



Cat[®] 320

Hydraulic Excavator

The Cat[®] 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 20 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 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 (125° F) and cold start capability of -18° C (0° F). An optional -32° C (-25° F) 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. You can set up to four different target depth and slope offsets to help save time and money. When the job calls for a different offset, quickly switch through the monitor and get to work.
 - 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[®] 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 (10 in) 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 (10 in) touchscreen monitor.
 - Use the excavator's onboard cell technology to quickly connect to 3D services like Trimble Connected Community or Virtual Reference Station.
 - 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.
 - Antennas have theft-prevention bolts; a special tool makes them easy for the owner to remove at the end of a shift.



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- Remote Services:
 - Remote troubleshoot connects you to a dealer service pro to help solve your problem and quickly get you to work.
 - Remote flash works around your schedule to ensure your machine's software is up to date for optimal performance.
- Standard Product Link™ 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.

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 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 in) touchscreen monitor, or with the optional 254 mm (10 in) touchscreen monitor, or with the aid of the jog dial control.
- A second 254 mm (10 in) 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.
- Find the tool you need – even if it's hidden beneath overgrowth or debris. The excavator's onboard Bluetooth reader can search for any work tool equipped with Cat asset tracking devices up to a range of 60 meters (200 feet).

Maintenance

- Expect up to 20 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.
- Fuel filters are synchronized to be changed at 1,000 hours – double the interval from the previous filters.
- 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.
- 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-SSM ports are on ground level, simplifying maintenance and allowing for quick, easy extraction of fluid samples for analysis.

Safety

- Lift Assist helps you avoid tipping. With visual and auditory alerts, you'll know if your load is within the excavator's safe working range limits.
- The standard 2D E-fence feature integrated right out of the factory prevents the excavator from moving outside operator defined set points.
- 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, and a right-side-view camera is optional. 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.

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
CAB					
ROPS, standard sound suppression	✓				
Mechanically adjustable seat	✓				
Air-adjustable seat with heat (Deluxe only)		✓			
High-resolution 203 mm (8 in) LCD touchscreen monitor	✓				
High-resolution 254 mm (10 in) LCD touchscreen monitor		✓			
CAT CONNECT TECHNOLOGY					
Cat Product Link	✓				
Cat GRADE with 2D	✓				
Cat GRADE with Advanced 2D (not available on SLR)		✓			
Cat GRADE with 3D (not available on SLR)		✓			
Cat GRADE with Assist	✓				
Cat PAYLOAD	✓				
2D E-fence	✓				
Remote Flash capability	✓				
Remote Troubleshoot capability	✓				
ENGINE					
Three selectable power modes	✓				
One-touch low idle with auto engine speed control	✓				
Auto engine idle shutdown	✓				
52° C (125° F) high-ambient cooling capacity	✓				
-18° C (0° F) cold start capability	✓				
-32° C (-25° F) cold start capability		✓			
Double element air filter with integrated precleaner	✓				
Reversing electric cooling fans	✓				
Biodiesel capability up to B20	✓				
HYDRAULIC SYSTEM					
Boom and stick regeneration circuits	✓				
Auto hydraulic warm up	✓				
Auto two-speed travel	✓				
Boom and stick drift reduction valve	✓				
Hammer return filter circuit		✓			
Slider joysticks	✓				
Tool Control (two pump, one/two way high-pressure flow)		✓			
Basic Tool Control (one pump, one way high-pressure flow)		✓			
Quick coupler circuit		✓			
BOOM AND STICKS					
5.7 m (18'8") HD reach boom, 2.9 m (9'6") HD reach stick	✓				
5.7 m (18'8") HD reach boom, 2.5 m (8'2") HD reach stick		✓			
8.85 m (29'0") SLR boom, 6.28 m (20'7") SLR stick		✓			
UNDERCARRIAGE AND STRUCTURES					
600 mm (24") double grouser shoes					✓
600 mm (24") triple grouser shoes					✓
700 mm (28") triple grouser shoes					✓
790 mm (31") triple grouser shoes					✓
Tie-down points on base frame	✓				
3700 kg (8,157 lb) counterweight	✓				
4200 kg (9,300 lb) counterweight for HD base frame					✓
4700 kg (10,400 lb) counterweight for SLR boom and stick					✓
ELECTRICAL SYSTEM					
Two 1,000 CCA maintenance-free batteries	✓				
Four 1,000 CCA maintenance-free batteries					✓
Programmable time-delay LED working lights	✓				
LED chassis light, left-hand/right-hand boom lights, cab lights	✓				
SERVICE AND MAINTENANCE					
Sampling ports for Scheduled Oil Sampling (S.O.S)	✓				
Ground-level and platform-level engine oil dipsticks	✓				
SAFETY AND SECURITY					
Rearview camera	✓				
Right-hand mirror	✓				
Right-side-view camera					✓
360° visibility					✓
Lift Assist	✓				
Cat asset tracker	✓				
Ground-level engine shutoff switch	✓				
Right-hand handrail and hand hold	✓				
Signaling/warning horn	✓				

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Technical Specifications

Engine		
Engine Model	Cat C7.1	
Engine Power – ISO 9249	117 kW	157 hp
Engine Power – ISO 14396	118 kW	158 hp
Bore	105 mm	4 in
Stroke	135 mm	5 in
Displacement	7.01 L	428 in ³

Hydraulic System		
Main System – Maximum Flow (Implement)	429 L/min	113 gal/min
Maximum Pressure – Equipment	35 000 kPa	5,075 psi
Maximum Pressure – Equipment – Heavy Lift Mode	38 000 kPa	5,510 psi
Maximum Pressure – Travel	34 300 kPa	4,974 psi
Maximum Pressure – Swing	26 800 kPa	3,886 psi

Machine Weight		
Operating Weight	22 400 kg	49,400 lb
• 5.7 m (18'8") HD reach boom, 2.9 m (9'6") HD reach stick, HD 1.19 m ³ (1.56 yd ³) bucket, 600 mm (24") triple grouser shoes.		

Service Refill Capacities		
Fuel Tank	345 L	86.6 gal
Cooling System	25 L	6.6 gal
Engine Oil	25 L	6.6 gal
Swing Drive (each)	5 L	1.3 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

Dimensions		
Boom	Reach 5.7 m (18'8")	
Stick	Reach 2.9 m (9'6")	
Bucket	1.19 m³ (1.56 yd³)	
Shipping Height (top of cab)	2960 mm	9'9"
Handrail Height	2950 mm	9'9"
Shipping Length	9530 mm	31'3"
Tail Swing Radius	2830 mm	9'4"
Track Length	4450 mm	14'7"
Length to Center of Rollers	3650 mm	12'0"
Ground Clearance	470 mm	1'6"
Track Gauge	2380 mm	7'9"
Transport Width – 600 mm (24") Shoes	2980 mm	9'9"
Counterweight Clearance	1050 mm	3'5"

Working Ranges and Forces		
Boom	Reach 5.7 m (18'8")	
Stick	Reach 2.9 m (9'6")	
Bucket	1.19 m³ (1.56 yd³)	
Maximum Digging Depth	6720 mm	22'1"
Maximum Reach at Ground Level	9860 mm	32'4"
Maximum Cutting Height	9370 mm	30'9"
Maximum Loading Height	6490 mm	21'4"
Minimum Loading Height	2170 mm	7'1"
Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6550 mm	21'6"
Maximum Vertical Wall Digging Depth	5190 mm	17'0"
Bucket Digging Force (ISO)	150 kN	33,811 lbf
Stick Digging Force (ISO)	106 kN	23,911 lbf



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