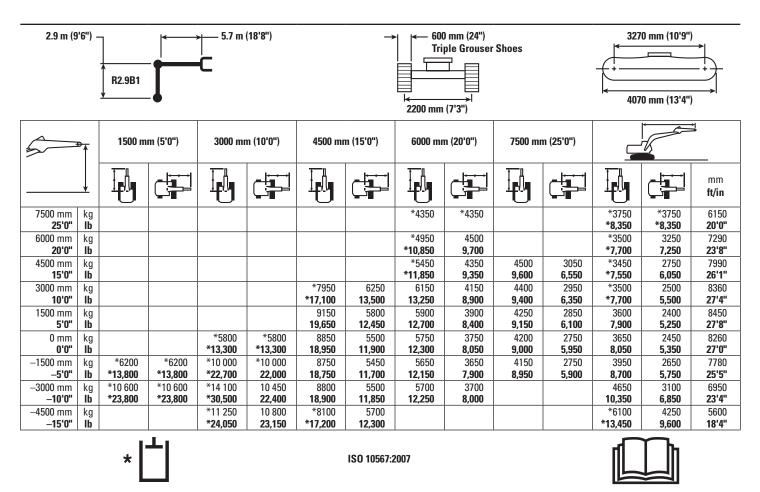
#### **Working Ranges**

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



Boom Option		Reach Boom 5.7 m (18'8")			
Stick Option	Reach R2.9B1				
1 Maximum Digging Depth	6630 mm	21'9"			
2 Maximum Reach at Ground Line	9770 mm	32'			
3 Maximum Cutting Height	9440 mm	30'11"			
4 Maximum Loading Height	6580 mm	21'7"			
5 Minimum Loading Height	2260 mm	7'5"			
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6460 mm	21'2"			
7 Maximum Vertical Wall Digging Depth	6010 mm	19'8"			
Bucket Digging Force (ISO)	129 kN	29,007 lbf			
Stick Digging Force (ISO)	99 kN	22,301 lbf			
Bucket Type	G	GD			
Bucket Capacity	1.0 m <sup>3</sup>	1.31 yd³			
Bucket Tip Radius	1560 mm	5'1"			

#### Reach Boom Lift Capacities – Counterweight: 3.7 mt (8,200 lb) – with Bucket Linkages, without Bucket

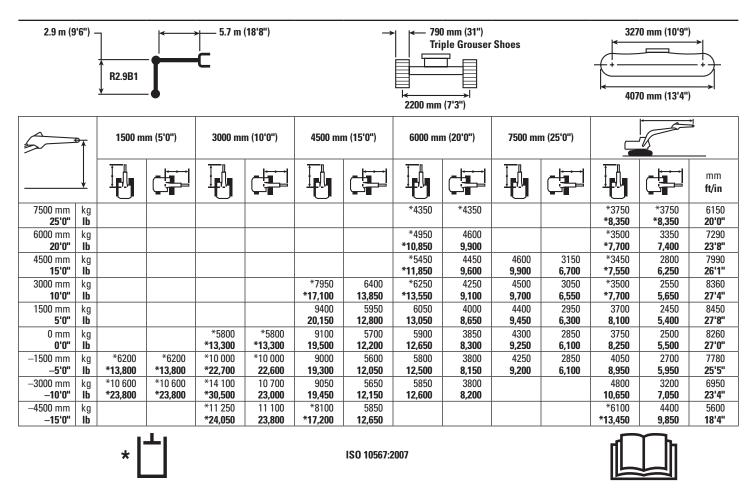


<sup>\*</sup>Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting 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.

#### Reach Boom Lift Capacities – Counterweight: 3.7 mt (8,200 lb) – with Bucket Linkages, without Bucket



<sup>\*</sup>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.

