

320

HYDRAULIC EXCAVATOR



Engine Power**ISO 14396**

118 kW (158 hp)

ISO 14396 (DIN)

160 hp (metric)

Operating Weight

21 300 kg (47,000 lb)

Meets Brazil MAR-1 and China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.



NEXT GENERATION EXCAVATORS

Cat® next generation excavators offer you more choices than ever for your business.

- + MORE MODEL OPTIONS
- + MORE STANDARD TECHNOLOGIES
- + MORE PRICE POINTS

Ready to help you make your business stronger, Cat next generation excavators give you new ways to get the most work done at the lowest cost – so you put more money in your pocket.



THE CAT® 320

MOVING THE STANDARD HIGHER

The **Cat 320** Hydraulic Excavator raises the bar for efficiency and fuel economy in this size class. With the industry's highest level of standard factory technology, a cab made for operator comfort, plus lower fuel and maintenance costs, the 320 will help make your operation more productive and profitable.



INCREASE EFFICIENCY UP TO 45%¹

The Cat 320 offers the industry's highest level of standard factory-equipped technology, including Cat Grade with 2D, Grade with Assist, and Payload.

REDUCE FUEL CONSUMPTION UP TO 20%²

A precise combination of lower engine speed and a large hydraulic pump delivers top performance while burning less fuel.

LOWER MAINTENANCE COSTS UP TO 25%³

Extended and more synchronized maintenance intervals increase uptime and reduce costs compared to the 320D2.

¹ Operator efficiency gains compared to traditional grading methods.

² Compared to the 320D2.

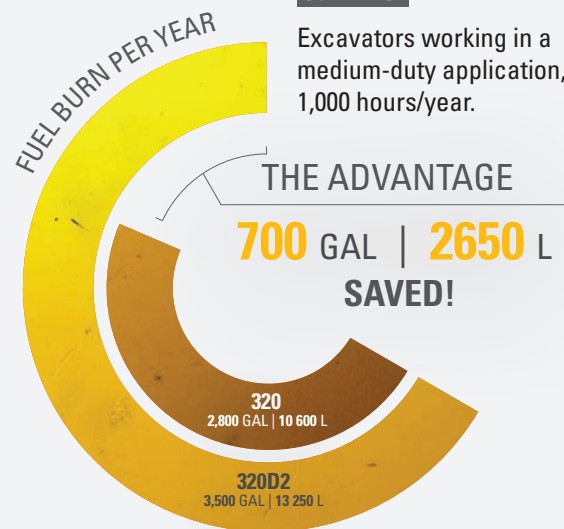
³ Cost reduction based on 12,000 hours of operation.



FUEL EFFICIENCY SAVINGS ADD UP

SCENARIO:

Excavators working in a medium-duty application, 1,000 hours/year.



CALCULATION:

320D2:

$3.5 \text{ GAL/HR} \times 1,000 \text{ HR/YR} = 3,500 \text{ GAL/YR}$
 $13.25 \text{ L/HR} \times 1000 \text{ HR/YR} = 13 250 \text{ L/YR}$

320:

$(3.5 \text{ GAL/HR} \times 80\%) \times 1,000 \text{ HR/YR} = 2,800 \text{ GAL/YR}$
 $(13.25 \text{ L/HR} \times 80\%) \times 1000 \text{ HR/YR} = 10 600 \text{ L/YR}$



STANDARD CAT TECHNOLOGY

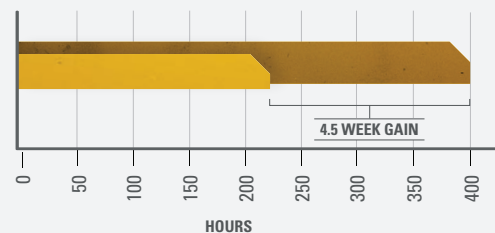
**GETS JOBS DONE FASTER
WITH LESS REWORK**

Onboard Cat technology gives you the edge. Operators of all experience levels will dig, load, and grade with more confidence, speed, and accuracy. The result? Better productivity and lower costs.



