

# 320 GC Hydraulic Excavator

# **Technical Specifications**

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

Table of Contents		
320 GC Hydraulic Excavator		
Specifications2	Operating Weights and Ground Pressures	.3
Engine	Major Component Weights	.4
Swing Mechanism2	Dimensions.	.5
Weights	Working Ranges	.6
Track	Reach Boom Lift Capacities	.7
Drive	Bucket Specifications and Compatibility	.9
Hydraulic System2	Attachments Offering Guide	10
Service Refill Capacities	Standard and Optional Equipment1	3
Standards	Dealer Installed Kit and Attachments 1	5
Sound Performance	320 GC Environmental Declaration	6
320 GC Forestry Hydraulic Excavator		
Key Features and Benefits	Standards	18
Specifications	Sound Performance	18
Engine	Operating Weights and Ground Pressures	19
Swing Mechanism	Major Component Weights	19
Weights	Dimensions	20
Track	Working Ranges	21
Drive	HD Reach Boom Lift Capacities	22
Hydraulic System18	HD Straight Boom Lift Capacities	23
Service Refill Capacities	Standard and Optional Equipment	25



Engine		
Engine Model	Cat® C4.4	
Net Power		
ISO 9249	107 kW	143 hp
ISO 9249 (DIN)	145 hp (me	tric)
Engine Power		
ISO 14396	108 kW	145 hp
ISO 14396 (DIN)	147 hp (me	etric)
Bore	105 mm	4 in
Stroke	127 mm	5 in
Displacement	4.4 L	269 in <sup>3</sup>
Biodiesel Capability	Up to B200	1)

- Meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- 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.
- (1) 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 (hydrotreated 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	11.25 rpm	
Maximum Swing Torque	74.4 kN·m	54,900 lbf·ft

Weights		
Operating Weight	20 400 kg	45,000 lb

 Medium undercarriage, Reach boom, R2.9 (9'6") stick, General Duty (GD) 1.0 m³ (1.31 yd³) bucket, 600 mm (24") triple grouser shoes, and 3700 kg (8,200 lb) counterweight.

Track		
tandard Track Shoes Width	600 mm	24 in
ptional Track Shoes Width	790 mm	31 in
Tumber of Shoes Each Side	47	
Sumber of Track Rollers (each side)	7	
Jumber of Carrier Rollers (each side)	2	
Drive		
Gradeability	35°/70%	
Maximum Travel Speed	5.7 km/h	3.5 mph
Maximum Drawbar Pull	206 kN	46,311 lbf
Hydraulic System		
1ain System – Maximum Flow –	429 L/min	113 gal/min

nyuraunc 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	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/Rollover Protective Structure (ROPS)	ISO 12117-2:2008
Cab/Operator Protective Guards (OPG) (optional)	ISO 10262:1998 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 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		790 mm (31") Triple Grouser Shoes	
	Weight	Ground Pressure	Weight	Ground Pressure
Base Machine Configurations	kg (Ib)	kPa (psi)	kg (Ib)	kPa (psi)
Base Frame with Track Rollers and Carrier Rollers				
3700 kg (8,200 lb) Counterweight + Medium Undercarriage Base Machine				
Reach Boom + R2.9 (9'6") Stick + 1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> ) GD Bucket	20 400 (45,000)	44.7 (6.5)	21,100 (46,500)	35.1 (5.1)

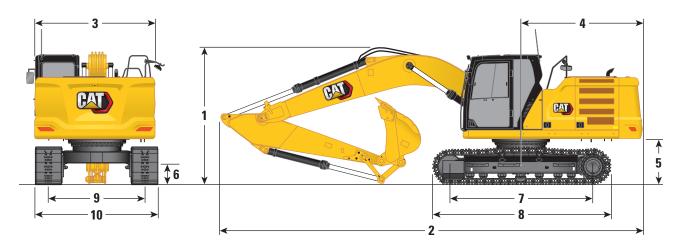
All operating weights include a 90% fuel tank with 75 kg (165 lb) operator.

### **Major Component Weights**

	kg	lb
Base Machine (with 3700 kg [8,200 lb] counterweight, standard swing frame, standard base frame with track rollers and standard carrier rollers for medium undercarriage, without boom cylinders – does not include 90% fuel and 75 kg [165 lb] operator)	13 740	30,300
Track Shoes:		
600 mm (24") Width, 8.5 mm (0.33") Thick Triple Grouser Track Shoes	2500	5,500
790 mm (31") Width, 10 mm (0.39") Thick Triple Grouser Track Shoes	3220	7,100
Two Boom Cylinders	340	700
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	310	700
Counterweight:		
3700 kg (8,200 lb) Counterweight	3700	8,200
Swing Frame:		
Standard Swing Frame	1910	4,150
Undercarriage:		
Standard Base Frame with HD Track Rollers and Standard Carrier Rollers	4140	9,100
Booms (including lines, pins, stick cylinder):		
Reach Boom 5.7 m (18'8")	1690	3,700
Stick (including lines, pins, bucket cylinder, bucket linkage):		
Reach Stick R2.9B1 (9'6")	1080	2,400
Buckets (without linkage):		
1.0 m³ (1.31 yd³) GD	730	1,670
1.16 m³ (1.52 yd³) GD	850	1,870

### **Dimensions**

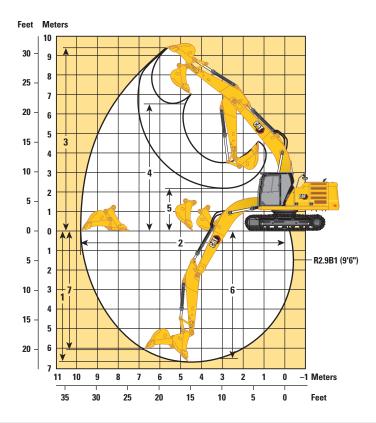
All dimensions are approximate and may vary depending on bucket selection.