## **Bucket Specifications and Compatibility**

									STD Undercarriage						
									Tier 3						
									3.7 mt (8,200 lb) Counterweight						
		Wi	dth	Cap	acity	We	Weight		Weight F		Reach				
	Linkage	mm	in	m <sup>3</sup>	yd <sup>3</sup>	kg	lb lb	%	R2.9 (9'6")						
Pin-On (No Quick Coupler	)				1	9			11210 (0.07						
General Duty	, В	600	24	0.46	0.61	555	1.223	100	•						
	В	750	30	0.64	0.84	626	1,380	100	•						
	В	1200	48	1.19	1.56	812	1,789	100	0						
	В	1300	51	1.30	1.70	835	1,841	100	Ö						
	В	1400	55	1.43	1.87	879	1,937	100	<b>♦</b>						
Heavy Duty	В	1050	42	1.00	1.31	892	1,967	100	Ď						
. ,	В	1200	48	1.19	1.56	917	2,022	100	Ö						
	В	1300	52	1.30	1.70	974	2,148	100	<b>♦</b>						
	В	1400	55	1.43	1.87	879	1,937	100	<u> </u>						
	В	1050	42	1.00	1.31	737	1,624	100	Ď						
Severe Duty	В	1050	42	1.00	1.31	948	2,091	90	$\overline{\Theta}$						
Severe Duty Spade	В	1200	48	1.20	1.57	1011	2,229	90	0						
General Duty	312	900	36	0.53	0.69	403	888	100	0						
Ditch Cleaning	312	1200	48	0.57	0.74	386	851	100							
Ditter orearing	312	1200	70			pin-on (paylo		kg	2428						
				IVIGAIIII	uiii ioau witii	piii-oii (payio	au + bucket)	lb	5,353						
								10	STD Undercarriage						
									Tier 3						
									3.7 mt (8,200 lb)						
		\A/:	dth	Capacity		Conneitu		Conneity		Conneity		Weight		Fill	Counterweight Reach
	Linkage		Width		yd <sup>3</sup>		lb lb	%	R2.9 (9'6")						
With Cat Pin Grabber Cou		mm	in	m <sup>3</sup>	yu	kg	ID	70	nz.9 (9 0 )						
General Duty	pier B	600	24	0.46	0.61	555	1 222	100							
General Duty	В	600	24	0.46	0.61	555	1,223	100	•						
	В	750	30	0.64	0.84 1.56	626	1,380 1,789	100	^						
		1200	48	1.19		812			<b>♦</b>						
	В	1300	51	1.30	1.70	835	1,841	100	<b>♦</b>						
	В	1400	55	1.43	1.87	879	1,937	100	X						
Heavy Duty	В	1050	42	1.00	1.31	892	1,967	100	♦						
	В	1200	48	1.19	1.56	917	2,022	100	♦						
	В	1300	52	1.30	1.70	974	2,148	100	X						
Severe Duty	В	1050	42	1.00	1.31	948	2,091	90	0						
	_		1 40	1.20	1.57	1011	2,229	90	$  \qquad \diamond$						
	В	1200	48						· ·						
Severe Duty Spade	В	1200	48			oupler (paylo		kg Ib	2006 4,423						

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 (3,500 lb/yd³)
- $\ominus$  1500 kg/m³ (2,500 lb/yd³)
- O 1200 kg/m³ (2,000 lb/yd³)
- ♦ 900 kg/m³ (1,500 lb/yd³)
- 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.

#### **Attachments Offering Guide**

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

✓ Match   * Working range front only   † Allowed usage on machine less than	✓ Match	*	Working range front only	†	Allowed usage on machine less than 50%
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Counterweight		3.7 mt (8,200 lb)
Boom Type		Reach
Stick Length		2.9 m (9'6")
Hydraulic Hammers	H115 S	✓
	H120 GC	√
	H120 GC S	✓
	H120 S	✓
	H130 S	<b>√</b> †
Multi-Processors	MP318 Concrete Cutter Jaw	✓
	MP318 Demolition Jaw	✓
	MP318 Pulverizer Jaw	√*
	MP318 Shear Jaw	✓
	MP318 Universal Jaw	✓
Demolition and Sorting Grapples	G317 GC	✓
	G318	✓
	G318 WH-800	√
Mobile Scrap and Demolition Shears	S3025	√*
Pulverizers	P215	✓
Crushers	P315	✓
Compactors (Vibratory Plate)	CVP110	✓

#### **Attachments Offering Guide (continued)** Not all Attachments are available in all regions. Consult your Cat dealer for configurations available in your region. Allowed usage on machine 1800 kg/m<sup>3</sup> 1200 kg/m<sup>3</sup> Match Working range front only less than 50% (3,000 lb/yd3) (2,000 lb/yd<sup>3</sup>) **PIN-ON ATTACHMENTS** Counterweight 3.7 mt (8,200 lb) **Boom Type** Reach Stick Length 2.9 m (9'6") Orange Peel Grapples GSH420-500 GSH420-600 GSH420-750 0 GSH520-500 GSH520-600 0 GSV520 GC-400 GSV520 GC-500 GSV520 GC-600 GSV520 GC-750 0 GSV520-400 GSV520-500 GSV520-600 0 GSV520-750 0 **CAT PIN GRABBER COUPLER ATTACHMENTS** 3.7 mt (8,200 lb) Counterweight Reach **Boom Type** Stick Length 2.9 m (9'6") H115 S Hydraulic Hammers ✓ H120 GC **√**†\* H120 GC S **√**† H120 S **√**† H130 S **Demolition and Sorting Grapples** G317 GC **√**\* **√**∗ Pulverizers P215 Compactors (Vibratory Plate) CVP110