**WHAT WOULD YOU DO
WITH 4.5 MORE WEEKS?**

45% GAIN WITH TECHNOLOGY
means same amount of work done faster



PREVIOUS YEAR:

- **USING TRADITIONAL GRADING METHODS**

400 hours/year, grading with stakes and checkers

CURRENT YEAR:

- **USING CAT[®] 320 WITH CAT TECHNOLOGY**

220 hours/year, with standard Cat Grade



INCREASE EFFICIENCY UP TO 45% WITH CAT® TECHNOLOGY

STANDARD, SIMPLE-TO-USE TECHNOLOGIES INCLUDE:



STANDARD CAT GRADE WITH 2D

Set your targets in the monitor and cut and fill to specifications without needing a grade checker. Program up to four depth and slope offsets to get to grade even more quickly – a real time saver on the jobsite.



STANDARD CAT GRADE WITH ASSIST

Automated boom, stick, and bucket movements deliver more accurate cuts with less effort. The operator simply sets the depth and slope into the monitor and activates single-lever digging.



STANDARD CAT PAYLOAD

Cat Payload helps you achieve precise load targets to improve your operating efficiency. Pick up a load of material – with a bucket and thumb combination or grapple and clamshell attachments – and get a real-time weight estimate without swinging. Automated tracking helps manage production and lower cost. You can even take payload data with you. The monitor's USB port lets you download your results from one shift all the way up to 30 days of work so you can manage your progress without needing an internet connection or VisionLink® subscription.

AVAILABLE OPTIONAL UPGRADES

Cat Grade with Advanced 2D and Cat Grade with 3D increase productivity and your profit potential. Cat Grade with Advanced 2D offers in-field design capability through an additional high-resolution touchscreen monitor. Cat Grade with 3D offers a choice of a single antenna global navigation satellite system (GNSS) for enhanced guidance or dual antenna GNSS for maximum grading efficiency.

All Cat Grade systems are compatible with radios and base stations from Trimble, Topcon, and Leica. Already invested in grade infrastructure? You can install grade systems from Trimble, Topcon, and Leica onto the machine.

CAT EQUIPMENT MANAGEMENT TECHNOLOGY TAKES THE GUESSWORK OUT OF MANAGING YOUR EQUIPMENT

Cat equipment management telematics technology helps take the complexity out of managing your jobsites – by gathering data generated by your equipment, materials, and people and serving it up to you in customizable formats.



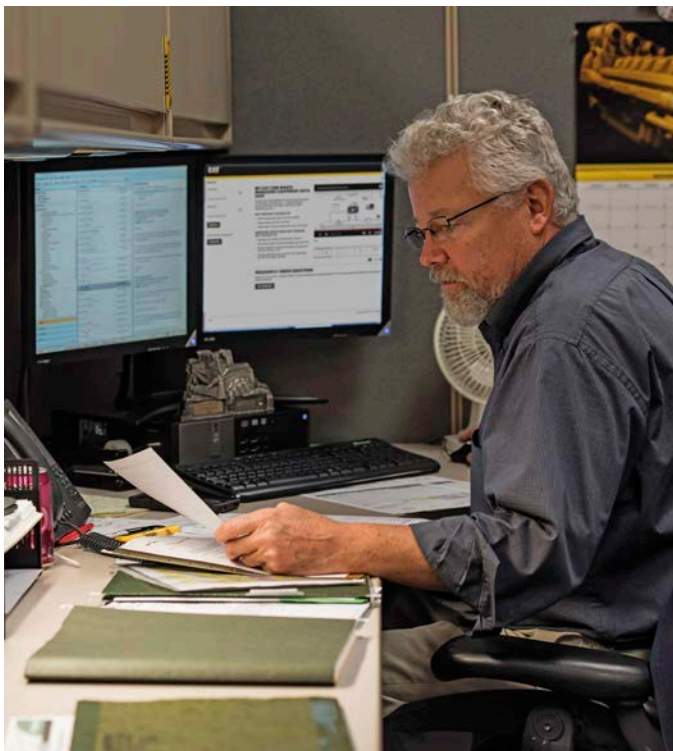
PRODUCT LINK™

Product Link™ collects data automatically and accurately from your assets – any type and any brand. Information such as location, hours, fuel usage, productivity, idle time, maintenance alerts, diagnostic codes, and machine health can be viewed online through web and mobile applications.