·		Boom 18'8")
Stick Option	Reach R2.9B1	
1 Machine Height:		
Top of Cab Height	2960 mm	9'9"
Top of OPG Height	3100 mm	10'2"
Handrail 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	2780 mm	9'1"
4 Tail Swing Radius	2830 mm	9'3"
5 Counterweight Clearance	1050 mm	3'5"
6 Ground Clearance	470 mm	1'7"
7 Length to Center of Rollers	3450 mm	11'4"
8 Track Length	4250 mm	13'11"
9 Track Gauge	2380 mm	7'10"
10 Undercarriage Width:		
600 mm (24") Shoes	2980 mm	9'9"
790 mm (31") Shoes	3080 mm	10'1"
Bucket Type	Gl	D
Bucket Capacity	1.00 m <sup>3</sup>	1.31 yd <sup>3</sup>
Bucket Tip Radius	1580 mm	5'2"

### **Working Ranges**

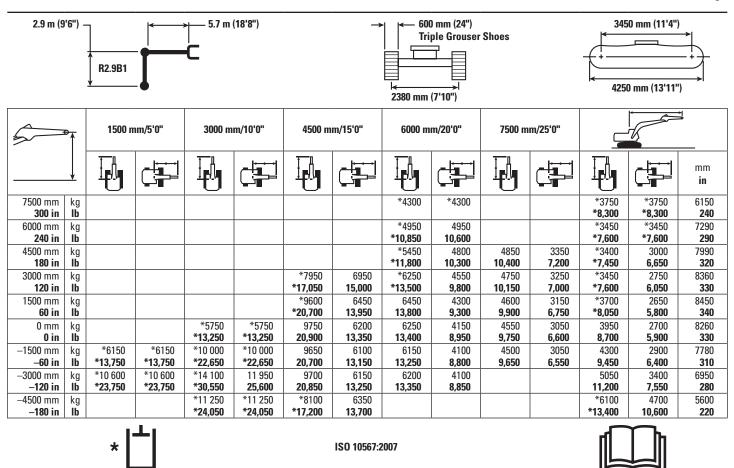
All dimensions are approximate and may vary depending on bucket selection.



Boom Option	Boom 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	Gl	GD	
Bucket Capacity	1.0 m <sup>3</sup>	1.31 yd <sup>3</sup>	
Bucket Tip Radius	1560 mm	5'1"	

#### Reach Boom Lift Capacities – Counterweight: 3700 kg (8,200 lb) – with Bucket Linkages, without Bucket

Medium Undercarriage

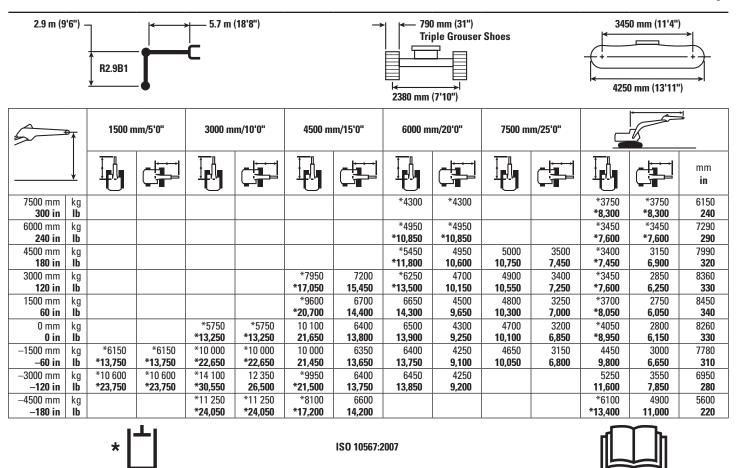


<sup>\*</sup>Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting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

### Reach Boom Lift Capacities – Counterweight: 3700 kg (8,200 lb) – with Bucket Linkages, without Bucket

Medium 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.