#### **Attachments Offering Guide (continued)** Not all Attachments are available in all regions. Consult your Cat dealer for configurations available in your region. Match Working range front only Allowed usage on machine less than 50% **CW-40S DEDICATED COUPLER ATTACHMENTS** Counterweight 3.7 mt (8,200 lb) **Boom Type** Reach Stick Length 2.9 m (9'6") Hydraulic Hammers H115 S H120 GC S **√**† H120 S H130 S **√**\* Multi-Processors MP318 Shear Jaw G317 GC **Demolition and Sorting Grapples** G318 **√**\* G318 WH-800 **√**\* P215 Pulverizers Compactors (Vibratory Plate) CVP110 **CW-40 DEDICATED COUPLER ATTACHMENTS** 3.7 mt (8,200 lb) Counterweight **Boom Type** Reach Stick Length 2.9 m (9'6") ✓ H115 S Hydraulic Hammers H120 GC **/**† H120 GC S **√**† H120 S **√**† H130 S **√**\* Multi-Processors MP318 Shear Jaw **Demolition and Sorting Grapples** G317 GC G317 GC fixed CAN G318 fixed CAN **√**\* G318 WH-800 **√**\* Pulverizers P215 CVP110 Compactors (Vibratory Plate) **BOOM-MOUNT ATTACHMENTS**

S2050 S3035

Counterweight

Mobile Scrap and Demolition Shears

**Boom Type** 

3.7 mt (8,200 lb)

Reach

## **320 GC Standard and Optional Equipment**

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

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

-	Standard	Optional
CAB		
ROPS, standard sound suppression	✓	
High-resolution 203 mm (8") LCD touchscreen monitor	✓	
Auto 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	✓	
Fixed left-side console	✓	
Mechanically adjustable seat suspension	✓	
51 mm (2") orange seat belt	✓	
Bluetooth® integrated radio (no USB, aux port or microphone)	✓	
12V DC outlets	✓	
Document storage	✓	
Cup and bottle holders	✓	
Openable two-piece front window	✓	
Upper radial wiper with washer	✓	
Openable steel hatch	✓	
LED dome light	✓	
Roller front sunscreen	✓	
Roller rear sunscreen		✓
Rear window emergency exit	✓	
Washable floor mat	✓	
Beacon ready	✓	
ENGINE		
Two selectable power modes	✓	
One-touch low idle with automatic engine speed control	✓	
Automatic engine idle shutdown	✓	
Work up to 3000 m (9,842.5 ft) above sea level without engine power de-rating	✓	
52° C (125° F) high-ambient cooling capacity	✓	
Cold starting capability for –32° C (–25° F)	✓	
Double element air filter with integrated precleaner	✓	
Electric fuel priming pump	✓	
Electric cooling fans with auto-reverse function	✓	
Biodiesel capability up to B20	✓	

	Standard	Optional
HYDRAULIC SYSTEM		
Boom and stick regeneration circuits	$\checkmark$	
Electronic main control valve	✓	
Auto warm up	✓	
Auto two-speed travel	✓	
Boom and stick drift reduction valve	✓	
Element type main hydraulic filter	✓	
Three button joysticks	✓	
Slider joysticks		✓
Tandem type electronic main pump	✓	
Hammer return filter circuit		✓
Basic Tool Control (one pump, one way high-pressure flow)		✓
Tool Control (two pump, one/two way high-pressure flow)		✓
Quick coupler circuit for Cat Pin Grabber		✓
Operating pattern film (four way)	✓	
Arctic fluids (include grease, engine oil, hydraulic oil)		✓
UNDERCARRIAGE AND STRUCTURES		
Standard undercarriage	✓	
600 mm (24") triple grouser track shoes		✓
790 mm (31") triple grouser track shoes		✓
Tie-down points on base frame	✓	
Center track guiding guard	✓	
Bottom guards	✓	
Travel motor guards	✓	
Grease lubricated track links	✓	
3.7 mt (8,200 lb) counterweight	✓	

## **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
BOOM, STICKS AND LINKAGES		
5.7 m (18'8") Reach boom	✓	
2.9 m (9'6") Reach stick	✓	
Bucket linkage, B1-family without lifting eye		✓
ELECTRICAL SYSTEM		
1,000 CCA maintenance-free batteries (×2)	✓	
Centralized electrical disconnect switch	✓	
Programmable time-delay LED working lights	✓	
LED chassis light and LH boom light – 1,800 lumens	✓	
LED chassis light, LH and RH boom lights, cab lights – 1,800 lumens		✓
CAT TECHNOLOGY		
Cat Product Link <sup>TM</sup>	✓	
Auto hammer stop	✓	

	Standard	Optional
SERVICE AND MAINTENANCE		
S·O·S <sup>SM</sup> sampling ports	✓	
Grouped location for engine oil and fuel filters	✓	
Ground-level second dipstick for engine oil	✓	
Radiator screen		✓
Side entry to service platform	✓	
QuickEvac™ maintenance ready		✓
Electric refueling pump		✓
SAFETY AND SECURITY		
Rearview camera and right-side mirror	✓	
Rearview and right-hand sideview cameras		✓
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	✓	
RH handrail and handhold (ISO 2867:2011 compliant)	✓	
Travel alarm		✓

## **320 GC Attachments**

#### **Dealer Installed Kits and Attachments**

Attachments may vary. Consult your Cat dealer for details.