VISIONLINK®

Access information anytime, anywhere with VisionLink – and use it to make informed decisions that boost productivity, lower costs, simplify maintenance, and improve safety and security on your jobsite. With different subscription level options, your Cat dealer can help you configure exactly what you need to connect your fleet and manage your business without paying for extras you don't want. Subscriptions are available with cellular or satellite reporting (or both).



Remote Services is a suite of technologies that improve your jobsite efficiency.

Remote Troubleshoot allows your Cat dealer to perform diagnostic testing on your connected machine remotely, pinpointing potential issues while the machine is in operation. Remote Troubleshoot ensures the technician arrives with the correct parts and tools the first time, eliminating additional trips to save you time and money.

Remote Flash updates onboard software without a technician being present, potentially reducing update time by as much as 50%. You can initiate the update when convenient, increasing your overall operating efficiency.

The **Cat app** helps you manage your assets – at any time – right from your smartphone. You can see your fleet location, hours, and other information you need to see. You will get critical alerts for required maintenance, and you can even request service from your local Cat dealer.

CAB TAKES THE HARD OUT OF WORK

Sites where excavators typically work are rugged and challenging. That's why it's important that the 320 cab protects the operator as much as possible from the fatigue, stresses, sounds, and temperatures of the job.



SEAT AND JOYSTICK CONSOLE REDUCE FATIGUE

Comfort and efficiency of movement keep operators productive and alert all shift long. The standard seat is wide and adjustable for operators of virtually any size. The deluxe cab package includes a heated air suspension seat.



TOUCHSCREEN MONITOR

Most machine settings can be controlled through the high-resolution 203 mm/8 inch (or optional 254 mm/10 inch) touchscreen monitor. It offers 42 languages and is easy to reach from the seat – no twisting or turning.



SMART SETTINGS

Smart mode automatically adjusts power to meet work demand with maximum fuel efficiency. Auto dig boost increases power by up to 8% for better bucket penetration, shorter cycle times, and greater payloads. Need more lift during your shift? Turn on auto heavy lift and get 8% more power exactly when you need it for as long as you need it.



CUSTOMIZABLE JOYSTICKS

Joystick function can be customized through the monitor. Make moving the excavator much easier with Cat Stick Steer. Simply push a button and use one hand to travel and turn instead of both hands or feet on levers or pedals. Adding an auxiliary relay allows you to power on or turn off a CB radio, beacon light, and even a dust suppression watering system without taking your hands off the joysticks.



KEYLESS PUSH START

The 320 uses a keyless push-button engine start. This adds security for the machine by using operator ID codes to limit and track machine access. Codes can be entered manually or via an optional Bluetooth® key fob.



