320E L RR

Hydraulic Excavator

Engine		
Engine Model	Cat® C6.6 ACERT™	
Engine Rated Power – ISO 14396	122 kW	166 hp

Drive		
Maximum Travel Speed	5.6 km/h	3.5 mph
Maximum Drawbar Pull	205 kN	46,086 lb

Weight		
Minimum Weight	23 800 kg	52,470 lb
Maximum Weight	24 900 kg	54,895 lb

Introduction

Since its introduction in the 1990s, the 300 Series family of excavators has become the industry standard in general, quarry, and heavy construction applications. The all-new E Series and the 320E L RR will continue that trend-setting standard.

The 320E L RR meets U.S. Environmental Protection Agency (EPA) Tier 4 Interim emission standards, European Union Stage IIIB emission standards, and Japan MLIT Step 4 emission standards. It is also built with several new fuel-saving and comfort-enabling features and benefits that will delight owners and operators.

If you are looking for more productivity and comfort less fuel consumption and emissions, and easier and more sensible serviceability, you will find it in the all-new 320E L RR and the E Series family of excavators.

Contents

Engine

Reduced emissions, economical and reliable performance

Cat C6.6 ACERT Engine

The Cat C6.6 ACERT engine delivers more horsepower using significantly less fuel than the previous series engine.

Emissions Solution

Equipped to meet U.S. Environmental Protection Agency (EPA) Tier 4 Interim emission standards, European Union Stage IIIB emission standards, and Japan MLIT Step 4 emission standards, the 320E L RR's C6.6 ACERT engine features wall and thru flow filters that perform through the machine work cycle without operator intervention.

All nonroad U.S. EPA Tier 4 Interim diesel engines are required to use only Ultra Low Sulfur Diesel (ULSD) fuels containing 15 mg/kg sulfur or less. Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specification are also required. For further fluid specifications and guidelines, visit: *http://www.cat.com/cda/files/214956/7/SEBU6251-13-secured.pdf*

Biodiesel-Ready Fuel System

The C6.6 ACERT engine is equipped with an electronic-controlled high-pressure fuel system that includes an electric priming pump (lifting pump) and three-layer fuel hoses to allow the use of biodiesels up to B20 (biodiesel fuel 20% mixture meeting ASTM 6751 or EN 14214).

Cooling System

The cooling system features an air-to-air aftercooler and A/C condenser positioned for easy servicing; the viscous fan automatically adjusts to ambient temperatures to help reduce fuel consumption and noise.

Speed and Power Control

The 320E L RR features speed control to maintain a constant speed – regardless of load – to improve fuel economy. Three different power modes are offered: high power, standard power, and economy power. The operator can easily change between modes through the monitor or console switch to meet the needs for the job at hand – all to help manage and conserve fuel.

Operator Station

Comfort and convenience to keep people productive

Seats

All seats include air suspension, heating, and ventilation to meet operator needs for comfort and productivity.

Controls

The right and left joystick consoles can be adjusted to meet individual preferences, improving operator comfort and productivity during the course of a day. With the touch of a button, one-touch idle reduces engine speed to help save fuel; touch it again or move the joystick and the machine returns to normal operating level.

Monitor

The 320E L RR is equipped with a 7" LCD (Liquid Crystal Display) monitor that's 40% bigger than the previous model's with higher resolution for better visibility. In addition to an improved keypad and added functionality, it's programmable to provide information in a choice of 42 languages to support today's diverse workforce.

An "Engine Shutdown Setting" accessible through the monitor allows owners and operators to specify how long the machine should idle before shutting down the engine, which can save significant amounts of fuel.

The image of the rearview camera is displayed directly on the monitor. Up to two different camera images can be displayed on the screen.

MP3-Ready Radio and Power Supply

The standard radio is equipped with a new auxiliary audio port for MP3 players. Two 12 volt power supply sockets are located near key storage areas for charging.

Storage

Storage spaces are located in the front, rear, and side consoles. A specific space near the auxiliary power supply holds MP3 players and cell phones. The drink holder accommodates large mugs with handles, and a shelf behind the seat stores large lunch or toolboxes.

Automatic Climate Control

The climate control system features five air outlets with positive filtered ventilation, which makes working in the heat and cold much more pleasant.

Reduced Radius

Designed for high maneuverability in confined spaces

Reduced Radius

The 320E L RR's tail swing radius is 2080 mm (6'10") compared to 2830 mm (9'3") on the 320E. When aligned with the tracks, working over the front, it does not extend beyond the track length allowing the 320E L RR to work well in road construction applications and other space-restricted areas.

Stability

The 320E L RR offers a stable platform for all applications. When compared to the 320E L, the 320E L RR delivers up to 16% additional lift over the side with the 6.9 mt (7.6 t) counterweight. One of the main contributors is the use of an additional counterweight, which allows the balance of the machine to be comparable to a standard machine with a longer tail swing.

Comfort

While the length of the upper structure is reduced to accommodate the work at hand, the cab of the 320E L RR is the same size with all the amenities and attachments found inside the 320E L.

Hydraulics

Power to move more dirt, rock, and debris with speed and precision

Hydraulic Horsepower

Hydraulic horsepower is the actual machine power available to do work through implements and work tools. It's much more than just the engine power under the hood – it's a core strength that differentiates Cat machines from other brands.

Hydraulic Pumps

The 320E L RR uses a two-pump, high-pressure hydraulic system to tackle the toughest work in short order. A highly efficient and simple back-to-back main control valve improves fuel consumption and allows for greater tool versatility.

Heavy Lift

The 320E L RR features a heavy lift function to give more lift capacity over the front. With a touch of a button, pressure increases and engine speed reduces to give better control in lifting those extra-tough-to-move materials like concrete pipe and road construction barriers.

Swing Priority Circuit

The swing priority circuit on the 320E L RR uses an electric valve that's operated by the machine's Electronic Control Module (ECM). Compared to using a hydraulic valve, an electric valve allows for more finely tuned control, which is critical during material loading.