#### CAB

- RH and LH electrical pedal
- Polycarbonate roof hatch
- Radial lower wiper for 70/30 with washer
- P5A laminated glass front windshield and roof hatch

#### **SAFETY AND SECURITY**

- Seat belt, retractable (75 mm/3" width)
- · Bluetooth receiver

#### **SERVICE AND MAINTENANCE**

• Grease gun holder

#### **GUARDS**

- 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
- Swivel guard
- Full protecting vandalism guard



## 320 GC Narrow

**Hydraulic Excavator** 

The Cat® 320 GC Narrow Excavator is designed with transportation in mind. Its undercarriage is sized just right to make it fit nicely on trailers and space-restricted jobsites.

#### **High Performance**

- The excavator's 2.54 m (8'3") width makes it easier to get into space-restricted areas compared to a standard width model.
- The C4.4 engine meets U.S. EPA Tier 3/EU Stage IIIA/Brazil Mar-1 equivalent emission standards.
- High-ambient cooling and cold start capability enable year round work.
- Smart mode automatically matches engine and hydraulic power to digging conditions for maximum efficiency.
- Do different jobs quickly and efficiently with purpose-built Cat® attachments.

#### Simple to Operate

- Program power mode and joystick response and pattern using Operator ID; the machine will remember the settings each time you go to work.
- Navigate quickly on the standard high-resolution 203 mm (8 in) touchscreen monitor or with the aid of the jog dial control.
- Not sure how a function works? The operator's manual is at your fingertips in the touchscreen monitor.

#### **Work in Comfort**

- The wide seat is adjustable for operators of all sizes.
- Easy-to-reach controls all located in front of you reduce twisting and turning.
- Standard automatic climate control keeps you at the right temperature all shift long.
- Advanced viscous mounts reduce cab vibration up to 50 percent over previous excavator series.
- Stow your gear with plenty of storage, including a cup holder, cell phone slot, and space behind the seat for a large lunchbox.

#### **Easy to Maintain**

- Do all routine maintenance at ground level.
- The hydraulic oil system requires no maintenance for 3,000 hours 50 percent longer than the previous series.
- Change fuel filters at 1,000 hours double the interval from the previous filters.
- The new air intake filter with precleaner has double the dust holding capacity of the previous air intake filter.

#### **Built-In Safety**

- No need to climb on top of the machine with daily maintenance points at ground level.
- New right-hand service platform design enables trouble-free access to upper service platform.
- Serrated steps and anti-skid punch plate prevent slipping.
- Keep your excavator secure with Operator ID; use your Personal Identification Number (PIN) code to enable push-button starting.
- Enjoy great visibility into the trench, in each swing direction, and behind you with the help of smaller cab posts and larger windows.
- Rearview camera is standard.



Engine		
Engine Model	Cat® C4.4	
Net Power ISO 9249	107 kW	143 hp
Engine Power ISO 14396	108 kW	145 hp
Bore	105 mm	4 in
Stroke	127 mm	5 in
Displacement	4.4 L	269 in <sup>3</sup>

- The C4.4 engine meets U.S. EPA Tier 3/EU Stage IIIA/Brazil Mar-1 equivalent emission standards.
- Recommended for use up to 4500 m (14,770 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.

Swing Mechanism		
Swing Speed	11.12 rpm	
Maximum Swing Torque	74 kN·m	54,440 lbf-ft
Weights		
Operating Weight	21 400 kg	47,200 lb

 Long Narrow undercarriage, Reach boom, R2.9 (9'6") stick, GD 1.00 m³ (1.31 yd³) bucket, 500 mm (20") triple grouser shoes and 3.9 mt (8,600 lb) counterweight.

Track		
Track Shoes Width	500 mm	20 in
Number of Shoes (each side)	49	
Number of Track Rollers (each side)	8	
Number of Carrier Rollers (each side)	2	

Drive		
Gradeability	35°/70%	
Maximum Travel Speed	5.7 km/h	3.5 mph
Maximum Drawbar Pull	205 kN	46.063 lbf

Hydraulic System		
Main System – Maximum Flow – Implement	429 L/min (215 × 2 pumps)	113 gal/min (57 × 2 pumps)
Maximum Pressure – Equipment – Normal	35 000 kPa	5,075 psi
Maximum Pressure – Travel	35 000 kPa	5,075 psi
Maximum Pressure – Swing	25 000 kPa	3,625 psi
Boom Cylinder – Bore	120 mm	5 in
Boom Cylinder – Stroke	1260 mm	50 in
Stick Cylinder – Bore	140 mm	6 in
Stick Cylinder – Stroke	1504 mm	59 in
Bucket Cylinder – Bore	120 mm	5 in
Bucket Cylinder – Stroke	1104 mm	43 in

Service Refill Capacities		
Fuel Tank Capacity	267 L	70.5 gal
Cooling System	12.5 L	3.3 gal
Engine Oil	15 L	4.0 gal
Swing Drive	12 L	3.2 gal
Final Drive (each)	4.5 L	1.2 gal
Hydraulic System (including tank)	218 L	57.6 gal
Hydraulic Tank (including suction pipe)	115 L	30.4 gal

Standards	
Brakes	ISO 10265:2008
Cab/ROPS	ISO 12117-2:2008
FOGS (optional)	ISO 10262:1998 (Level II)

<b>Sound Performance</b>	
ISO 6395 (external)	102 dB(A)
ISO 6396 (inside cab)	70 dB(A)

- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 OCT98, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.
- 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.

