

# 320

## HYDRAULIC EXCAVATOR



**Engine Power**  
**Operating Weight**

118 kW (158 hp)  
22 400 kg (49,400 lb)

Cat® C7.1 Engine 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** 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%<sup>1</sup>

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%<sup>2</sup>

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%<sup>3</sup>

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

<sup>1</sup> Operator efficiency gains compared to traditional grading methods.

<sup>2</sup> Compared to the 320D2.

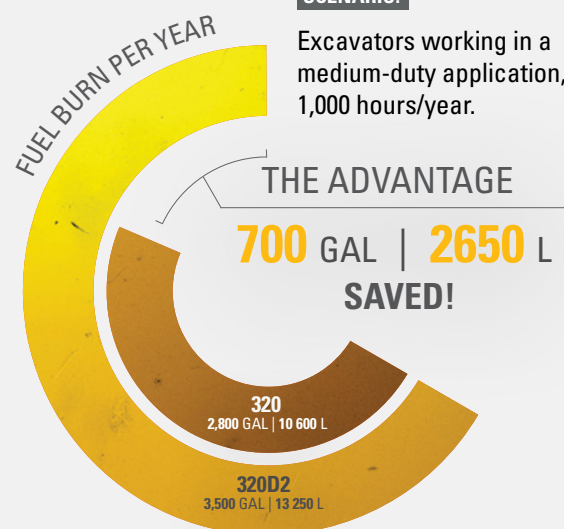
<sup>3</sup> Cost reduction based on 12,000 hours of operation.



## FUEL EFFICIENCY SAVINGS ADD UP

### SCENARIO:

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



### CALCULATION:

#### 320D2:

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

#### 320:

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



# STANDARD CAT TECHNOLOGY

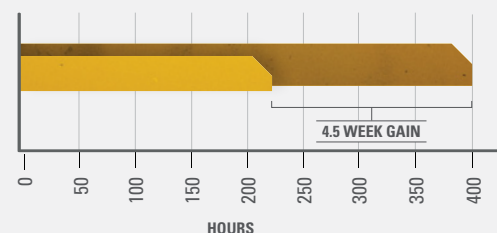
**GETS JOBS DONE FASTER  
WITH LESS REWORK**

**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

Cat Grade with 2D helps operators reach grade faster. Operators cut and fill to exact specifications without overcutting. You can program up to four of your most commonly used target depth and slope off sets so you can get to grade with ease – a real time saver on the jobsite. Best of all, no grade checkers are needed so the work area is safer.



#### STANDARD CAT PAYLOAD

With bucket or grapple, Cat Payload technology delivers precise load targets with on-the-go weighing, which helps prevent over/underloading and maximizes efficiency. 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 can manage your progress without needing an internet connection or VisionLink® subscription.



#### 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.

### AVAILABLE OPTIONAL UPGRADES

Cat Grade with Advanced 2D and Cat Grade with 3D increase productivity and expand grading capabilities. Grade with Advanced 2D adds in-field design capabilities through an additional 254 mm (10 inch) high-resolution touchscreen monitor. Grade with 3D adds GPS and GLONASS positioning for pinpoint accuracy. 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.



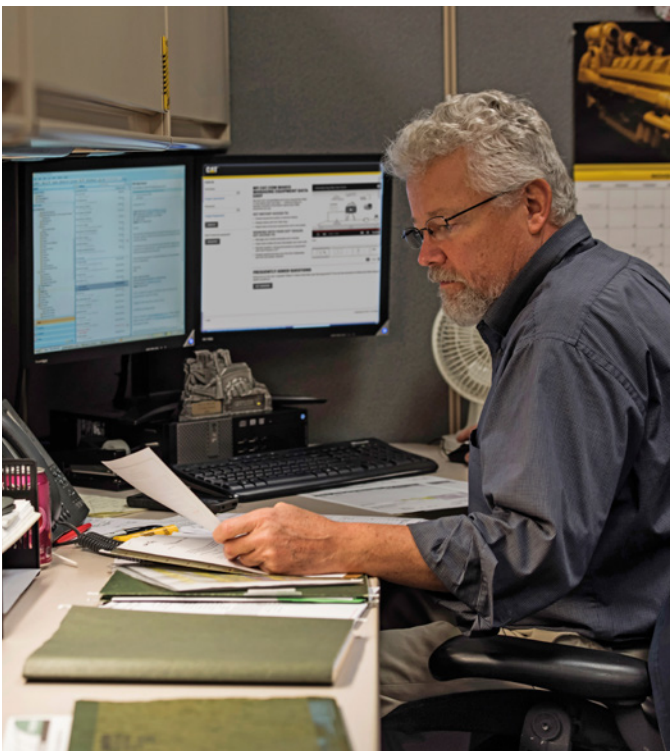
### **PRODUCT LINK™**

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 on-board 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.



## 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 via an optional Bluetooth® key fob.



A large yellow hydraulic excavator is shown from a low angle, looking up at its boom and cab. The boom is extended upwards and to the left, with a bucket full of dirt. The cab is on the right, with a worker wearing a white hard hat, sunglasses, and an orange safety vest visible inside. The background shows a clear blue sky and a line of green trees in the distance.

A QUIET, SAFE WORKSPACE

# BUILDS OPERATOR CONFIDENCE

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## ISO-CERTIFIED ROPS CAB

The ISO-certified 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.

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## ALL-AROUND VISIBILITY

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

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## EASY ACCESS, CONNECTIVITY AND STORAGE

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.