Electric Boom Regeneration Valve

This valve minimizes pump flow when the boom lowers down, which helps improve fuel efficiency. It is optimized for any dial speed setting being used by the operator, which results in enhanced boom lowering speed for greater controllability.


CAT

Structures & Undercarriage

Built to work in rugged environments

Frame

The 320E L RR features a solid foundation that's built to absorb the stresses of every day work. The main frame utilizes high-tensile-strength steel and a one-piece swing table to improve strength and reliability. The X-shaped carbody is designed to resist bending and twisting forces. The upper frame includes reinforced mountings to support the Roll-Over Protective Structure (ROPS) cab; the lower frame is reinforced to increase component durability.

Undercarriage

The undercarriage is built to support various work applications. Precision-forged carrier rollers, press-fit pin master joints, and enhanced track shoe bolts improve durability and reduce the risk of machine downtime and the need and cost to replace components. Standard rollers and idlers are sealed and lubricated to extend service lift. Track links are assembled and sealed with grease to decrease internal wear and increase life compared to dry seal undercarriage. Also, two-piece Track Guiding Guard or Full Length Guard as option is now offered to help maintain track alignment and improve performance in multiple applications.

Counterweights

A 6.9 mt counterweight is standard. Integrated links enable easy removal of the counterweight for maintenance or shipping.

Front Linkage

Made for high stress and long service life

Booms and Sticks

The 320E L RR is offered with a 5.7 m (18'8") HD reach boom and the R2.9B1 (9'6") HD stick.

Both boom and stick are made of high-tensile-strength steel using a large box section design with interior baffle plates and an additional bottom guard; both undergo ultrasound inspection to ensure weld quality and reliability.

Other reinforced areas on the 320E L RR include thick multi-plate fabrications, castings, and forgings used in high-stress areas such as the boom nose, boom foot, boom cylinder, and stick foot. The boom nose pin retention method is a captured flag design for added durability. The front linkage pins' inner bearing surfaces are welded with a self-lubricated bearing, which helps extend service intervals and increase uptime.

HD = Heavy Duty – This boom is designed to balance reach, digging force, and bucket capacity. It covers the vast majority of applications such as digging, loading, trenching, and working with hydraulic tools.

Work Tools

Dig, hammer, rip, and cut with confidence

An extensive range of Cat Work Tools for the 320E L RR includes buckets, compactors, grapples, multi-processors, scrap and demolition shears, rippers, crushers, pulverizers, hammers, and shears. Each is designed to optimize the versatility and performance of your machine.

Quick Couplers

Quick couplers allow one person to change work tools in seconds for maximum performance and flexibility on a job site. One machine can move rapidly from task to task, and a fleet of similarly equipped machines can share a common work tool inventory.

Cat Center-Lock™ Pin Grabber Coupler

Center-Lock is the pin grabber style coupler featuring a patented locking system. A highly visible lock clearly shows the operator when the coupler is engaged or disengaged from the bucket or work tool.

Buckets

Cat buckets are designed as an integral part of the 320E L RR system and feature new geometry for better performance. The leading edge has been pushed forward, resulting in more efficient filling and better operator control for greatly improved productivity. Wear coverage in the corners and side cutter and sidebar protector coverage are improved. All benefits are captured in a new bucket line with a new bucket naming convention.

Caterpillar offers standard bucket categories for excavators. Each category is based on intended bucket durability when used in recommended application and material. Buckets are available as pin-on or can be used with a quick coupler.

General Duty (GD)

GD buckets are for digging in low-impact, low-abrasion material such as dirt, loam, and mixed compositions of dirt and fine gravel.

Heavy Duty (HD)

The most popular bucket style, HD buckets are a good starting point when digging conditions are not well known like a wide range of impact and abrasion conditions that include mixed dirt, clay, and rock.

Severe Duty (SD)

SD buckets are for higher abrasion conditions such as well shot granite and caliche. Red area on bucket image illustrates additional protection against wear as compared to a GD bucket.

Specialty Buckets

In addition to the standard four bucket categories, specialty bucket styles are available for the 320E, each with a different purpose:

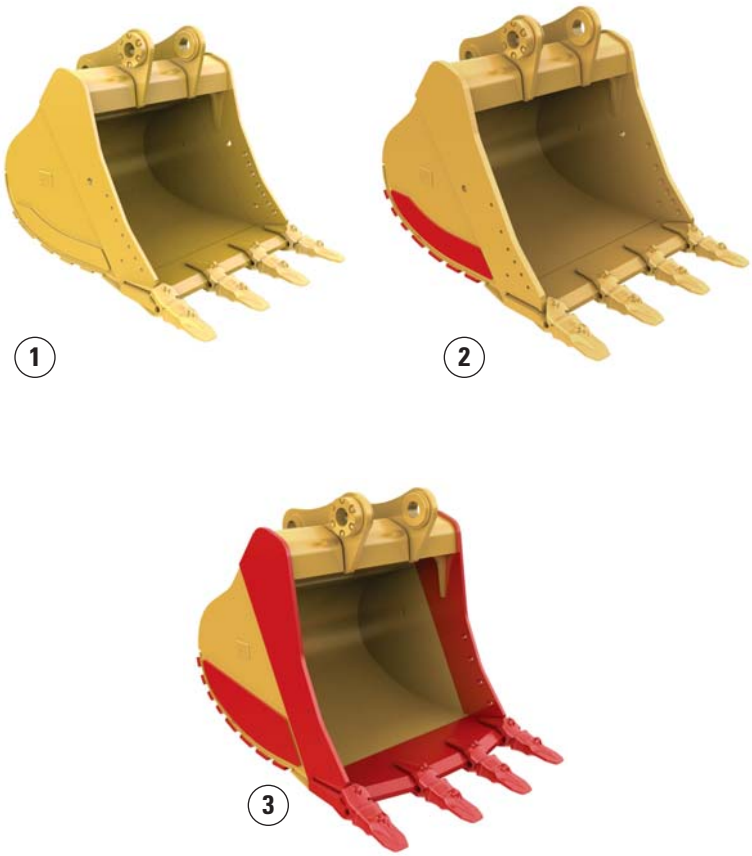
- Ditch Cleaning buckets for cleaning ditches, slope grading, and other finish work.
- Center-Lock Pin Grabber Performance buckets for maximum digging performance while keeping the versatility and convenience of a coupler.
- Wide Tip buckets for low impact material where leaving a smoother floor and minimal spillage are necessary.