#### **Air Conditioning System**

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.9 kg of refrigerant, which has a  $CO_2$  equivalent of 1.287 metric tonnes.

## **Operating Weights and Ground Pressures**

	500 mm (20") Triple Grouser Shoes	
	Weight	Ground Pressure
	kg (lb)	kPa (psi)
.9 mt (8,600 lb) Counterweight + Undercarriage Base Machine for Narrow		
Reach Boom + R2.9 (9'6") Stick + 1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> ) GD Bucket	21 400 (47,200)	53.4 (7.7)
Reach Boom + R2.9 (9'6") Stick + 1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> ) GD Bucket + Quick Coupler	21 700 (47,800)	54.1 (7.8)

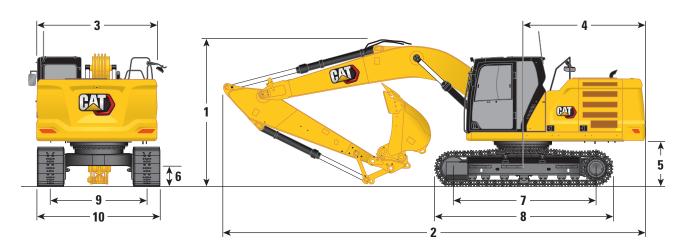
All operating weights include a 90% fuel tank with 75 kg (165 lb) operator.

#### **Major Component Weights**

	kg	lb
Base Machine weight (with upperframe, long narrow undercarriage, 3.9 mt [8,600 lb] counterweight, boom cylinders, without boom, stick, bucket, stick cylinders, bucket cylinders, track, 90% fuel tank and 75 kg [165 lb] operator)		
Base Machine with 3.9 mt (8,600 lb) counterweight	15 030	33,130
Track Shoes:		
500 mm (20") Width, 8.5 mm (0.33") Thick, Triple Grouser Track Shoes	2440	5,390
Two Boom Cylinders	340	750
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	280	610
Counterweight:		
3.9 mt (8,600 lb) Counterweight	4550	10,030
Booms (including lines, pins, stick cylinder):		
5.7 m (18'8") Reach Boom (including HP lines)	1760	3,880
5.7 m (18'8") Reach Boom (including HP lines and quick coupler lines)	1780	3,930
Sticks (including lines, pins, bucket cylinder, bucket linkage):		
R2.9B1 (9'6") GC Semi-HD Reach Stick (including HP lines)	1110	2,440
R2.9B1 (9'6") GC Semi-HD Reach Stick (including HP lines and quick coupler lines)	1120	2,470
Buckets (without linkage, with tips and side cutters):		
1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> ) GD Bucket	790	1,750
1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> ) GD Bucket for use with CW Quick Coupler	750	1,650
Quick Coupler:		
CW Quick Coupler B1 without Pins	250	550

#### **Dimensions**

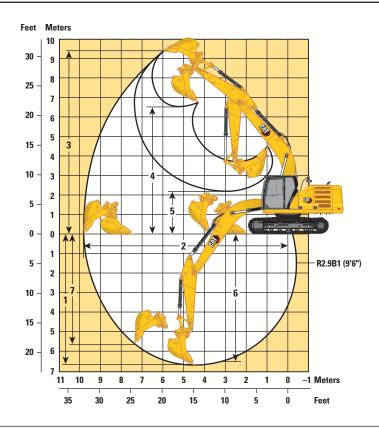
All dimensions are approximate and may vary depending on bucket selection.



om Option		Reach Boom 5.7 m (18'8")		
Stick Option	Reach R2.9B1			
Undercarriage Type	Nari	row		
1 Machine Height:				
Top of Cab Height	2980 mm	9'9"		
Top of FOGS Height	3120 mm	10'3"		
Handrails Height	2970 mm	9'9"		
With Boom/Stick/Bucket Installed	3050 mm	10'0"		
With Boom/Stick Installed	2940 mm	9'8"		
With Boom Installed	2400 mm	7'10"		
2 Machine Length:				
With Boom/Stick/Bucket Installed	9560 mm	31'4"		
With Boom/Stick Installed	9540 mm	31'4"		
With Boom Installed	8490 mm	27'10"		
3 Upperframe Width without Walkways	2550 mm	8'4"		
4 Tail Swing Radius	2830 mm	9'3"		
<b>5</b> Counterweight Clearance	1030 mm	3'5"		
6 Ground Clearance	435 mm	1'5"		
7 Track Length:				
Length to Center of Rollers	3650 mm	12'0"		
8 Crawler Overall Length	4460 mm	14'8"		
9 Track Gauge – Extended	2000 mm	6'7"		
Track Width:				
500 mm (20") Shoes	500 mm	20"		
10 Undercarriage Width:				
500 mm (20") Shoes	2500 mm	8'2"		
Bucket Type	G	D		
Bucket Capacity	1.00 m <sup>3</sup>	1.31 yd <sup>3</sup>		
Bucket Tip Radius	1560 mm	5'1"		