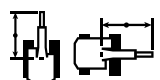




# SAFETY FEATURES

## LOOK OUT FOR YOUR PEOPLE AND YOUR EQUIPMENT

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.



### 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.

### 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.

### 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.





PROTECTION IN  
**ALL DIRECTIONS**



## STANDARD 2D E-FENCE TECHNOLOGY

Whether you are using a bucket or hammer, standard 2D 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.





# 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**



**GRAPPLES**



**HYDRAULIC HAMMERS**

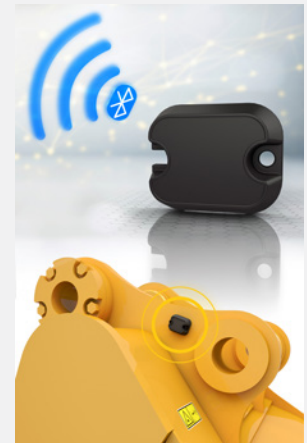


**PREVENT HAMMER  
WEAR AND TEAR**

Turn on through the monitor and the hammer will automatically stop after 30 seconds of continuous firing, preventing both tool and excavator from overworking.

## 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 Cat App on your phone will locate the device automatically.

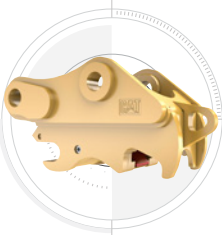


Save more time and energy with the available work tool recognition feature. A simple shake of the attached tool confirms its identity; it also ensures all the attachment settings are correct so you can get to work quickly and efficiently.

**MULTI-PROCESSORS**



**QUICK COUPLERS**



**RAKES**



**RIPPERS**



**SECONDARY  
PULVERIZERS**



**SHEARS**



**THUMBS**



**VIBRATORY PLATE  
COMPACTORS**



**TILTROTATOR**



# TECHNICAL SPECIFICATIONS

See *cat.com* for complete specifications.

| ENGINE  |            |               |
|---|------------|---------------|
| Engine Model  | Cat C7.1   |               |
| Engine Power – ISO 9249   | 117 kW     | 157 hp        |
| Net Power – ISO 14396   | 118 kW     | 158 hp        |
| Bore  | 105 mm     | 4 in          |
| Stroke  | 135 mm     | 5 in          |
| Displacement  | 7.01 L     | 428 in³       |
| Net Power is tested per ISO 9249. Standards 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. |            |               |
| Rated 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  | 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 m³ (1.56 yd³) 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)  | 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  | 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 |

# CAB FEATURES

| FEATURE                        | DESCRIPTION                  | COMFORT | DELUXE |
|--------------------------------|------------------------------|---------|--------|
| ROPS                           | Standard Sound Suppression   | ●       | ●      |
| High-Resolution Monitor        | 203 mm (8 inch) Touchscreen  | ●       | ●      |
|                                | 254 mm (10 inch) Touchscreen | x       | ○      |
| Keyless Push-to-Start          | Engine Control               | ●       | ●      |
| Jog Dial, Shortcut Keys        | Monitor Control              | ●       | ●      |
| Air Conditioning               | Automatic Bi-level           | ●       | ●      |
| Suspension Seat with Seat Belt | Adjustable                   | ●       | x      |
|                                | Air Adjustable               | x       | ●      |
|                                | Heated                       | x       | ●      |
| Console                        | 3 Fixed Heights              | ●       | x      |
|                                | Infinitely Adjustable        | x       | ●      |
|                                | Tilt-Up Left Side            | x       | ●      |
| Bluetooth Integrated Radio     | With USB Ports               | ●       | ●      |

● - standard    ○ - optional    x - not available



# STANDARD & OPTIONAL EQUIPMENT

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

| CAB   | STANDARD | OPTIONAL |
|---|----------|----------|
| ROPS, standard sound suppression                          | •        |          |
| Mechanically adjustable seat                              | •        |          |
| Air-adjustable seat with heat (Deluxe only)               |          | •        |
| High-resolution 203 mm (8 inch) LCD touchscreen monitor   | •        |          |
| High-resolution 254 mm (10 inch) LCD touchscreen monitor  |          | •        |
| Cat Stick Steer   |          | •        |
| CAT TECHNOLOGY  | STANDARD | OPTIONAL |
| 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   | •        |          |
| E-Fence   | •        |          |
| Lift Assist   | •        |          |
| Auto Dig Boost  | •        |          |
| Remote Flash capability                                   | •        |          |
| Remote Troubleshoot capability                            | •        |          |
| Auto Heavy Lift   |          | •        |
| ENGINE  | STANDARD | OPTIONAL |
| 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, 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                                    | 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                                   | •        |          |
| 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   | 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 <sup>SM</sup> ) ports             | •        |          |
| Ground-level and platform-level engine oil dipsticks            | •        |          |
| SAFETY AND SECURITY   | STANDARD | OPTIONAL |
| Rearview camera   | •        |          |
| Right-hand mirror   | •        |          |
| Right-hand-sideview camera                                      |          | •        |
| 360° visibility   |          | •        |
| Lift Assist   | •        |          |
| Cat asset tracker   | •        |          |
| Ground-level engine shutoff switch                              | •        |          |
| Right-hand handrail and handhold                                | •        |          |
| Signaling/warning horn  | •        |          |
| Cat Command remote control                                      |          | •        |
| Inspection Lighting   |          | •        |
| Cat Detect People Detection                                     |          | •        |

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 GC, 320 and 323 models available at [www.cat.com](http://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](http://www.cat.com)

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AEXQ2332-07  
Replaces AEXQ2332-06  
Build Number: 07E