### **Bucket Specifications and Compatibility**

					Undercarriage			Medium		
	Counterweight					3700 kg (8,200 lb)				
		Wi	dth	Сар	acity	We	ight	Fill	Reach Boom	
	Linkage	mm	in	m³	yd³	kg	lb	%	R2.9 (9'6")	
Pin-On (No Quick Coupler)			•	•	•	•				
General Duty	В	1050	42	1.00	1.31	737	1,624	100	•	
	В	1050	42	1.16	1.52	848	1,869	100	$\Theta$	
Heavy Duty	В	1050	42	1.00	1.31	892	1,967	100	•	
	В	1200	48	1.19	1.56	928	2,046	100	$\Theta$	
Heavy Duty Spade	В	1350	54	1.40	1.83	1025	2,260	100	0	
Severe Duty	В	1200	48	1.19	1.56	1038	2,289	90	$\Theta$	
Severe Duty Spade	В	1200	48	1.20	1.57	1011	2,229	90	$\Theta$	
				N4i		-: /		kg	2425	
				IVIaxim	um load with	pin-on (payio	ad + bucket)	lb	5,346	
With Cat Pin Grabber Coupl	ler									
General Duty	В	1050	42	1.00	1.31	737	1,624	100	$\Theta$	
	В	1050	42	1.16	1.52	848	1,869	100	0	
Heavy Duty	В	1050	42	1.00	1.31	892	1,967	100	0	
	В	1200	48	1.19	1.56	928	2,046	100	0	
Heavy Duty Spade	В	1350	54	1.40	1.83	1025	2,260	100	$\Diamond$	
Severe Duty	В	1200	48	1.19	1.56	1038	2,289	90	0	
Severe Duty Spade	В	1200	48	1.20	1.57	1011	2,229	90	0	
	•			Movie	m lood with a	ounlar/navla	ad - buoks+\	kg	2006	
				iviaxiMu	m load with c	ouhiei (hayio	au + Ducket)	lb	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)
- 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         ●         1800 kg/m³ (3,000 lb/yd³)         ○         1200 kg/m³ (2,000 lb/yd³)	✓	Match	*	Working range front only	•	1800 kg/m³ (3,000 lb/yd³)	0	1200 kg/m³ (2,000 lb/yd³)
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Undercarriage		Medium
Counterweight		3700 kg (8,200 lb
Boom Type		Reach
Stick Length		R2.9 (9'6")
Hydraulic Hammers	H115 GC	✓
	H115 GC S	✓
	H115 S	✓
	H120 GC	✓
	H120 GC Side Mount	✓
	H120 GC S	✓
	H120 S	✓
	H130 GC	✓
	H130 GC S	✓
	H130 S	✓
Multi-Processors	MP318 Concrete Cutter Jaw	✓
	MP318 Demolition Jaw	✓
	MP318 Pulverizer Jaw	✓
	MP318 Shear Jaw	✓
	MP318 Universal Jaw	✓
Demolition and Sorting Grapples	G318	✓
Mobile Scrap and Demolition Shears	S3025 Flat Top	<b>√</b> *
Pulverizers	P218 Secondary Pulverizer	✓
	P318 Primary Pulverizer	✓
Compactors (Vibratory Plate)	CVP110	✓
Rotary Cutters	RC20	✓
Orange Peel Grapples	GSH420-500	•
	GSH420-600	•
	GSH420-750	•
	GSH425-750	0
	GSH520-500	•
	GSH520-600	•
	GSH520-750	0

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Attachments Offering	Guide (continued)	
Not all Attachments are a	vailable in all regions. Consult your Cat dealer for configurat	ions available in your region.
✓ Match	* Working range front only	No Match
<u>—</u>		
CAT PIN GRABBER COUPLER	ATTACHMENTS	
Undercarriage		Medium
Counterweight		3700 kg (8,200 lb)
Boom Type		Reach
Stick Length		R2.9 (9'6")
Hydraulic Hammers	H115 GC	✓
	H115 GC S	✓
	H115 S	✓
	H120 GC	<b>√</b> *
	H120 CC Side Mount	./

	H120 GC Side Mount	✓
	H120 GC S	✓
	H120 S	✓
	H130 S	✓
Multi-Processors	MP318 Concrete Cutter Jaw	
	MP318 Demolition Jaw	
	MP318 Shear Jaw	<b>√</b> *
	MP318 Universal Jaw	
Demolition and Sorting Grapples	G318	
Compactors (Vibratory Plate)	CVP110	✓
Rotary Cutters	RC20	✓

Undercarriage		Medium
Counterweight		3700 kg (8,200 lb)
Boom Type		Reach
Stick Length		R2.9 (9'6")
Hydraulic Hammers	H115 GC	✓
	H115 GC S	✓
	H115 S	✓
	H120 GC	✓
	H120 GC S	✓
	H120 S	✓
	H130 S	✓
Multi-Processors	MP318 Concrete Cutter Jaw	<b>√</b> *
	MP318 Demolition Jaw	<b>√</b> *
	MP318 Pulverizer Jaw	
	MP318 Shear Jaw	✓
	MP318 Universal Jaw	<b>√</b> *
Demolition and Sorting Grapples	G318	<b>√</b> *
Pulverizers	P218 Secondary Pulverizer	
	P318 Primary Pulverizer	
Compactors (Vibratory Plate)	CVP110	✓
Rotary Cutters	RC20	✓

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Attachments Offering Guide (continue	ed)	
Not all Attachments are available in all region	ons. Consult your Cat dealer for configura	tions available in your region.
✓ Match * W	orking range front only	No Match
HCS70 DEDICATED COUPLER ATTACHMENTS		
Undercarriage		Medium
Counterweight		3700 kg (8,200 lb)
Boom Type		Reach
Stick Length		R2.9 (9'6")
Hydraulic Hammers	H115 S	✓
	H120 GC	<b>√</b> *
	H120 S	✓
	H130 S	✓
Multi-Processors	MP318 Concrete Cutter Jaw	
	MP318 Demolition Jaw	
	MP318 Shear Jaw	<b>√</b> *
	MP318 Universal Jaw	
Demolition and Sorting Grapples	G318	
Compactors (Vibratory Plate)	CVP110	✓
Rotary Cutters	RC20	✓
HCS70/55 DEDICATED COUPLER ATTACHMENTS		
Undercarriage		Medium
Counterweight		3700 kg (8,200 lb)
Boom Type		Reach
Stick Length	11115 C	R2.9 (9'6")
Hydraulic Hammers	H115 S	<b>√</b> *
	H120 GC	
	H120 S	<b>√</b>
No tel D	H130 S	✓
Multi-Processors	MP318 Concrete Cutter Jaw	
	MP318 Demolition Jaw	<b>√</b> *
D 12 10 2 C 1	MP318 Shear Jaw	V *
Demolition and Sorting Grapples	G318	
Compactors (Vibratory Plate)	CVP110	<u> </u>
Rotary Cutters	RC20	✓
HCS70/55 DEDICATED COUPLER ATTACHMENTS		
Undercarriage		Medium
Counterweight		3700 kg (8,200 lb)
Boom Type		Reach
Mobile Scrap and Demolition Shears	S2050	✓
	S3035 Flat Top	✓