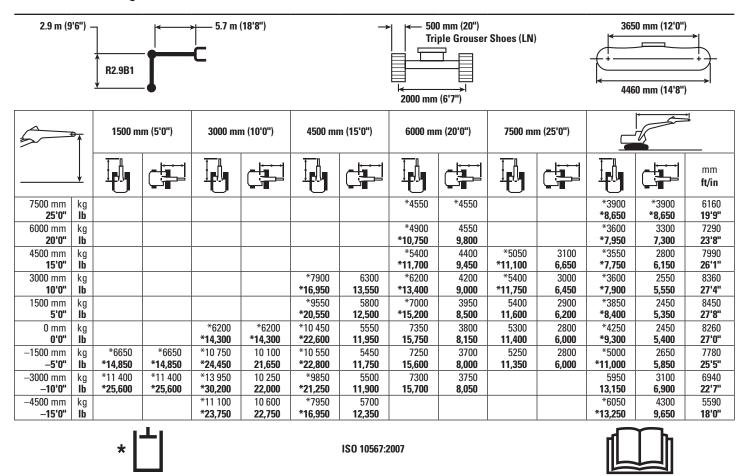
#### **Working Ranges**

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



Boom Option	Reach   5.7 m (1		
Stick Option	Reach R2.9B1		
Undercarriage Type	Narr	ow	
1 Maximum Digging Depth	6700 mm	22'0"	
2 Maximum Reach at Ground Line	9850 mm	32'4"	
3 Maximum Cutting Height	9450 mm	31'0"	
4 Maximum Loading Height	6510 mm	21'4"	
5 Minimum Loading Height	2190 mm	7'2"	
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6530 mm	21'5"	
7 Maximum Vertical Wall Digging Depth	5650 mm	18'6"	
Bucket Digging Force (ISO)	141 kN	31,590 lbf	
Stick Digging Force (ISO)	107 kN	23,990 lbf	
Bucket Type	GI	)	
Bucket Capacity	1.00 m <sup>3</sup>	1.31 yd <sup>3</sup>	
Bucket Tip Radius	1560 mm	5'1"	

## Reach Boom Lift Capacities — Counterweight: 3.9 mt (8,600 lb) — with Bucket Linkages, without Bucket Narrow Undercarriage



<sup>\*</sup>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.

#### **Bucket Specifications and Compatibility**

					,				Narrow	
		\ \A/=	-lal-	0		14/-	:	F:II	3.9 mt (8,600 lb)	
		VVI	dth	Capacity		Weight		Fill	Reach Boom	
	Linkage	mm	in	m <sup>3</sup>	yd³	kg	lb	%	R2.9 (9'6")	
Pin On (No Coupler)				,						
General Duty	В	600	24	0.46	0.61	555	1,223	100	•	
	В	750	30	0.64	0.84	626	1,380	100	•	
	В	1300	51	1.30	1.70	835	1,841	100	$\Diamond$	
	В	1400	55	1.43	1.87	879	1,937	100	Х	
	В	1000	39	0.93	1.22	717	1,580	100	$\Theta$	
	В	1050	42	1.00	1.31	737	1,624	100	•	
	В	1200	48	1.19	1.56	807	1,778	100	0	
	В	1500	60	1.58	2.06	914	2,014	100	Х	
leavy Duty	В	1050	42	1.00	1.31	892	1,967	100	0	
	В	1200	48	1.19	1.56	917	2,022	100	$\Diamond$	
	В	1300	52	1.30	1.70	974	2,148	100	$\Diamond$	
evere Duty	В	1050	42	1.00	1.31	948	2,091	90	0	
	В	1200	48	1.20	1.57	1011	2,229	90	$\Diamond$	
Ditch Cleaning	В	2000	78	1.22	1.60	869	1,916	100	$\Diamond$	
Ditch Cleaning Tilt	В	2000	79	1.23	1.61	1096	2,417	100	$\Diamond$	
-				Maxim	um load with	pin-on (paylo	ad + bucket)	kg	2790	
								lb	4,905	

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 (3,500 lb/yd³)
- 1800 kg/m³ (3,000 lb/yd³)
- $\ominus$  1500 kg/m³ (2,500 lb/yd³)
- O 1200 kg/m³ (2,000 lb/yd³)
- ♦ 900 kg/m³ (1,500 lb/yd³)
- 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.