A QUIET, SAFE WORKSPACE

BUILDS OPERATOR CONFIDENCE

CAB HELPS KEEP YOU SAFE

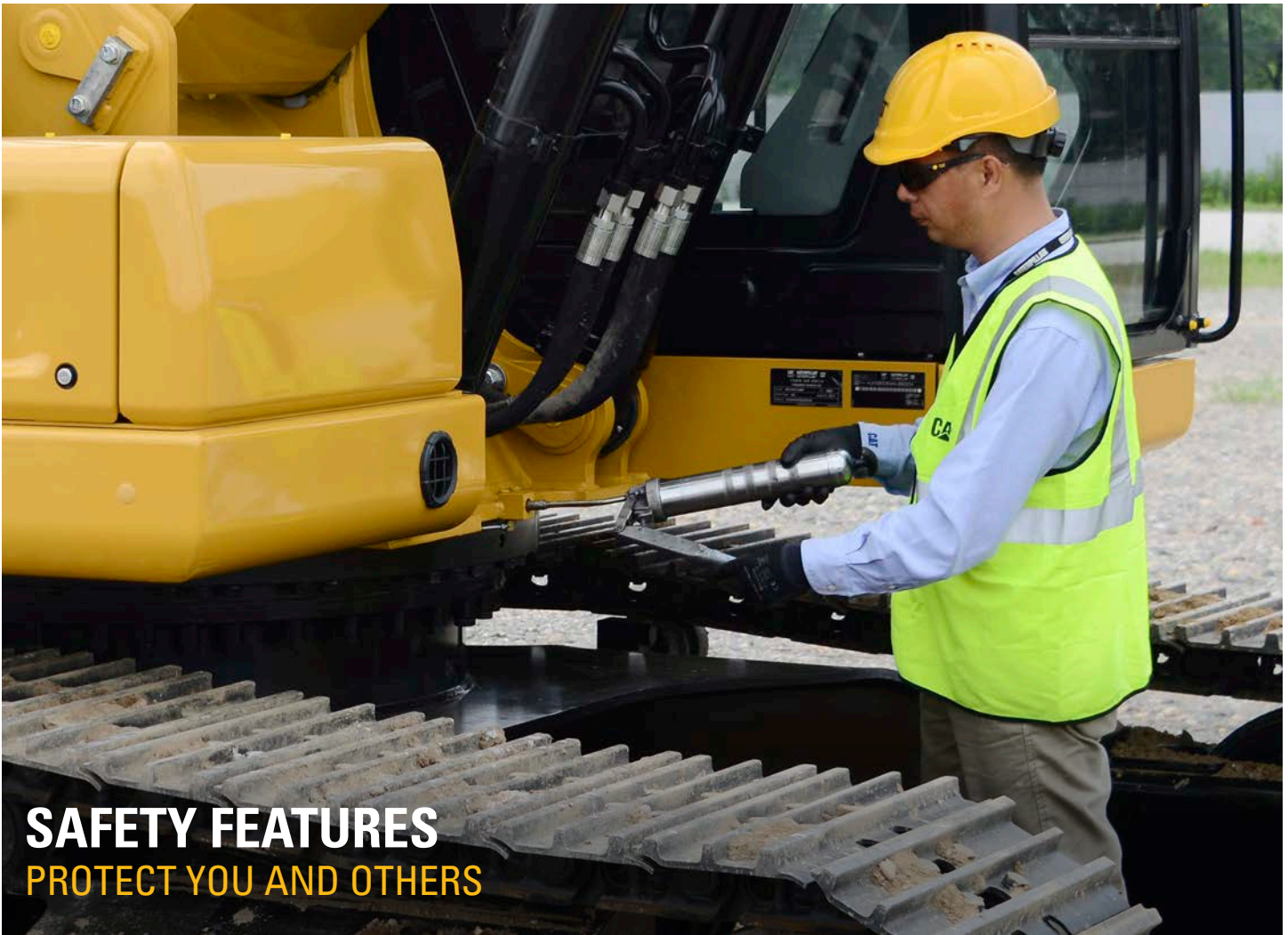
The ISO-certified rollover protective structure (ROPS) cab is sound-suppressed and sealed. The windows and lower front profile of the machine give outstanding visibility to the work area without the strain of constantly leaning forward.

ALL-AROUND VISIBILITY

A standard rearview camera keeps operators aware of their surroundings at all times. An optional 360° visibility feature is also available.

EASY ACCESS, STORAGE, AND CONNECTIVITY

Convenience features include Bluetooth integrated radio, USB ports for charging and phone connectivity, 12V DC outlets and AUX port, storage in rear, overhead and console compartments, and cup and bottle holders.



SAFETY FEATURES PROTECT YOU AND OTHERS

GROUND-LEVEL DAILY MAINTENANCE

Daily maintenance checks can be performed with 100% of the points accessible from ground level, making maintenance faster, easier, and safer. Checkpoints include the engine oil dipstick, fuel water separator, fuel tank water and sediment drains, and cooling system coolant level check.

CAT COMMAND REMOTE CONTROL

Enhance jobsite safety by adding Cat Command to your fleet. The remote control system comes with everything you need to operate outside of the cab. Command console lets you operate up to 400 meters (437 yards) away. Command station lets you work virtually anywhere.

CAT DETECT PEOPLE DETECTION

Cat Detect People Detection helps protect the most valuable asset on any jobsite – people. The system uses smart cameras with depth sensors to provide the operator with visual and auditory alerts so he or she can take immediate action when a person is too close to the excavator.