Hydraulic Kits

Caterpillar offers field-installed hydraulic kits that are uniquely designed to integrate Cat Work Tool attachments with Cat Excavators. Hoses and tubes are pre-made, pre-shaped, and pre-painted to make installation quick and easy.

Comprehensive Product Support

All Cat Work Tools are backed up by a world-wide network of well-stocked parts depots and highly experienced service and support personnel.



1) General Duty 2) Heavy Duty 3) Severe Duty

Integrated Technologies

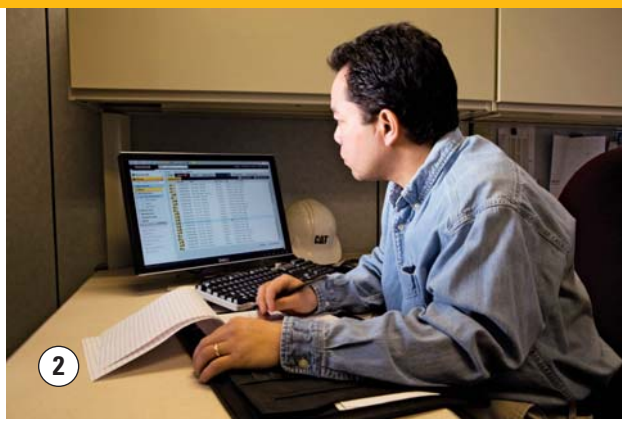
Solutions that make work easier and more efficient

Cat Grade Control Depth and Slope

This optional system combines traditional machine control and guidance with standard factory-installed and calibrated components, making the system ready to go to work the moment it leaves the factory. The system utilizes internal front linkage sensors – well protected from the harsh working environment – to give operators real-time bucket tip position information through the cab monitor (1), which minimizes the need and cost for traditional grade checking and improves job site safety. It also helps the operator complete jobs in fewer cycles, which means less fuel use.

Cat Product Link™

This deeply integrated into the machine monitoring system is designed to help customers improve their overall fleet management effectiveness. Events and diagnostic codes as well as hours, fuel consumption, idle time, machine location, and other detailed information are transmitted to a secure web based application (2 and 3) called VisionLink®, which uses powerful tools to communicate to users and dealers.



Serviceability

Fast, easy and safe access built in

Service Doors

Wide service doors and a one-piece hood provide easy access to the cooling and engine compartments. Both doors and hood feature enhanced hardware and a new screen design to help minimize debris entry.

Compartments

The compartments are designed to provide technicians with quick access to major components and regular service items like filters. The fresh air filter, for example, is located on the side of the cab to make it easy to reach and replace as needed.

Other Service Enhancements

The water separator with water level sensor has a primary fuel filter element located in the pump compartment near ground level.

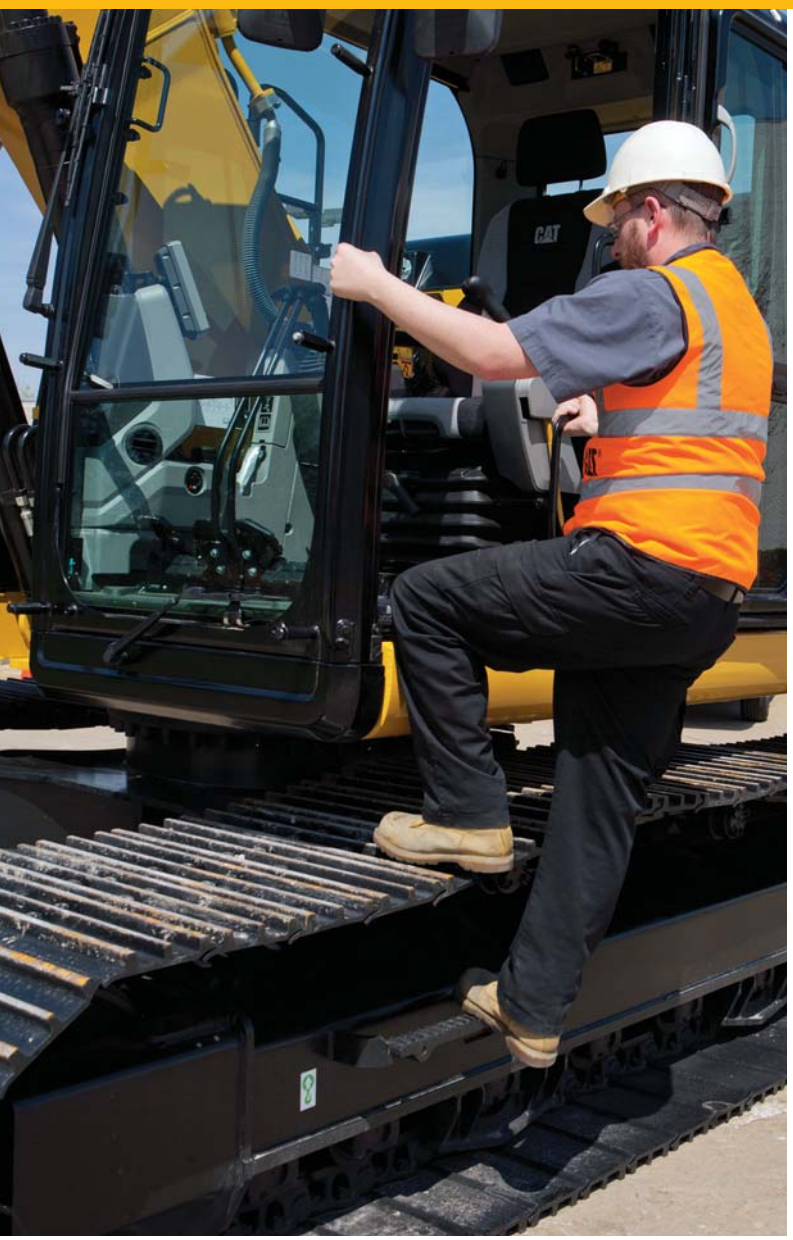
The fuel tank features a remote drain cock located in the pump compartment to make it easy to remove water and sediment during maintenance.