# **320 GC Standard and Optional Equipment**

### **Standard and Optional Equipment**

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	$\checkmark$	
2.9 m (9'6") Reach stick	✓	
Bucket linkage, B1-family with lifting eye	✓	
CAB		
ROPS	✓	
OPG		✓
High-resolution 203 mm (8") LCD touchscreen monitor	✓	
Auto bi-level air conditioner	✓	
Keyless push-to-start engine control	✓	
Height-adjustable console, three steps with tool	✓	
Fixed left-side console	✓	
Mechanical-suspension seat	✓	
51 mm (2") seat belt	✓	
Console mounted Bluetooth® radio with USB ports	✓	
24V DC outlet	✓	
Document storage	✓	
Overhead storage and rear storage with nets	✓	
Beverage holder	✓	
Cup holder	✓	
Openable two-piece front window	✓	
Rear window emergency exit	✓	
Radial wiper with washer	✓	
Openable steel hatch	✓	
LED dome light	✓	
Roller front sunscreen	✓	
Roller rear sunscreen		✓
Washable floor mat	✓	
Beacon ready	✓	

<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.

	Standard	Optional
CAT TECHNOLOGY		
VisionLink®	<b>√</b> 1	
VisionLink Productivity		√2
Remote Flash	✓	
ELECTRICAL SYSTEM		
1,000 CCA maintenance-free batteries (×2)	✓	
Centralized electrical disconnect switch	✓	
Programmable time-delay LED working lights	✓	
LED chassis light and Left Hand (LH) boom light – 1,800 lumens	✓	
LED chassis light, LH and Right Hand (RH) boom lights, cab lights – 1,800 lumens		✓
ENGINE		
Cat C4.4 single turbo diesel engine	✓	
Two selectable power modes	✓	
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 pre-cleaner	✓	
Electric fuel priming pump	✓	
Electric cooling fans with auto-reverse function	✓	
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 $<sup>^{\</sup>rm 2}\!\mbox{VisionLink}$  supscription required. Consult your Cat dealer for details.

# **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
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	✓	
Three button joysticks	✓	
Slider joysticks		✓
Tandem type electronic main pump	✓	
Hammer return filter circuit		✓
Basic Tool Control (one pump, one way high-pressure flow)		✓
Advanced Tool Control (two pump, one/two way high-pressure flow)		✓
Quick coupler circuit for Cat pin grabber		✓
Operating pattern (four way)		✓
Standard fluids	✓	
Multi viscous hydraulic oil	✓	
Arctic fluids (include grease, engine oil, hydraulic oil)		✓
SAFETY AND SECURITY		
Auto hammer stop	✓	
Rearview camera	✓	
Right-hand-side view mirror		✓
Right-hand-side view camera		✓
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	✓	
Lockable disconnect switch	✓	
Right hand handrail and handhold	✓	
Swing alarm		✓
Signaling/warning horn	✓	
Inspection lighting		✓

	Standard	Optional
SERVICE AND MAINTENANCE		
Scheduled Oil Sampling (S·O·S <sup>SM</sup> ) ports	✓	
Grouped location for engine oil and fuel filters	✓	
Ground-level second dipstick for engine oil	✓	
Radiator screen		✓
Side entry to service platform	✓	
Integrated vehicle health	✓	
management system		
UNDERCARRIAGE AND STRUCTURES		
Medium undercarriage	✓	
Grease lubricated track links	✓	
600 mm (24") triple grouser track shoes		✓
790 mm (31") triple grouser track shoes		✓
Center track guiding guard	✓	
Bottom guards	✓	
Swivel guard		✓
Travel motor guards	✓	
3700 kg (8,200 lb) counterweight	✓	
Tie-down points on base frame	✓	

#### **Dealer Installed Kit and Attachments**

Attachments may vary. Consult your Cat dealer for details.

#### CAB

- Lower radial wiper
- Rain protector plus cab light cover
- Polycarbonate roof hatch
- Sun visor, slider
- Laminated P5A glass front windshield
- LH/RH electrical pedal for tool control
- Armrest kit
- Dual exit rear window kit
- 75 mm (3") retractable seat belt
- Lunch box net
- Rear storage
- Tool box

#### **GUARDS**

- Swivel guard
- Side rubber bumper guard
- Operator Protective Guards
- Mesh guard full front
- · Mesh guard half front
- Full protecting vandalism guard

#### **MAINTENANCE**

· Duct ready kit

#### **SAFETY AND SECURITY**

• Bluetooth receiver

### 320 GC Environmental Declaration

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit <a href="https://www.caterpillar.com/en/company/sustainability">https://www.caterpillar.com/en/company/sustainability</a>.

#### **Engine**

- The Cat® C4.4 engine meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- 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.

#### **Air Conditioning System**

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430).
 The system contains 0.85 kg (1.9 lb) of refrigerant which has a CO<sub>2</sub> equivalent of 1.216 metric tonnes (1.340 tons).

#### **Paint**

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
- Barium < 0.01%
- Cadmium < 0.01%
- Chromium < 0.01%
- Lead < 0.01%

#### **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 operator station and cab (when not properly maintained or doors/ windows open) for extended periods or in a noisy environment.