INSPECTION LIGHTING

Make service work easier and safer with optional inspection lighting. With the flip of a switch, lights will illuminate the engine, pump, battery, and radiator compartments to enhance visibility.

LIFT ASSIST

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.



PROTECTION IN
ALL DIRECTIONS



E-WALL SWING

E-WALL FORWARD

E-WALL CAB PROTECTION

E-WALL CEILING

E-WALL FLOOR

E-FENCE TECHNOLOGY

Whether you are using a bucket and thumb combination or a hammer, grapple, or clamshell, E-Fence automatically stops excavator motion using boundaries you set in the monitor for the entire working envelope – above, below, sides, and front. E-Fence protects equipment from damage and reduces fines related to zoning or underground utility damage. Automatic boundaries even help prevent operator fatigue by reducing overswinging and digging.



LOWER MAINTENANCE COSTS UP TO 25%

With extended and more synchronized maintenance intervals, you get more done at a lower cost compared to the 320D2. Consolidated filter locations make service faster. Hydraulic, air, and fuel tank filters have increased capacity and longer life.

KEY MAINTENANCE COST REDUCTIONS INCLUDE:

- + Consolidated filter locations to reduce service time.
- + Multiple oil filters with extended maintenance intervals, plus a higher dirt capacity hydraulic filter.
- + Advanced air filter with double the dust holding capacity of the previous filter.
- + Fuel filters synchronized to be changed at 1,000 hours – double the interval from the previous filters.

SERVICE REMINDERS MADE EASY

Boost productivity with proactive service reminders. Our new integrated vehicle health management system alerts the operator with step-by-step service guidance, along with parts needed, so you don't experience any unnecessary downtime.



INCREASE YOUR PRODUCTIVITY AND PROFIT WITH CAT ATTACHMENTS

You can easily expand the performance of your machine by utilizing any of the variety of Cat attachments. Each Cat attachment is designed to fit the weight and horsepower of Cat excavators for improved performance, safety, and stability.

BUCKETS



QUICK COUPLERS



ATTACHMENT TRACKING MADE EASY

The Cat PL161 Attachment Locator is a Bluetooth device that makes finding your attachments and other gear quick and easy. The excavator's onboard Bluetooth reader or the Cat app on your phone will locate the device automatically.

Save more time and energy with the available work tool recognition feature. A simple shake of the attached tool confirms its identity; it also ensures all the attachment settings are correct, so you can get to work quickly and efficiently.

GRAPPLES



TILTROTATOR



DO HARD-TO-REACH WORK

With 360° rotation and 40° side-to-side tilting action, a Cat tiltrotator will help you get complex work done faster. A new system upgrade from the factory allows the tool to work with Cat 2D Grade, Assist, Payload, and E-Fence. It includes factory-fit joysticks, but uses the standard cab monitor to display the tool and engage its SecureLock™ so you don't need to spend money on an extra monitor. It also works seamlessly with other brands with no additional hardware required. All you have to do is simply select "Third Party Tiltrotator System Installation" in the monitor, do the calibration, and get to work.

MULTI-PROCESSORS



HYDRAULIC HAMMERS



PREVENT HAMMER WEAR AND TEAR

Protect your hammer tool from overheating and rapid wear. Auto hammer stop warns you after 15 seconds of continuous firing and then automatically shuts it off after 30 seconds – all to extend the tool's service life.

TECHNICAL SPECIFICATIONS

See cat.com for complete specifications.