The engine oil check gauge is situated in front of the engine compartment for easy access, and a uniquely designed drain cock helps prevent spills.

Hydraulic lash adjusters automatically adjust valve opening and closing events to help reduce fuel consumption and engine noise. They also eliminate the need for a valve lash, which reduces maintenance for the customer.

Safety

Features to help protect people



Roll-Over Protective Structure (ROPS) Cab

The ROPS cab provides your operator with enhanced protection in the event of a roll-over; it's also built to accommodate a Falling Object Guard Structure (FOGS), which is important in waste and demolition applications.

Sound Proofing

Improved sealing and cab roof lining lower noise levels by 5 dB inside the cab – a significant benefit to operators.

Anti-Skid Plates

The surface of the upper structure and the top of the storage box area are covered with anti-skid plates to help prevent service personnel and operators from slipping during maintenance.

Steps, Hand and Guard Rails

Steps on the track frame and storage box along with extended hand and guard rails to the upper deck enable operators to securely work on the machine.

Time Delay Cab and Boom Lights

After the engine start key has been turned to the "OFF" position, lights will be illuminated to enhance visibility. The time delay can vary from 0 to 90 seconds, which can be set through the monitor.

High Intensity Discharge (HID) Lights

Cab lights can be upgraded to HID for greater visibility.

Windows

The 70/30 split configuration features an upper window equipped with handles on the top and both sides so the operator can slide it to store in the ceiling. The lower window is removable and can be stored on the left wall of the cab shell.

The large skylight provides great overhead visibility, excellent natural lighting, and good ventilation. The skylight can be opened completely to become an emergency exit.

Monitor Warning System

The machine's advanced diagnostic system features a buzzer in the monitor to communicate to operators critical events like full filters or low hydraulic fluid levels so they can take immediate action.

Rearview Camera and Mirrors (ISO 5006)

The standard rearview camera is housed in the counterweight. The image projects through the cab monitor to give the operator a clear view of what is behind the machine.

Complete Customer Care

Service you can count on

Product Support

Cat dealers utilize a worldwide parts network to maximize your machines' uptime. Plus they can help you save money with Cat remanufactured components.

Machine Selection

What are the job requirements and machine attachments? What production is needed? Your Cat dealer can provide recommendations to help you make the right machine choices.

Purchase

Consider financing options and day-to-day operating costs. Look at dealer services that can be included in the machine's cost to yield lower owning and operating costs over time.

Customer Support Agreements

Cat dealers offer a variety of customer support agreements and work with you to develop a plan to meet your specific needs. These plans can cover the entire machine, including attachments, to help protect your investment.

Operation

Improving operating techniques can boost your profits. Your Cat dealer has videos, literature, and other ideas to help you increase productivity. Caterpillar also offers simulators and certified operator training to help maximize the return on your investment.

Replacement

Repair, rebuild, or replace? Your Cat dealer can help you evaluate the cost involved so you can make the best choice for your business.

Sustainability

Generations ahead in every way

- The C6.6 ACERT engine, along with the Cat Clean Emissions Module (CEM), meets U.S. Environmental Protection Agency (EPA) Tier 4 Interim emission standards, European Union Stage IIIB emission standards, and Japan MLIT Step 4 emission standards.
- The 320E L RR has the flexibility of running on either ultra-low-sulfur diesel (ULSD) fuel with 15 ppm of sulfur or less or biodiesel (B20) fuel blended with ULSD that meets ASTM 6751 or EN 14214 standards.
- Even when operating in high horsepower and high production applications, the 320E L RR performs a similar amount of work as the previous D Series model with significantly reduced fuel consumption.
- The 320E L RR is quieter inside and out, which benefits operators and the surrounding environment.
- A ground-level overfill indicator rises when the hydraulic oil tank is full to help the operator avoid spilling.
- QuickEvac™ ensures fast, easy, and secure changing of engine and hydraulic oil.
- The 320E L RR is built to be rebuilt with major structures and components capable of being remanufactured to reduce waste and replacement costs.
- An eco-friendly engine oil filter eliminates the need for painted metal cans and aluminum top plates. The cartridge-style spin-on housing enables the internal filter to be separated and replaced; the used internal element can be incinerated to help reduce waste.
- The 320E L RR is an efficient, productive machine.

Engine

Engine Model	Cat C6.6 ACERT	
Engine Rated Power – ISO 14396	122 kW	166 hp
Bore	105 mm	4.1 in
Stroke	127 mm	5.0 in
Displacement	6.6 L	403 in^3

Hydraulic System

Main System – Maximum Flow (Total)	428 L/min	113.1 gal/min
Swing System – Maximum Flow	214 L/min	56.5 gal/min
Maximum Pressure – Equipment	35 000 kPa/ 38 000 kPa	5,076 psi/ 5,512 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	25 000 kPa	3,626 psi
Pilot System – Maximum Flow	24.3 L/min	1,483 in^3/min
Pilot System – Maximum Pressure	3920 kPa	569 psi
Boom Cylinder – Bore	120 mm	4.7 in
Boom Cylinder – Stroke	1260 mm	49.6 in
Stick Cylinder – Bore	140 mm	5.5 in
Stick Cylinder – Stroke	1504 mm	59.2 in
B1 Bucket Cylinder – Bore	120 mm	4.7 in
B1 Bucket Cylinder – Stroke	1104 mm	43.5 in

