



# Cat<sup>®</sup> 320

## Hydraulic Excavator

***The Cat<sup>®</sup> 320 excavator brings premium performance with simple-to-use technologies like Cat GRADE with 2D, Grade Assist, and Payload – all standard equipment from the factory to boost your operator efficiencies up to 45 percent. Combine these features with a new cab, longer maintenance intervals that lower your maintenance costs up to 15 percent, and a power system that reduces fuel consumption by up to 20 percent and you have a low-cost-per-unit-of-production excavator that's perfect for medium- to heavy-duty applications.***

***Not all features available in all regions. Consult your Cat dealer for specific configurations available in your region.***

### High Performance with Lower Fuel Consumption

- Use up to 20 percent less fuel than the Cat 320D2 excavator.
- Increase operating efficiency up to 45 percent with standard Cat Connect technologies that lower operator fatigue and your operating costs, including fuel consumption and daily maintenance.
- The C7.1 ACERT<sup>™</sup> engine can run on biodiesel up to B20 and meets U.S. EPA Tier 3/EU Stage IIIA/China Nonroad Stage III/Brazil Mar-1 equivalent emission standards.
- The advanced hydraulic system provides the optimum balance of power and efficiency while giving you the control you need for precise digging requirements.
- Match the excavator to the job with power modes; let Smart mode automatically match engine and hydraulic power to your digging conditions.
- Auxiliary hydraulic options give you the versatility to use a wide range of Cat attachments.
- Don't let the temperature stop you from working. The excavator has a standard high-ambient temperature capability of 52° C and cold start capability of -18° C. An optional -32° C cold start package is available.

### Boost Efficiency and Boost Productivity with Integrated Cat Connect Technologies

- Boost productivity up to 45 percent versus traditional grading with standard Cat GRADE with 2D and Grade Assist systems – includes indicate-only and laser capability.
  - Dig with guidance to depth, slope, and horizontal distance to grade.
  - The 2D system is upgradable to Cat GRADE with Advanced 2D or Cat GRADE with 3D.

- Standard Grade Assist:
  - Stay on grade – simply and effortlessly – with single-lever digging.
  - Set your desired bucket angle and let Bucket Assist automatically maintain the angle in sloping, leveling, fine grading, and trenching applications for easy, accurate, and fast jobs.
  - Keep the tracks on ground in lifting and hard digging with Boom Assist.
  - Automatically stop excavator swing at operator-defined set points in truck loading and trenching applications with Swing Assist, which will help you use less effort and consume less fuel.
- Standard Cat PAYLOAD on-board weighing system:
  - Achieve precise load targets and increase loading efficiency with on-the-go weighing and real-time estimates of your payload without swinging.
  - Track your daily productivity such as truck target weights and load/cycle counts.
  - Calibration can be performed in a matter of minutes.
  - Combine the Payload upgrade with VisionLink<sup>®</sup> and remotely manage your production targets.
- Upgrade to optional Cat GRADE with Advanced 2D upgrade:
  - Create and edit grade designs with ease on a second high-resolution 254 mm touchscreen monitor.
- Upgrade to optional Cat GRADE with 3D upgrade:
  - Create and edit grade designs with ease and see the front linkage's full range of motion on a second high-resolution 254 mm touchscreen monitor.
  - Know the excavator's absolute position relative to GPS and GLONASS systems.
  - The machine automatically compensates for excavator pitch and roll caused by sloping ground conditions.
- Standard Product Link<sup>™</sup> provides location, machine hours, fuel usage, productivity, idle time, diagnostic codes, and other machine data on demand through the VisionLink online interface, helping you improve job site efficiency with lowering operating costs.