ENGINE		
Engine Model	Cat® C7.1	
Engine Power		
ISO 14396	118 kW	158 hp
ISO 14396 (DIN)	160 hp (metric)	
Net Power		
ISO 9249	117 kW	157 hp
ISO 9249 (DIN)	159 hp (metric)	
Bore	105 mm	4 in
Stroke	135 mm	5 in
Displacement	7.01 L	428 in ³
<ul style="list-style-type: none"> • 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 1,800 rpm. 		
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	27 500 kPa	3,988 psi
SWING MECHANISM		
Swing Speed	11.25 rpm	
Maximum Swing Torque	82 kN·m	60,300 lbf·ft
MACHINE WEIGHT		
Operating Weight	21 300 kg	47,000 lb
HD Reach boom, HD R2.9 (9'6") stick, HD 1.19 m ³ (1.56 yd ³) bucket, 600 mm (24") triple grouser shoes, and 3.7 mt (8,200 lb) counterweight.		
Operating Weight	21 800 kg	48,100 lb
HD Reach boom, HD R2.9 (9'6") stick, HD 1.19 m ³ (1.56 yd ³) bucket, 600 mm (24") triple grouser shoes, and 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	25 L	6.6 gal
Swing Drive (each)	12 L	3.2 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	HD Reach 5.7 m (18'8")	
Stick	HD 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"
Counterweight Clearance	1050 mm	3'5"
Ground Clearance	470 mm	1'6"
Track Length	4450 mm	14'7"
Length to Center of Rollers	3650 mm	12'0"
Track Gauge	2380 mm	7'9"
Transport Width – 600 mm (24") shoes	2980 mm	9'9"
Transport Width – 700 mm (28") shoes	3080 mm	10'1"
Transport Width – 790 mm (31") shoes	3170 mm	10'5"
WORKING RANGES AND FORCES		
Boom	HD Reach 5.7 m (18'8")	
Stick	HD 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

STANDARD & OPTIONAL EQUIPMENT

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

CAB	STANDARD	OPTIONAL
Rollover protective structure (ROPS)	•	
Mechanical-suspension seat (comfort only)	•	
Heated air-suspension seat (deluxe only)	•	
High-resolution 203 mm (8 inch) LCD touchscreen monitor	•	
High-resolution 254 mm (10 inch) LCD touchscreen monitor		•
Cat® Stick Steer		•
Auxiliary relay		•
CAT TECHNOLOGY	STANDARD	OPTIONAL
Cat Product Link™	•	
Remote Flash	•	
Remote Troubleshoot	•	
Cat Grade with 2D	•	
Cat Grade with Advanced 2D		•
Cat Grade with 3D single GNSS		•
Cat Grade with 3D dual GNSS		•
Cat Assist	•	
Cat Payload	•	
E-Fence	•	
Lift assist	•	
ENGINE	STANDARD	OPTIONAL
Cat C7.1 single turbo diesel engine	•	
Three selectable power modes	•	
Automatic 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	STANDARD	OPTIONAL
Boom and stick regeneration circuits	•	
Auto 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		•

BOOMS AND STICKS	STANDARD	OPTIONAL
5.7 m (18'8") HD Reach boom		•
8.85 m (29'0") Super Long Reach boom		•
2.9 m (9'6") HD Reach stick		•
2.5 m (8'2") HD Reach stick		•
2.9 m (9'6") SD Reach stick*		•
2.5 m (8'2") SD Reach stick*		•
6.28 m (20'7") Super Long Reach stick		•
UNDERCARRIAGE AND STRUCTURES	STANDARD	OPTIONAL
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	•	
3.7 mt (8,157 lb) counterweight		•
4.2 mt (9,300 lb) counterweight		•
4.7 mt (10,400 lb) counterweight		•
ELECTRICAL SYSTEM	STANDARD	OPTIONAL
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	STANDARD	OPTIONAL
Scheduled Oil Sampling (S-O-S SM) ports	•	
Ground-level and platform-level engine oil dipsticks	•	
Integrated vehicle health management system		•
SAFETY AND SECURITY	STANDARD	OPTIONAL
Cat Detect People Detection		•
Rearview camera	•	
Right-hand mirror	•	
Right-hand-sideview camera		•
360° visibility		•
Cat asset tracker	•	
Ground-level engine shutoff switch	•	
Right-hand handrail and handhold	•	
Signaling/warning horn	•	
Swing alarm		•
Cat Command remote control**		•
Inspection lighting		•

* Kingdom of Saudi Arabia only.

** South America only.

Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area.

For additional information, refer to the Technical Specifications brochures for the 320 model available at www.cat.com or your Cat dealer.

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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www.cat.com www.caterpillar.com



AEXQ2332-08
Replaces AEXQ2332-07
Build Number: 07F
(Afr-ME, Eurasia, Pacific Islands,
Hong Kong, Taiwan, S Am, SE Asia)