Drive

Maximum Travel Speed	5.6 km/h	3.5 mph
Maximum Drawbar Pull	205 kN	46,086 lb

Swing Mechanism

Swing Speed	11.2 rpm	
Swing Torque	61.8 kN·m	45,581 lb-ft

Service Refill Capacities

Fuel Tank Capacity	290 L	76.6 gal
Cooling System	30 L	7.9 gal
Engine Oil (with filter)	23 L	6.1 gal
Swing Drive	8 L	2.1 gal
Final Drive (each)	8 L	2.1 gal
Hydraulic System (including tank)	205 L	54.2 gal
Hydraulic Tank	115 L	30.4 gal

Track

Number of Shoes (each side)	
Long Undercarriage	49 pieces
Number of Track Rollers (each side)	
Long Undercarriage	8 pieces
Number of Carrier Rollers (each side)	
Long Undercarriage	2 pieces

Sound Performance

Operator – ISO 6396	71 dB
Spectator – ISO 6395	103 dB

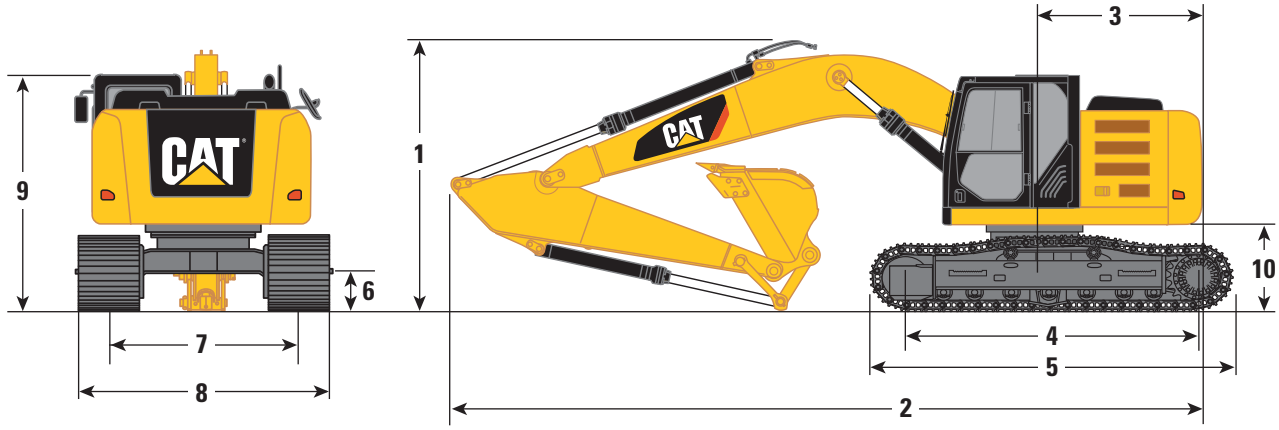
- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 OCT98, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/ windows open) for extended periods or in noisy environment.

Standards

Brakes	ISO 10265 2008
Cab/FOGS	ISO 10262 1998
Cab ROPS	ISO 12117-2 2008

Dimensions

All dimensions are approximate.



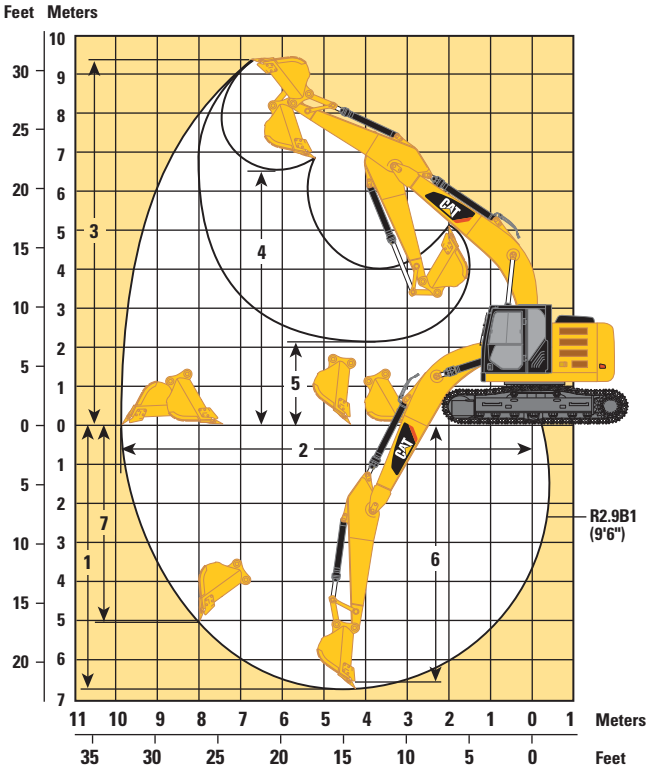
		HD Reach Boom 5.7 m (18'8")
	Stick	**R2.9B1 (9'6") HD**
1	Shipping Height*	3130 mm (10'3")
	Shipping Height with Guard Rail	3150 mm (10'4")
	Shipping Height with Top Guard	3152 mm (10'4")
2	Shipping Length	8970 mm (29'5")
3	Tail Swing Radius	2080 mm (6'10")
4	Length to Center of Rollers	3650 mm (12'0")
5	Track Length	4455 mm (14'7")
6	Ground Clearance	450 mm (1'6")
7	Track Gauge	2380 mm (7'10")
8	Transport Width	
	600 mm (24") Shoes	2980 mm (9'9")
	700 mm (28") Shoes	3080 mm (10'1")
	790 mm (31") Shoes	3170 mm (10'5")
9	Cab Height	2980 mm (9'9")
	Cab Height with Top Guard	3152 mm (10'4")
10	Counterweight Clearance**	1000 mm (3'3")

*Including shoe lug height.