#### **Oils and Fluids**

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

#### **Features and Technology**

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
- Advanced hydraulic systems balance power and efficiency
- Smart mode matches machine power to digging requirements automatically
- Eco mode supports reduced fuel consumption for light applications
- Extended service intervals help decrease maintenance costs
- Programmable high-efficiency cooling fans run only when needed
- The latest hydraulic oil filter provides longer life with a 3,000-hour replacement interval



# 320 GC

# Forestry Hydraulic Excavator

The Cat® 320 GC Forestry Configuration provides premium performance and operating efficiency. The Cat C4.4 engine help lower fuel consumption, and longer maintenance intervals help reduce operating costs. The Severe Duty undercarriage features an 8-roller bottom, double supported carrier rollers, and 600 mm (24") double grouser track shoes. The ROPS comfort cab is fitted with 19 mm (.75 in) polycarbonate front window and 13 mm (.50 in) polycarbonate side windows.

#### Brazil only.

#### **Efficient Performance**

- Use onboard information systems to track operating costs, including fuel consumption and daily maintenance.
- The C4.4 engine can run on biodiesel up to B20 and meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Match the excavator to the job with power modes; let Smart mode automatically match engine and hydraulic power to your processor.
- Auxiliary hydraulic options give you the versatility to use a wide range of attachments.
- Don't let the temperature stop you from working. The excavator has a standard high-ambient temperature capability of 52° C (125° F) and cold start capability of -32° C (-25° F).

#### **Operating Cost**

- Do all daily maintenance at ground level.
- Check engine oil level quickly and safely with the ground-level engine oil dipstick; fill and check engine oil on top of the machine with a conveniently located second dipstick.
- Fuel filters are synchronized to be changed at 1,000 hours.
- Expect the latest air intake filter with pre-cleaner to last up to 1,000 hours.
- The hydraulic oil filter provides improved filtration performance, antidrain valves to keep oil clean when the filter is replaced, and longer life with a 3,000 hour replacement interval.
- High-efficiency cooling fans run only when needed; you can program intervals so they automatically reverse to keep cores clean without interrupting your work.
- S-O-S ports are on ground level, simplifying maintenance and allowing for quick, easy extraction of fluid samples for analysis.
- Remote Troubleshoot is a mobile application that allows your Cat dealer to perform diagnostic testing on your connected machine remotely to help ensure that issues are resolved quickly and with less downtime.
- Remote Flash is a mobile application that allows you to update onboard software without a technician being present, allowing you to initiate software updates when convenient, increasing your overall operating efficiency.
- VisionLink® provides actionable data insights for all assets regardless
  of fleet size or equipment manufacturer.\* Review equipment data from
  your desktop or mobile device to maximize uptime and optimize assets.
  Dashboards provide information such as hours, miles, location, idle time,
  and fuel utilization. Make informed decisions that lower costs, simplify
  maintenance, and improve safety and security on your jobsite.

#### \*Data field availability can vary by equipment manufacturer

#### **Comfort and Simplicity**

- Work effectively in the Comfort cab with automatic climate control.
- Start the engine with a push button; use a Bluetooth key fob, or the Operator ID passcode.
- Program your power mode and joystick preferences using Operator ID; the excavator will remember what you set each time you go to work.
- Navigate quickly on the standard high-resolution 203 mm (8") touchscreen monitor.
- Enjoy wide spacing between consoles for a more comfortable environment.
- Stow your gear with plenty of in-cab storage behind and beneath the seat, overhead, and in the consoles.
- Use the standard radio's USB ports and Bluetooth technology to connect personal devices and make hands-free calls.
- Not sure how a function works or how to maintain the excavator? Always have the operator's manual at your fingertips in the touchscreen monitor.

#### Safety

- Access 100 percent of daily maintenance points from ground level no need for you to climb on top of the excavator.
- The cab meets ISO 12117-2:2008 Rollover Protective Structure (ROPS) and ISO 8084:2003 Operator Protective Structure (OPS) standards.
- 19 mm (3/4") front and 13 mm (1/2") side windows are made of strong polycarbonate plastic
- Enjoy great visibility to the stem, in each swing direction, and behind you with the help of smaller cab pillars, larger windows, and a flat engine hood design.
- The standard hydraulic lockout lever isolates all hydraulic and travel functions in the lowered position.
- Ground-level shutoff switch stops all fuel to the engine when activated and shuts down the machine.
- A rearview camera is standard.
- The right-hand service platform design provides easy, safe, and quick access to upper service platform; the service platform steps use antiskid punch plate to prevent slipping.

Engine		
Engine Model	Cat® C4.4	
Net Power		
ISO 9249	107 kW	143 hp
ISO 9249 (DIN)	145 hp (metr	ic)
Engine Power		
ISO 14396	108 kW	145 hp
ISO 14396 (DIN)	147 hp (metr	ic)
Bore	105 mm	4 in
Stroke	127 mm	5 in
Displacement	4.4 L	269 in <sup>2</sup>
Biodiesel Capability	Up to B20 <sup>(1)</sup>	

- Meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- 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.
- (1) 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 (hydrotreated 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.

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

Swing Mechanism		
Swing Speed	11.2 rpm	
Maximum Swing Torque	74.4 kN·m	54,900 lbf·ft
Mainhte		

vveights		
Operating Weight	21 000 kg	46,300 lb
operating weight	<b>2</b> 1 000 mg	.0,20010

• Long undercarriage, HD Reach boom, HD R2.9 (9'6") stick, 600 mm (24") double grouser shoes, and 3700 kg (8,200 lb) counterweight.