# Cat® 320 Hydraulic Excavator

## Work in Comfort in the All-New Cab

- Choose between Comfort and Deluxe cabs – both with automatic climate control.
- Sit in wide seats that adjust for all size operators; stay warm with the Deluxe heated seat.
- Enjoy wide spacing between consoles for a more comfortable environment.
- Get in and out of the cab easier using the tip-up left console (in Deluxe cab only).
- Advanced viscous mounts reduce cab vibration up to 50 percent over previous excavator models.
- Control the excavator comfortably with easy-to-reach controls all located in front of you.
- Stow your gear with plenty of in-cab storage behind and beneath the seat, overhead, and in the consoles. A cup holder, document holder, bottle holder, and coat hook are also provided.
- Use the standard radio's USB ports and Bluetooth® technology to connect personal devices and make hands-free calls.

## Simple To Operate

- Start the engine with a push button; use a Bluetooth key fob, smartphone app, or the Operator ID passcode.
- Program each joystick button, including response and pattern, using Operator ID; the machine will remember what you set each time you go to work.
- Navigate quickly on the standard high-resolution 203 mm touchscreen monitor, or with the optional 254 mm touchscreen monitor, or with the aid of the jog dial control.
- A second 254 mm monitor is available for the advanced grade control.
- 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.

## Maintenance

- Expect up to 15 percent less maintenance cost than the 320D2. (Savings calculated over 12,000 machine hours.)
- Do all daily maintenance at ground level.
- Check engine oil level quickly and safely with the new ground-level engine oil dipstick; fill and check engine oil on top of the machine with a conveniently located second dipstick.

- Track your excavator's filter life and maintenance intervals via the in-cab monitor.
- Change all fuel filters at a synchronized 500 hours.
- Expect the new air intake filter with precleaner to last up to 1,000 hours – a 100 percent increase over the previous filter.
- The new hydraulic oil filter provides improved filtration performance, anti-drain valves to keep oil clean when the filter is replaced, and longer life with a 3,000 hour replacement interval – 50 percent longer than previous filter designs.
- The new high-efficiency electric cooling fans only run when needed and reverse to keep cores free from debris.
- S-O-S<sup>SM</sup> ports are on ground level, simplifying maintenance and allowing for quick, easy extraction of fluid samples for analysis.

## Safety

- Work safely under structures or near traffic with the standard 2D E-fence feature integrated right out of the factory, which prevents any part of the excavator from moving outside operator-defined set points to avoid hazards and job site accidents.
- Access 100 percent of daily maintenance points from ground level – no need for you to climb on top of the excavator.
- The standard ROPS cab meets ISO 12117-2:2008 requirements.
- Enjoy great visibility into the trench, 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 shut-off switch stops all fuel to the engine when activated and shuts down the machine.
- A rearview camera is standard. Upgrade to 360° visibility and you'll easily see objects and personnel around the excavator in a single view.
- The new right-hand service platform design provides easy, safe, and quick access to upper service platform; the service platform steps use anti-skid punch plate to prevent slipping.
- The handrails comply with ISO 2867:2011 requirements.
- The lower frame meets ISO 15818:2017 lifting and tie-down requirements.