**Without shoe lug height.

Working Ranges

All dimensions are approximate.



	HD Reach Boom 5.7 m (18'8")
Stick	**R2.9B1 (9'6") HD**
1 Maximum Digging Depth	6720 mm (22'1")
2 Maximum Reach at Ground Level	9860 mm (32'4")
3 Maximum Cutting Height	9370 mm (30'9")
4 Maximum Loading Height	6490 mm (21'4")
5 Minimum Loading Height	2170 mm (7'1")
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6550 mm (21'6")
7 Maximum Vertical Wall Digging Depth	5060 mm (16'7")

320E L RR Hydraulic Excavator Specifications

Operating Weight and Ground Pressure

	790 mm (31") Triple Grouser Shoes				700 mm (28") Triple Grouser Shoes				600 mm (24") Triple Grouser Shoes			
	kg	lb	kPa	psi	kg	lb	kPa	psi	kg	lb	kPa	psi
Heavy Duty Boom – 5.7 m (18'8")												
R2.9B1 (9'6") HD	24 700	54,450	39.1	5.67	24 400	53,790	43.7	6.34	24 000	52,910	50.2	7.28

Major Component Weights

Base Machine (with boom cylinder, without counterweight, front linkage and track)	6500 kg (14,330 lb)
Long Undercarriage	7845 kg (17,300 lb)
Counterweight	
6.9 mt	6900 kg (15,210 lb)
Boom (includes lines, pins and stick cylinder)	
Heavy Duty Boom – 5.7 m (18'8")	1720 kg (3,792 lb)
Stick (includes lines, pins and bucket cylinder)	
R2.9B1 (9'6") HD	683 kg (1,510 lb)
Track Shoe (Long/per two tracks)	
600 mm (24") Triple Grouser	2696 kg (5,940 lb)
700 mm (28") Triple Grouser	3074 kg (6,780 lb)
790 mm (31") Triple Grouser	3360 kg (7,410 lb)
Buckets	
B1 1200 mm (4') GD 1.19 m^3 (1.56 yd^3)	930 kg (2,050 lb)

All weights are rounded up to nearest 10 kg and lb except for buckets. Kg and lb were rounded up separately so some of the kg and lb do not match.

Base machine includes 75 kg (165 lb) operator weight, 90% fuel weight, and undercarriage with center guard.

Bucket and Stick Forces

	HD Reach Boom 5.7 m (18'8")
Stick	**R2.9B1 (9'6") HD**
	B1 – Family Bucket
General Duty	
Bucket Digging Force (ISO)	140.5 kN (31,600 lb)
Stick Digging Force (ISO)	106.7 kN (24,000 lb)
Heavy Duty	
Bucket Digging Force (ISO)	150.4 kN (33,800 lb)
Stick Digging Force (ISO)	106.4 kN (23,900 lb)
Severe Duty	
Bucket Digging Force (ISO)	150.4 kN (33,800 lb)
Stick Digging Force (ISO)	106.4 kN (23,900 lb)

320E L RR Hydraulic Excavator Specifications

Reach Boom Lift Capacities

Load Point Height | Load at Maximum Reach | Load Radius Over Front | Load Radius Over Side

Boom – HD-R5.7 m (18'8")
Stick – HD-R2.9B1 (9'6")

Counterweight – 6.9 mt (7.6 t)
Shoes – 790 mm (31") triple grouser

Bucket – None
Heavy Lift Mode – On

		1.5 m/5 ft		3.0 m/10 ft		4.5 m/15 ft		6.0 m/20 ft		7.5 m/25 ft				
														m ft
7.5 m **25.0 ft**	kg **lb**							*4900	*4900			*4200 ***9,350**	*4200 ***9,350**	6.15 **19.78**
6.0 m **20.0 ft**	kg **lb**							*5300 ***11,650**	*5300 ***11,650**			*3900 ***8,600**	*3900 ***8,600**	7.28 **23.71**
4.5 m **15.0 ft**	kg **lb**							*5850 ***12,700**	*5850 **12,650**	*5450 ***12,000**	4150 **8,900**	*3850 ***8,400**	3750 **8,250**	7.98 **26.10**
3.0 m **10.0 ft**	kg **lb**					*8550 ***18,350**	*8550 ***18,350**	*6700 ***14,500**	5600 **12,100**	*5850 ***12,700**	4050 **8,650**	*3900 ***8,600**	3400 **7,500**	8.35 **27.38**
1.5 m **5.0 ft**	kg **lb**					*10 300 ***22,250**	8000 **17,200**	*7600 ***16,450**	5350 **11,500**	6200 **13,350**	3900 **8,400**	*4150 ***9,150**	3300 **7,250**	8.44 **27.70**
Ground Line	kg **lb**			*6550 ***15,000**	*6550 ***15,000**	*11 300 ***24,450**	7700 **16,550**	*8250 ***17,850**	5150 **11,100**	6100 **13,100**	3800 **8,200**	*4600 ***10,100**	3350 **7,350**	8.26 **27.09**
–1.5 m **–5.0 ft**	kg **lb**	*7000 ***15,600**	*7000 ***15,600**	*11 350 ***25,700**	*11 350 ***25,700**	*11 400 ***24,700**	7600 **16,300**	8350 **17,950**	5100 **10,950**	6050 **13,050**	3800 **8,150**	*5400 ***11,950**	3600 **7,950**	7.78 **25.48**
–3.0 m **–10.0 ft**	kg **lb**	*12 000 ***26,950**	*12 000 ***26,950**	*15 150 ***32,750**	14 800 **31,650**	*10 650 ***23,050**	7650 **16,450**	*7900 ***17,000**	5100 **11,000**			*6450 ***14,250**	4250 **9,400**	6.94 **22.67**
–4.5 m **–15.0 ft**	kg **lb**			*12 050 ***25,750**	*12 050 ***25,750**	*8650 ***18,400**	7900 **17,000**					6550 **14,350**	5850 **13,150**	5.60 **18.08**