#### **Bucket Specifications and Compatibility (continued)**

									Narrow
									3.9 mt (8,600 lb)
		Wi	dth	Cap	Capacity Weight		ight	Fill	Reach Boom
	Linkage	mm	in	m³	yd³	kg	lb	%	R2.9 (9'6")
With CW40 Coupler			•						
General Duty	В	900	36	0.81	1.06	664	1,463	100	•
	В	1050	42	1.00	1.31	711	1,567	100	•
	В	1200	48	1.19	1.56	781	1,721	100	$\Theta$
	В	1300	51	1.30	1.70	813	1,791	100	0
	В	1400	55	1.43	1.87	863	1,903	100	0
General Duty with	В	650	26	0.70	0.92	567	1,249	100	•
Leveling Edge	В	800	31	0.68	0.89	614	1,353	100	•
	В	1200	47	1.19	1.56	787	1,734	100	$\Theta$
	В	1400	55	1.43	1.87	855	1,884	100	0
	В	1500	60	1.58	2.06	895	1,972	100	♦
Heavy Duty	В	600	24	0.46	0.61	618	1,363	100	•
	В	1200	48	1.19	1.56	886	1,953	100	0
	В	1300	52	1.30	1.71	944	2,081	100	0
Ditch Cleaning	В	2100	83	1.29	1.69	792	1,746	100	0
	В	2100	83	1.46	1.91	809	1,784	100	0
	В	1800	72	1.50	1.96	775	1,709	100	0
	В	1800	72	1.50	1.96	737	1,624	100	0
	В	2100	83	1.76	2.31	864	1,905	100	♦
Ditch Cleaning Tilt	В	2000	79	1.23	1.61	1161	2,560	100	♦
<u> </u>				Maximu	m load with c	oupler (paylo	ad + bucket)	kg	2540
								lb	5,600

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 (3,500 lb/yd³)
- 1800 kg/m³ (3,000 lb/yd³)
- → 1500 kg/m³ (2,500 lb/yd³)
- O 1200 kg/m3 (2,000 lb/yd3)
- 900 kg/m³ (1,500 lb/yd³)

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   * Working range front only	Allowed usage on machine less than 50%	1800 kg/m³ (3,000 lb/yd³)	1200 kg/m³ (2,000 lb/yd³)
--------------------------------------	--	---------------------------	------------------------------

Undercarriage		Narrow
Counterweight		3.9 mt (8,600 lb
Boom Type		Reach
Stick Length		R2.9 (9'6")
Hydraulic Hammers	H115 S	✓
	H120 GC	✓
	H120 GC S	✓
	H120 S	✓
	H130 S	<b>√</b> †
Multi-Processors	MP318 Concrete Cutter Jaw	✓
	MP318 Demolition Jaw	✓
	MP318 Pulverizer Jaw	✓*
	MP318 Shear Jaw	✓
	MP318 Universal Jaw	✓
Demolition and Sorting Grapples	G317 GC	✓
	G318	✓
	G318 WH-800	✓
Mobile Scrap and Demolition Shears	S3025	<b>√</b> *
Pulverizers	P215	✓
Crushers	P315	✓
Compactors (Vibratory Plate)	CVP110	✓
Orange Peel Grapples	GSH420-500	•
	GSH420-600	•
	GSH420-750	0
	GSH520-500	•
	GSH520-600	0
	GSH520-750	0
	GSV520-400	•
	GSV520-500	•
	GSV520-600	•
	GSV520-750	0
	GSV520 GC-400	•
	GSV520 GC-500	•
	GSV520 GC-600	•
	GSV520 GC-750	0

#### **Attachments Offering Guide (continued)** Not all Attachments are available in all regions. Consult your Cat dealer for configurations available in your region. Working range front only Allowed usage on machine less than 50% **PIN GRABBER COUPLER ATTACHMENTS Undercarriage Narrow** 3.9 mt (8,600 lb) Counterweight **Boom Type** Reach Stick Length R2.9 (9'6") Hydraulic Hammers H115 S H120 GC **√**† H120 GC S H120 S **√**† H130 S **√**†\* G317 GC **√**\* **Demolition and Sorting Grapples √**\* Pulverizers P215 Compactors (Vibratory Plate) CVP110 **CW-40S DEDICATED COUPLER ATTACHMENTS** Undercarriage **Narrow** Counterweight 3.9 mt (8,600 lb) **Boom Type** Reach Stick Length R2.9 (9'6")

H115 S

H120 S

H130 S

G317 GC

G318

P215

CVP110

H120 GC S

MP318 Shear Jaw

G318 WH-800

(continued on next page)

✓

**√**†

**√**†

**√**\*

**√**\*

✓

✓

✓

Hydraulic Hammers

Multi-Processors

Pulverizers

**Demolition and Sorting Grapples** 

Compactors (Vibratory Plate)