Track		
Standard 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		
Gradeability	35°/70%	
Maximum Travel Speed	5.7 km/h	3.5 mph
Maximum Drawbar Pull	206 kN	46,300 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	5,100 psi
Maximum Pressure – Equipment – Lift Mode	38 000 kPa	5,500 psi
Maximum Pressure – Travel	34 300 kPa	5,000 psi
Maximum Pressure – Swing	25 000 kPa	4,000 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	91.1 gal
Cooling System	25 L	6.6 gal
Engine Oil	15 L	4.0 gal
Swing Drive	5.5 L	1.5 gal
Final Drive (each)	5 L	1.3 gal
Hydraulic System (including tank)	234 L	61.8 gal
Hydraulic Tank	115 L	30.4 gal

Standards	
Brakes	ISO 10265:2008
Operator Protective Structure (OPS)	ISO 8084:2003
Cab/ROPS	ISO 12117-2:2008
Cab/OPG (optional)	ISO 10262:1998 Level II

Sound Performance		
ISO 6395:2008 (external)	99 dB(A)	
ISO 6396:2008 (inside cab)	70 dR(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") Double Grouser Shoes			mm (24") rouser Shoes
_	Weight	Ground Pressure	Weight	Ground Pressure
Base Machine Configurations	kg (lb)	kPa (psi)	kg (lb)	kPa (psi)
Base Frame with Track Rollers and Carrier Rollers				
3700 kg (8,200 lb) Counterweight + Long Undercarriage Base Mach	ine			
HD Reach Boom + HD R2.9 (9'6") Stick	21 000 (46,300)	43.7 (6.3)	20 700 (46,300)	43.1 (6.2)
HD Straight Boom + HD R2.9 (9'6") Stick for Harvester	21 200 (46.800)	44.1 (6.4)	20 900 (46,800)	43.5 (6.3)

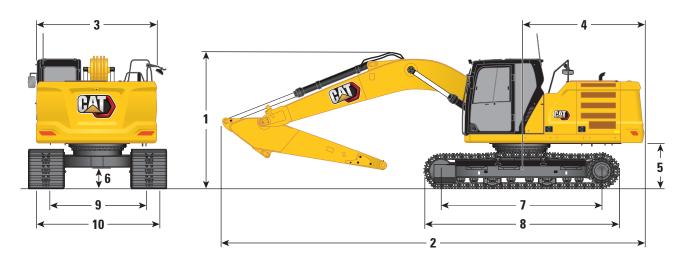
All operating weights include a 90% fuel tank with 75 kg (165 lb) operator.

### **Major Component Weights**

	kg	lb
Base Machine (with 3700 kg [8,200 lb] counterweight, standard swing frame, SD base frame with SD track rollers and SD carrier rollers for long undercarriage, without boom cylinder – does not include 90% fuel and 75 kg [165 lb] operator)	14 460	31,900
Track Shoes:		
600 mm (24") Width, 13 mm (0.51") Thick, Double Grouser Track Shoes	3080	6,800
600 mm (24") Width, 10 mm (0.39") Thick, Triple Grouser Track Shoes	2820	6,200
Two Boom Cylinders	350	760
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	310	690
Counterweight:		
3700 kg (8,200 lb) Counterweight	3700	8,200
Swing Frame:		
Standard Swing Frame	1890	4,170
Undercarriage:		
SD Base Frame with SD Track Rollers and SD Carrier Rollers for Long Undercarriage	5150	11,350
Booms (including lines, pins, stick cylinder):		
HD Reach Boom 5.7 m (18'8")	2020	4,450
HD Straight Boom 5.7 m (18'8") for Harvester	2080	4,590
HD Straight Boom 5.7 m (18'8") for Grapple	2020	4,450
Stick (including lines, pins, bucket cylinder, bucket linkage):		
HD Reach Stick R2.9B1 (9'6")	770	1,700
HD Reach Stick R2.9B1 (9'6") for Harvester	930	2,050
HD Reach Stick R2.9B1 (9'6") for Grapple	920	2,030
OPG	130	280

### **Dimensions**

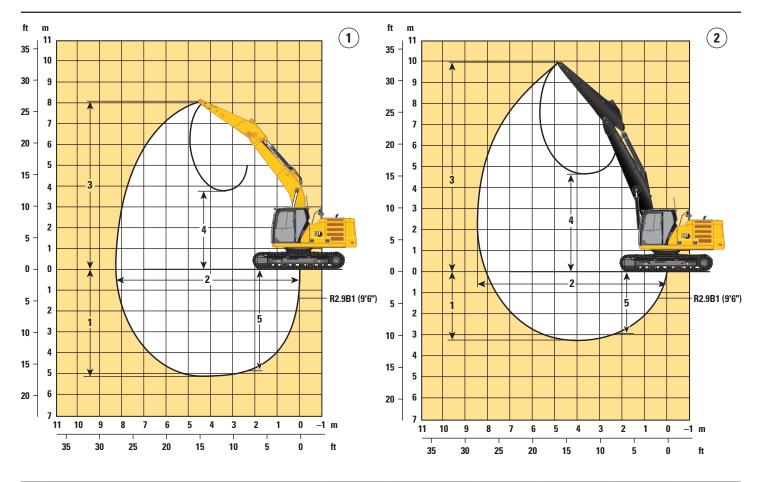
All dimensions are approximate and may vary depending on bucket selection.