Boom – HD-R5.7 m (18'8")
Stick – HD-R2.9B1 (9'6")

Counterweight – 6.9 mt (7.6 t)
Shoes – 700 mm (28") triple grouser

Bucket – None
Heavy Lift Mode – On

		1.5 m/5 ft		3.0 m/10 ft		4.5 m/15 ft		6.0 m/20 ft		7.5 m/25 ft				
														m ft
7.5 m **25.0 ft**	kg **lb**							*4950	*4950			*4300 ***9,500**	*4300 ***9,500**	6.15 **20.18**
6.0 m **20.0 ft**	kg **lb**							*5450 ***12,000**	5400 **11,550**			*3950 ***8,750**	3900 **8,750**	7.29 **23.92**
4.5 m **15.0 ft**	kg **lb**							*6000 ***13,100**	5250 **11,250**	*5650 ***12,250**	3700 **7,950**	*3900 ***8,550**	3350 **7,400**	7.99 **26.21**
3.0 m **10.0 ft**	kg **lb**					*8800 ***18,900**	7600 **16,400**	*6900 ***15,000**	5000 **10,800**	5600 **12,050**	3600 **7,750**	*4000 ***8,750**	3050 **6,750**	8.36 **27.43**
1.5 m **5.0 ft**	kg **lb**					*10 650 ***22,950**	7150 **15,350**	7650 **16,400**	4800 **10,300**	5500 **11,800**	3500 **7,550**	*4200 ***9,250**	2950 **6,500**	8.45 **27.72**
Ground Line	kg **lb**			*6600 ***15,150**	*6600 ***15,150**	*11 650 **25,200**	6850 **14,800**	7450 **16,000**	4600 **9,950**	5400 **11,600**	3400 **7,350**	*4650 ***10,250**	3000 **6,600**	8.26 **27.10**
–1.5 m **–5.0 ft**	kg **lb**	*7050 ***15,750**	*7050 ***15,750**	*11 400 ***25,850**	*11 400 ***25,850**	11 650 **25,000**	6800 **14,600**	7350 **15,850**	4550 **9,800**	5350 **11,550**	3400 **7,300**	5100 **11,250**	3250 **7,150**	7.78 **25.52**
–3.0 m **–10.0 ft**	kg **lb**	*12 100 ***27,100**	*12 100 ***27,100**	*15 600 ***33,850**	13 200 **28,250**	*11 050 ***23,850**	6850 **14,700**	7400 **15,900**	4550 **9,850**			6000 **13,350**	3800 **8,400**	6.95 **22.80**
–4.5 m **–15.0 ft**	kg **lb**			*12 500 ***26,750**	*12 500 ***26,750**	*9000 ***19,100**	7050 **15,150**					*6800 ***14,950**	5200 **11,700**	5.60 **18.37**

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads meet hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Reach Boom Lift Capacities

Load Point Height | Load at Maximum Reach | Load Radius Over Front | Load Radius Over Side

Boom – HD-R5.7 m (18'8")
Stick – HD-R2.9B1 (9'6")

Counterweight – 6.9 mt (7.6 t)
Shoes – 600 mm (24") triple grouser

Bucket – None
Heavy Lift Mode – On

		1.5 m/5 ft		3.0 m/10 ft		4.5 m/15 ft		6.0 m/20 ft		7.5 m/25 ft				
														m **ft**
7.5 m **25.0 ft**	kg **lb**							*4950	*4950			*4300 ***9,500**	*4300 ***9,500**	6.15 **20.18**
6.0 m **20.0 ft**	kg **lb**							*5450 ***12,000**	5300 **11,400**			*3950 ***8,750**	3850 **8,600**	7.29 **23.92**
4.5 m **15.0 ft**	kg **lb**							*6000 ***13,100**	5150 **11,100**	5600 **12,050**	3650 **7,800**	*3900 ***8,550**	3300 **7,250**	7.99 **26.21**
3.0 m **10.0 ft**	kg **lb**					*8800 ***18,900**	7500 **16,150**	*6900 ***15,000**	4950 **10,600**	5500 **11,850**	3550 **7,650**	*4000 ***8,750**	3000 **6,600**	8.36 **27.43**
1.5 m **5.0 ft**	kg **lb**					*10 650 ***22,950**	7000 **15,150**	7500 **16,150**	4700 **10,150**	5400 **11,600**	3450 **7,400**	*4200 ***9,250**	2900 **6,400**	8.45 **27.72**
Ground Line	kg **lb**			*6600 ***15,150**	*6600 ***15,150**	11 550 **24,800**	6750 **14,550**	7350 **15,750**	4550 **9,750**	5300 **11,400**	3350 **7,200**	4650 **10,150**	2950 **6,500**	8.26 **27.10**
–1.5 m **–5.0 ft**	kg **lb**	*7050 ***15,750**	*7050 ***15,750**	*11 400 ***25,850**	*11 400 ***25,850**	11 450 **24,550**	6700 **14,350**	7250 **15,600**	4450 **9,600**	5250 **11,350**	3350 **7,150**	5000 **11,050**	3200 **7,000**	7.78 **25.52**
–3.0 m **–10.0 ft**	kg **lb**	*12 100 ***27,100**	*12 100 ***27,100**	*15 600 ***33,850**	13 000 **27,800**	*11 050 ***23,850**	6750 **14,450**	7300 **15,650**	4500 **9,700**			5900 **13,100**	3750 **8,250**	6.95 **22.80**
–4.5 m **–15.0 ft**	kg **lb**			*12 500 ***26,750**	*12 500 ***26,750**	*9000 ***19,100**	6900 **14,900**					*6800 ***14,950**	5150 **11,550**	5.60 **18.37**

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads meet hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Work Tool Offering Guide*

Boom Type	HD Reach Boom R5.7 (18'8")
Stick Size	**R2.9B1 (9'6") HD**
Hydraulic Hammer	H115Es H120Es H130Es
Multi-Processor	MP15**
Pulverizer	P215
Mobile Scrap and Demolition Shear	S320B*** S325B# S340B#
Compactor (Vibratory Plate)	CVP110
Contractors' Grapple	G120B – G130B
Trash Grapple	These work tools are available for the 320E L RR. Consult your Cat dealer for proper match.
Thumbs	
Rakes	
Center-Lock Pin Grabber Coupler	
Dedicated Quick Coupler	

*Offerings not available in all areas. Matches are dependent on excavator configurations. Consult your Cat dealer for proper work tool match.

