



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 15 percent, and a power system that reduces fuel consumption by up to 25 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 25 percent less fuel than the Cat 320F 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 C4.4 ACERT™ engine can run on biodiesel up to B20 and meets U.S. EPA Tier 4 Final and EU Stage IV emission standards with an aftertreatment system that requires no maintenance or downtime.
- 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 digging conditions.
- Auxiliary hydraulic options give you the versatility to use a wide range of Cat attachments.
- Available SmartBoom™ lets the boom freely travel up and down without using any pump flow so operators can focus on stick and bucket work. The benefits are reduced operator stress and reduced fuel consumption.
- Don't let the temperature stop you from working. The excavator has a standard ambient temperature capability of 46° C (115° F) and optional high-ambient capability of 52° C (125° F). Standard cold start capability is -32° C (-25° F).

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 system – 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 Payload with VisionLink[®] and remotely manage your production targets.
- Upgrade to optional Cat GRADE with Advanced 2D:
 - 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:
 - Create and edit designs with ease and see the front linkage's full range of motion on a second high-resolution 254 mm (10 in) touchscreen monitor.
 - Know the excavator's exact position relative to GPS and GLONASS systems.
 - The machine automatically compensates for excavator pitch and roll caused by sloping ground conditions.
- Standard Product Link™ provides location, machine hours, fuel usage, productivity, idle time, diagnostic codes, and other machine data on demand through VisionLink online interface, helping you improve job site efficiency with lower 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 (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 beneath and behind 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 unique Operator ID function.
- Program each joystick button, including response and pattern, using Operator ID; it will also remember climate control fan and radio settings.
- 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.

Maintenance

- Expect up to 15 percent less maintenance cost than the 320E. (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.
- Do no required maintenance on the Cat Clean Emissions Module.
- 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-SSM ports simplify maintenance and allow 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, and a right-side-view camera is optional. Upgrade to 360° visibility and you'll easily visualize objects and personnel around the excavator in a single view.
- 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.
- Available boom and stick lowering check valves prevent reverse flow, keeping your front linkage securely in place should the hydraulic system unexpectedly lose power.
- 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
CAB			BOOM AND STICKS		
ROPS, standard sound suppression	✓		5.7 m (18'8") reach boom, 2.9 m (9'6") stick	✓	
Mechanically adjustable seat	✓		8.85 m (29'0") SLR boom, 6.28 m (20'7") SLR stick		✓
Air-adjustable seat with heat (Deluxe only)		✓	UNDERCARRIAGE AND STRUCTURES		
High-resolution 203 mm (8 in) LCD touchscreen monitor	✓		600 mm (24") triple grouser shoes		✓
High-resolution 254 mm (10 in) LCD touchscreen monitor		✓	700 mm (28") triple grouser shoes		✓
CAT CONNECT TECHNOLOGY			790 mm (31") triple grouser shoes		✓
Cat Product Link	✓		900 mm (35") triple grouser shoes		✓
Cat GRADE with 2D	✓		Tie-down points on base frame	✓	
Cat GRADE with Advanced 2D (not available on SLR)		✓	4200 kg (9,300 lb) counterweight for HD boom and stick		✓
Cat GRADE with 3D (not available on SLR)		✓	4700 kg (10,400 lb) counterweight for SLR boom and stick		✓
Cat GRADE with Assist	✓		ELECTRICAL SYSTEM		
Cat PAYLOAD	✓		Two 1,000 CCA maintenance-free batteries	✓	
ENGINE			Programmable time-delay LED working lights	✓	
Three selectable power modes	✓		LED chassis light, left-hand/right-hand boom lights, cab lights	✓	
Auto engine idle shutdown	✓		SERVICE AND MAINTENANCE		
46° C (115° F) ambient cooling capacity	✓		Sampling ports for Scheduled Oil Sampling (S-O-S)	✓	
52° C (125° F) high-ambient cooling capacity		✓	Ground-level and platform-level engine oil dipsticks	✓	
-32° C (-25° F) cold start capability	✓		Remote flash	✓	
Reversing electric cooling fans	✓		SAFETY AND SECURITY		
Biodiesel capability up to B20	✓		Rearview camera	✓	
HYDRAULIC SYSTEM			Right-hand-side camera	✓*	✓*
Boom and stick regeneration circuits	✓		Right-hand mirror	✓	
Boom and stick lowering check valves		✓	360° visibility		✓
Auto hydraulic warm up	✓		Ground-level engine shutoff switch	✓	
Auto two-speed travel	✓		Right-hand handrail and hand hold	✓	
Boom and stick drift reduction valve	✓		Signaling/warning horn	✓	
Hammer return filter circuit		✓	*Europe standard; other regions optional.		
Combined flow/high-pressure auxiliary circuit		✓			
Medium-pressure circuit		✓			
Quick coupler circuit for Cat Pin Grabber		✓			

Cat® 320 Hydraulic Excavator

Technical Specifications

Engine		
Engine Model	Cat C4.4 ACERT	
Gross Power – ISO 14396/SAE J1995	122 kW	164 hp
Net Power – ISO 9249/SAE J1349	121 kW	162 hp
Engine RPM		
Operation	1,650 rpm	
Travel	1,800 rpm	
Bore	105 mm	4 in
Stroke	127 mm	5 in
Displacement	4.4 L	269 in ³

Hydraulic System		
Main System – Maximum Flow (Implement)	429 L/min	113 gal/min
Maximum Pressure – Equipment – Normal	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 – North America	22 500 kg	49,600 lb
• Reach boom, R2.9 m (9'6") stick, HD 1.19 m ³ (1.56 yd ³) bucket and 790 mm (31 in) triple grouser shoes, 4.2 mt (9,300 lb) counterweight.		
Operating Weight – Europe/Australia and New Zealand	21 900 kg	48,300 lb
• Reach boom, R2.9 m (9'6") stick, HD 1.19 m ³ (1.56 yd ³) bucket and 600 mm (24 in) triple grouser shoes, 4.2 mt (9,300 lb) counterweight.		

Service Refill Capacities		
Fuel Tank	345 L	86.6 gal
Cooling System	25 L	6.6 gal
Engine Oil	15 L	4 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
DEF Tank	39 L	10.3 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	9'3"
Length to Center of Rollers	3650 mm	12'0"
Ground Clearance	470 mm	1'7"
Track Gauge	2380 mm	7'9"
Transport Width – 600 mm (24") Shoes	2980 mm	9'9"
Transport Width – 790 mm (31") Shoes	3170 mm	10'5"
Counterweight Clearance	1048 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	38,811 lbf
Stick Digging Force (ISO)	106 kN	23,911 lbf
Bucket Digging Force (SAE)	134 kN	30,104 lbf
Stick Digging Force (SAE)	103 kN	23,212 lbf

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

© 2017 Caterpillar
All rights reserved

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

CAT, CATERPILLAR, SAFETY.CAT.COM, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

VisionLink is a trademark of Trimble Navigation Limited, registered in the United States and in other countries.

AEXQ2190-01 (12-2017)
Replaces AEXQ2190
Build Number: 07A
(North America, Europe, ANZ)