Boom Options		HD Reach Boom HD Straight Boom 5.7 m (18'8") 5.7 m (18'8")				
Stick Options		HD Reach Stick R2.9B1 (9'6")		HD Re R2.9B1 (9'6") Harvester		(9'6") ple
1 Machine Height:						
Top of Cab Height	2970 mm	9'9"	2970 mm	9'9"	2970 mm	9'9"
Top of OPG Height	3120 mm	10'3"	3120 mm	10'3"	3120 mm	10'3"
Handrail Height	2970 mm	9'9"	2970 mm	9'9"	2970 mm	9'9"
With Boom/Stick Installed	2920 mm	9'7"	2590 mm	8'6"	2590 mm	8'6"
With Boom Installed	2480 mm	8'2"	2180 mm	7'2"	2180 mm	7'2"
2 Machine Length:						
With Boom/Stick Installed	9500 mm	31'2"	9550 mm	31'4"	9550 mm	31'4"
With Boom Installed	8460 mm	27'9"	8370 mm	27'6"	8370 mm	27'6"
<b>3</b> Upper Frame Width	2780 mm	9'1"	2780 mm	9'1"	2780 mm	9'1"
4 Tail Swing Radius	2830 mm	9'3"	2830 mm	9'3"	2830 mm	9'3"
<b>5</b> Counterweight Clearance	1050 mm	3'5"	1050 mm	3'5"	1050 mm	3'5"
<b>6</b> Ground Clearance	465 mm	1'5"	465 mm	1'5"	465 mm	1'5"
7 Length to Center of Rollers	3650 mm	12'0"	3650 mm	12'0"	3650 mm	12'0"
8 Track Length	4450 mm	14'7"	4450 mm	14'7"	4450 mm	14'7"
<b>9</b> Track Gauge – Extended	2380 mm	7'10"	2380 mm	7'10"	2380 mm	7'10"
<b>10</b> Undercarriage Width:						
600 mm (24") Shoes	2980 mm	9'9"	2980 mm	9'9"	2980 mm	9'9"

### **Working Ranges**

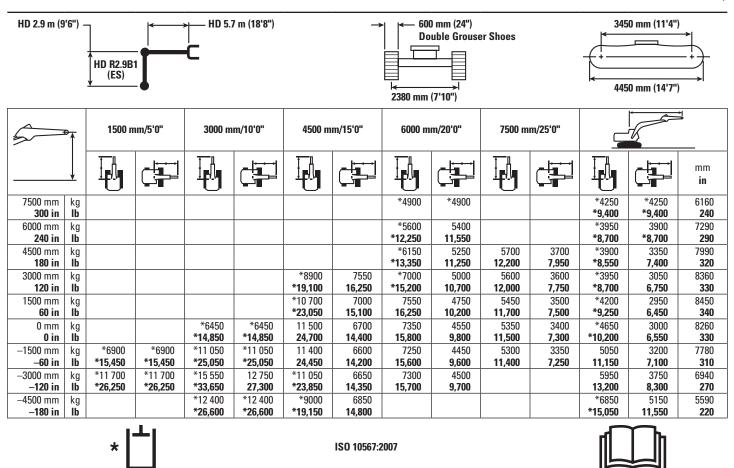
All dimensions are approximate and may vary depending on bucket selection.



Boom Options	HD Reach Boom 5.7 m (18'8")			HD Straight Boom 5.7 m (18'8")		2	
Stick Options	HD Reach Stick R2.9B1 (9'6")		HD Rea R2.9B1 (9'6") Harvester		ach Stick R2.9B1 (9'6") Grapple		
1 Maximum Digging Depth	5140 mm	16'10"	3260 mm	10'8"	3260 mm	10'8"	
2 Maximum Reach at Ground Line	8260 mm	27'1"	8440 mm	27'8"	8440 mm	27'8"	
3 Maximum Cutting Height	8070 mm	26'6"	9980 mm	32'9"	9980 mm	32'9"	
4 Minimum Loading Height	3750 mm	12'4"	4770 mm	15'8"	4770 mm	15'8"	
5 Maximum Depth Cut for 2440 mm (8 ft) Level Bottom	4800 mm	15'9"	2990 mm	9'10"	2990 mm	9'10"	

#### HD Reach Boom Lift Capacities – Counterweight: 3700 kg (8,200 lb) – with Bucket Linkages, without Bucket

**General Forestry** 

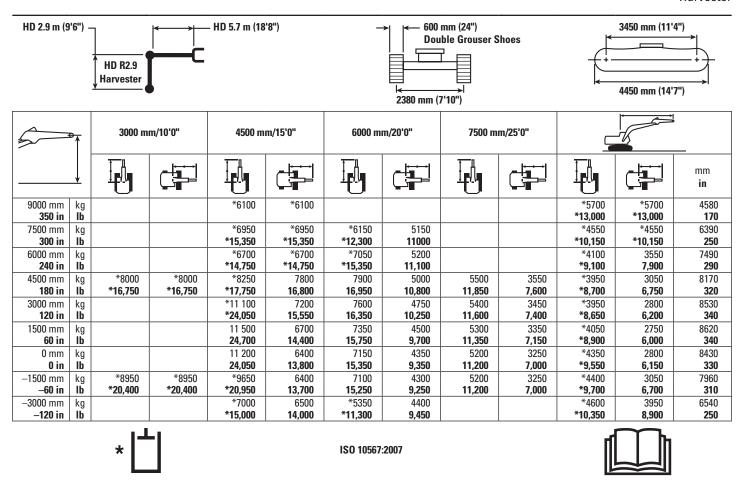


<sup>\*</sup>Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting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