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>CAB</b>			<b>BOOM AND STICKS</b>		
ROPS, standard sound suppression	✓		5.7 m HD reach boom, 2.9 m HD reach stick	✓	
Mechanically adjustable seat	✓		8.85 m SLR boom, 6.28 m SLR stick		✓
Air-adjustable seat with heat (Deluxe only)		✓	<b>UNDERCARRIAGE AND STRUCTURES</b>		
High-resolution 203 mm LCD touchscreen monitor	✓		600 mm double grouser shoes		✓
High-resolution 254 mm LCD touchscreen monitor		✓	600 mm triple grouser shoes	✓	
<b>CAT CONNECT TECHNOLOGY</b>			Tie-down points on base frame	✓	
Cat Product Link	✓		3700 kg counterweight	✓	
Cat GRADE with 2D	✓		4200 kg counterweight for HD base frame		✓
Cat GRADE with Advanced 2D (not available on SLR)		✓	4700 kg counterweight for SLR boom and stick		✓
Cat GRADE with 3D (not available on SLR)		✓	<b>ELECTRICAL SYSTEM</b>		
Cat GRADE with Assist	✓		Two 1,000 CCA maintenance-free batteries	✓	
Cat PAYLOAD	✓		Four 1,000 CCA maintenance-free batteries		✓
<b>ENGINE</b>			Programmable time-delay LED working lights	✓	
Three selectable power modes	✓		LED chassis light, left-hand/right-hand boom lights, cab lights	✓	
One-touch low idle with auto engine speed control	✓		<b>SERVICE AND MAINTENANCE</b>		
Auto engine idle shutdown	✓		Sampling ports for Scheduled Oil Sampling (S-O-S)	✓	
52° C high-ambient cooling capacity	✓		Ground-level and platform-level engine oil dipsticks	✓	
– 18° C cold start capability	✓		Remote flash	✓	
– 32° C cold start capability		✓	<b>SAFETY AND SECURITY</b>		
Double element air filter with integrated precleaner	✓		Rearview camera	✓	
Reversing electric cooling fans	✓		Right-hand mirror	✓	
Biodiesel capability up to B20	✓		360° visibility		✓
<b>HYDRAULIC SYSTEM</b>			Ground-level engine shutoff switch	✓	
Boom and stick regeneration circuits	✓		Right-hand handrail and hand hold	✓	
Auto hydraulic warm up	✓		Signaling/warning horn	✓	
Auto two-speed travel	✓				
Boom and stick drift reduction valve	✓				
Hammer return filter circuit		✓			
Slider joysticks	✓				
Combined flow/high-pressure auxiliary circuit		✓			
Quick coupler circuit for Cat Pin Grabber		✓			

# Cat® 320 Hydraulic Excavator

## Technical Specifications

Engine	
Engine Model	Cat C7.1 ACERT
Gross Power – ISO 14396/SAE J1995	118 kW
Net Power – ISO 9249/SAE J1349	117 kW
Engine RPM	
Operation	1,650 rpm
Travel	1,800 rpm
Bore	105 mm
Stroke	135 mm
Displacement	7.01 L

Hydraulic System	
Main System – Maximum Flow (Implement)	429 L/min
Maximum Pressure – Equipment	35 000 kPa
Maximum Pressure – Equipment – Heavy Lift Mode	38 000 kPa
Maximum Pressure – Travel	34 300 kPa
Maximum Pressure – Swing	26 800 kPa

Machine Weight	
Operating Weight	22 000 kg
• 5.7 m HD reach boom, 2.9 HD reach stick, HD 1.0 m³ bucket, 600 mm shoes.	

Service Refill Capacities	
Fuel Tank	345 L
Cooling System	32 L
Engine Oil	25 L
Swing Drive (each)	7 L
Final Drive (each)	6 L
Hydraulic System (including tank)	240 L
Hydraulic Tank	128 L

Dimensions	
<b>Boom</b>	<b>Reach 5.7 m</b>
<b>Stick</b>	<b>Reach 2.9 m</b>
<b>Bucket</b>	<b>1.19 m³</b>
Shipping Height (top of cab)	2960 mm
Handrail Height	2954 mm
Shipping Length	9531 mm
Tail Swing Radius	2833 mm
Length to Center of Rollers	3650 mm
Ground Clearance	468 mm
Track Gauge	2380 mm
Transport Width – 790 mm Shoes	3170 mm
Counterweight Clearance	1048 mm

Working Ranges and Forces	
<b>Boom</b>	<b>Reach 5.7 m</b>
<b>Stick</b>	<b>Reach 2.9 m</b>
<b>Bucket</b>	<b>1.19 m³</b>
Maximum Digging Depth	6720 mm
Maximum Reach at Ground Level	9860 mm
Maximum Cutting Height	9370 mm
Maximum Loading Height	6490 mm
Minimum Loading Height	2170 mm
Maximum Depth Cut for 2440 mm Level Bottom	6550 mm
Maximum Vertical Wall Digging Depth	5190 mm
Bucket Digging Force (ISO)	150 kN
Stick Digging Force (ISO)	106 kN



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