#### **Attachments Offering Guide (continued)** Not all Attachments are available in all regions. Consult your Cat dealer for configurations available in your region. Match Working range front only Allowed usage on machine less than 50% **CW-40 DEDICATED COUPLER ATTACHMENTS Undercarriage Narrow** 3.9 mt (8,600 lb) Counterweight **Boom Type** Reach R2.9 (9'6") Stick Length Hydraulic Hammers H115 S ✓ H120 GC **/**† H120 GC S **√**† H120 S **√**† H130 S **√**†\* **√**\* Multi-Processors MP318 Shear Jaw Demolition and Sorting Grapples G317 GC ✓ G317 GC Fixed CAN G318 **√**\* G318 Fixed CAN **√**\* G318 WH-800 **√**\* Pulverizers P215 Crushers P315 **√**\* Compactors (Vibratory Plate) CVP110 **BOOM-MOUNT ATTACHMENTS Undercarriage** Narrow Counterweight 3.9 mt (8,600 lb) Reach **Boom Type** Mobile Scrap and Demolition Shears S2050 **√**\* S3035 S3035 Flat Top

## **320 GC Narrow Standard and Optional Equipment**

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

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

	Standard	Optional
BOOMS, STICKS AND LINKAGES		
5.7 m (18'8") Reach boom	✓	
2.9 m (9'6") Reach stick	✓	
Bucket linkage, B1-family without	<u> </u>	
lifting eye	·	
CAB		
ROPS, standard sound suppression	✓	
High-resolution 203 mm (8") LCD touchscreen monitor	✓	
Auto 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	✓	
Fixed left-side console	✓	
Mechanically adjustable seat suspension	✓	
51 mm (2") orange seat belt	✓	
Bluetooth® integrated radio (no USB, aux port or microphone)	✓	
12V DC outlets	✓	
Document storage	✓	
Cup and bottle holders	✓	
Openable two-piece front window	✓	
Upper radial wiper with washer	✓	
Openable steel hatch	✓	
LED dome light	✓	
Roller front sunscreen	✓	
Roller rear sunscreen	✓	
Rear window emergency exit		✓
Washable floor mat	✓	
Beacon ready	✓	

	Standard	Optional
CAT TECHNOLOGY		
Cat Product Link™	✓	
Auto hammer stop	✓	
ELECTRICAL SYSTEM		
1,000 CCA maintenance-free batteries (×2)	✓	
Centralized electrical disconnect switch	✓	
Programmable time-delay LED working lights	✓	
LED chassis light, boom lights, cab lights	✓	
ENGINE		
Two selectable power modes	✓	
Auto engine speed control	✓	
Auto engine idle shutdown	✓	
Work up to 3000 m (9,842.5 ft) above sea level without engine power de-rating	✓	
52° C (125° F) high-ambient cooling capacity	✓	
Cold starting capability for –32° C (–25° F)	✓	
Double element air filter with integrated precleaner	✓	
Electric fuel priming pump	✓	
Electric cooling fans with auto-reverse function	✓	
Biodiesel capability up to B20	✓	
(	continued on	next page)

## **320 GC Narrow Standard and Optional Equipment**

#### Standard and Optional Equipment (continued)

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

	Standard	Optional
HYDRAULIC SYSTEM		
Boom and stick regeneration circuits	✓	
Electronic main control valve	✓	
Auto warm up	✓	
Auto two-speed travel	✓	
Boom and stick drift reduction valve	✓	
Element type main hydraulic filter	✓	
Slider joysticks	✓	
Tandem type electronic main pump	✓	
Basic Tool Control (one pump, one way high-pressure flow)		✓
Tool Control (two pump, one/two way high-pressure flow)		✓
Medium pressure circuit		✓
Quick coupler circuit for Cat Pin Grabber and CW Dedicated		✓
SAFETY AND SECURITY		
Rear and right-hand-sideview cameras		✓
Neutral lever (lock out) for all controls		✓
Anti-skid plate and countersunk bolts on service platform	✓	
Ground-level accessible secondary engine shutoff switch	✓	
RH handrail and handhold (ISO 2867:2011 compliant)	✓	
FOGS guards		✓

	Standard	Optional
SERVICE AND MAINTENANCE		
S·O·S <sup>SM</sup> sampling ports	✓	
Ground-level second dipstick for engine oil	✓	
Side entry to service platform	✓	
UNDERCARRIAGE AND STRUCTURES		
Long Narrow undercarriage	✓	
500 mm (20") triple grouser track shoes	✓	
Two-piece segmented track guiding guards	✓	
Bottom guards	✓	
Grease lubricated track links	✓	
3.9 mt (8,600 lb) counterweight	✓	

### **320 GC Narrow Attachments**

#### **Dealer Installed Kits 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
- P5A laminated glass front windshield and roof hatch

#### **SAFETY AND SECURITY**

- Bluetooth receiver kit
- 76 mm (3") retractable seat belt

#### **SERVICE AND MAINTENANCE**

• Grease gun holder

#### **GUARDS**

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

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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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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AEXQ3211 (04-2021) Build Number: 07D (CIS)