#### HD Straight Boom Lift Capacities – Counterweight: 3700 kg (8,200 lb) – with Bucket Linkages, without Bucket

Harvester

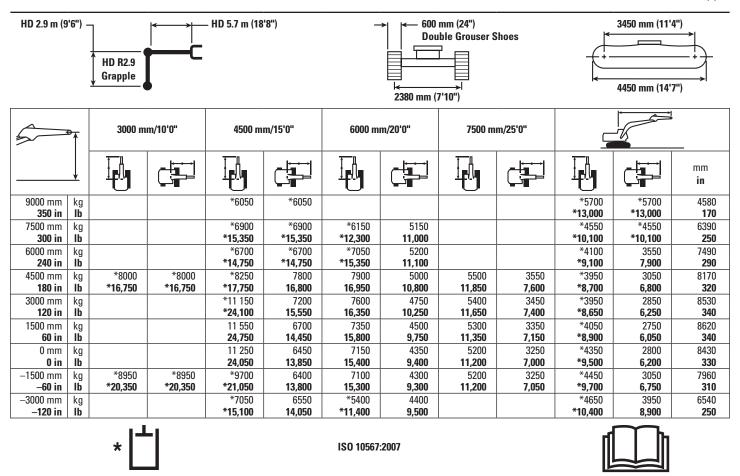


<sup>\*</sup>Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting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

#### HD Straight Boom Lift Capacities – Counterweight: 3700 kg (8,200 lb) – with Bucket Linkages, without Bucket

Grapple



<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.

# **320 GC Forestry 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") HD Reach boom		$\checkmark$
5.7 m (18'8") HD Straight boom		✓
2.9 m (9'6") HD Reach stick		✓
2.9 m (9'6") HD Stick for Harvester		✓
2.9 m (9'6") HD Stick for Grapple		✓
Bucket linkage, B1-family with lifting eye		✓
CAB		
ROPS	✓	
OPG		✓
19 mm (3/4") polycarbonate front window	✓	
13 mm (1/2") polycarbonate side and rear window	✓	
High-resolution 203 mm (8") LCD touchscreen 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	✓	
Monitor integrated Bluetooth radio with USB/Aux Ports	✓	
Heated air-suspension seat	✓	
Slider joysticks	✓	
51 mm (2") seat belt	✓	
Fixed left-side console	✓	
12V DC outlets	✓	
Document storage	✓	
Cup and bottle holders	✓	
Upper parallel wiper with washer	✓	
Openable steel hatch	✓	
LED dome and lower lights	✓	
Roller front sunscreen	✓	
Roller rear sunscreen		✓
Washable floor mat	✓	
Beacon ready	✓	

<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.

	Standard	Optional
CAT TECHNOLOGY		
VisionLink	<b>√</b> 1	
VisionLink Productivity		✓2
Remote Flash	✓	
ELECTRICAL SYSTEM		
1,000 CCA maintenance-free batteries (×2)	✓	
Centralized electrical disconnect switch	✓	
LED chassis light	✓	
LED, left-side and right-side boom light		✓
LED cab light		✓
Premium surround lighting package		✓
ENGINE		
Cat C4.4 single turbo diesel engine	✓	
Two selectable power modes	✓	
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	✓	
-32° C (-25° F) cold start capability	✓	
Double element air filter with integrated pre-cleaner	✓	
Electric fuel priming pump	✓	
Electric cooling fans with autoreverse function	✓	

 $(continued\ on\ next\ page)$ 

<sup>&</sup>lt;sup>2</sup>VisionLink supscription required. Consult your Cat dealer for details.

# **320 GC Forestry 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		
Tool Control 25 Hydraulic Package for Forestry (two pumps, one/two way high pressure flow)	✓	
Electronic main control valve	✓	
Auto warm up	✓	
Auto two-speed travel	✓	
Boom and stick drift reduction valve	✓	
Element type main hydraulic filter	✓	
Tandem type electronic main pump	✓	
Quick coupler circuit for Cat pin grabber		✓
Operating pattern (four way)		✓
Standard fluids	✓	
Arctic fluids (include grease, engine oil, hydraulic oil)		✓
SAFETY AND SECURITY		
Rearview camera	✓	
Right-hand-side view mirror		✓
Right-hand-side view camera		✓
Right-hand-side handrail with hand hold	✓	
Neutral lever (lock out) for all controls	✓	
Anti-skid plate and countersunk bolts on service platform	✓	
Ground-level secondary engine shutoff switch	✓	
Lockable disconnect switch	✓	
Travel alarm		✓
Inspection light		✓
Signaling/warning horn	✓	

	Standard	Optional
SERVICE AND MAINTENANCE		
Side entry to service platform	✓	
Grouped engine oil and fuel filters	✓	
S·O·S ports	✓	
Ground-level second dipstick for engine oil	✓	
QuickEvac™ maintenance ready		✓
Radiator screen		✓
Integrated vehicle health	✓	
management system		
UNDERCARRIAGE AND STRUCTURES		
Long undercarriage	✓	
Grease lubricated track link	✓	
600 mm (24") double grouser track shoes	✓	
600 mm (24") triple grouser track shoes		✓
Full-length track guiding guard	✓	
HD travel motor guards	✓	
HD bottom guard	✓	
Swivel guard		✓
OPG guard		✓
3700 kg (8,160 lb) counterweight	✓	
Tie-down points on base frame	✓	



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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AEXQ3970-00 (10-2024) Build Number: 07H (S Am [except Chile, Colombia])