**Pin-on or CW coupler.

***Pin-on only.

#Boom mount.

Bucket Specifications and Compatibility

With Center Lock Coupler

		Width		Capacity		Weight		Fill	HD Reach Boom
	Linkage	mm	in	m^3	yd^3	kg	lb	%	**R2.9B1 (9'6") HD**
General Duty (GD)	B	600	24	0.46	0.61	546	1204	100%	●
	B	750	30	0.64	0.84	617	1361	100%	●
	B	1000	39	0.93	1.22	710	1566	100%	●
	B	1050	42	1.00	1.31	731	1611	100%	●
	B	1200	48	1.19	1.56	799	1761	100%	⦿
	B	1400	55	1.43	1.87	866	1909	100%	⊖
	B	1500	60	1.58	2.06	906	1997	100%	○
Heavy Duty (HD)	B	600	24	0.46	0.61	629	1386	100%	●
	B	750	30	0.64	0.84	728	1605	100%	●
	B	900	36	0.81	1.06	806	1775	100%	●
	B	1050	42	1.00	1.31	860	1895	100%	●
	B	1200	48	1.19	1.56	916	2018	100%	⦿
	B	1350	54	1.38	1.81	1018	2244	100%	⊖
	B	1500	60	1.58	2.06	1079	2378	100%	○
Severe Duty (SD)	B	900	36	0.81	1.06	868	1913	90%	●
							Maximum load pin-on (payload + bucket)	kg	3110
								lb	6855

Maximum Material Density:

- ● 2100 kg/m^3 (3,500 lb/yd^3)
- ⦿ 1800 kg/m^3 (3,000 lb/yd^3)
- ⊖ 1500 kg/m^3 (2,500 lb/yd^3)
- ○ 1200 kg/m^3 (2,000 lb/yd^3)

The above loads are in compliance with hydraulic excavator standard EN474, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled.

Capacity based on ISO 7451.

Bucket weight with General Duty tips.

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

320E L RR Standard Equipment

Standard Equipment

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

ENGINE
- C6.6 ACERT diesel engine
- Biodiesel capable
- U.S. EPA Tier 4 Interim
- 2300 m (7,546') altitude capability
- Electric priming pump (lifting pump)
- Automatic engine speed control
- Economy, Standard, and HP modes
- Two-speed travel
- Side-by-side cooling system
- Radial seal air filter
- Primary filter with water separator and water separator indicator switch
- Starting kit, cold weather, –25° C (–13° F)
- Screen filter in fuel line
- Primary fuel filter
- Secondary fuel filter

HYDRAULIC SYSTEM
- Regeneration circuit for boom and stick
- Reverse swing dampening valve
- Automatic swing parking brake
- High-performance hydraulic return filter
- Capability of installing Cat Bio hydraulic oil
- Quick drains, engine and hydraulic oil (QuickEvac™)

CAB
- Pressurized operator station with positive filtration
- Mirror package
- Sliding upper door window (left-hand cab door)
- Glass-breaking safety hammer
- Removable lower windshield with in cab storage bracket
- Coat hook
- Beverage holder
- Literature holder
- AM/FM Radio with MP3 auxiliary audio port
- Two stereo speakers
- Storage shelf suitable for lunch or toolbox
- Color LCD display with warning, filter/fluid change, and working hour information
- Adjustable armrest
- Height adjustable joystick consoles
- Neutral lever (lock out) for all controls
- Travel control pedals with removable hand levers
- Two power outlets, 10 amp (total)
- Laminated glass front upper window and tempered other windows
- Cab hatch
- Seat, high-back air suspension with heater and ventilator
- Sunscreen
- Windshield wiper with washer

UNDERCARRIAGE
- Grease Lubricated Track GLT2, resin seal
- Towing eye on base frame
- Segmented (2 piece) track guiding guard

ELECTRICAL
- 80 amp alternator
- Circuit breaker

LIGHTS
- Boom light with time delay
- Exterior lights integrated into storage box

SECURITY
- Cat one key security system
- Door locks
- Cap locks on fuel and hydraulic tanks
- Lockable external tool/storage box
- Signaling/warning horn
- Secondary engine shutoff switch
- Openable skylight for emergency exit
- Rearview camera

TECHNOLOGY
- Product Link

Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

ENGINE
- Starting kit, cold weather, –25° C (–13° F)
- Jump start receptacle
- Radiator screen

HYDRAULIC SYSTEM
- Control pattern quick changer, two way
- Additional circuit
- Boom and stick lines
- High-pressure line
- Medium-pressure line
- Cat quick coupler line – high pressure capable
- Electronic control device, 1/2P, one-way circuit
- Electronic control device (Common), 1/2P, common circuit
- Electronic control device (Common), 1P, two-way circuit

UNDERCARRIAGE
- 600 mm (24") triple grouser shoes
- 700 mm (28") triple grouser shoes
- 790 mm (31") triple grouser shoes
- Guard, full length for long FG undercarriage
- Guard, heavy-duty bottom
- Center track guiding guard
- Segmented (2 piece) track guiding guard

COUNTERWEIGHT
- 6.9 mt (7.6 t) with lifting eye

FRONT LINKAGE
- Quick coupler

LIGHTS
- Working lights, cab mounted with time delay
- HID lights, cab mounted with time delay
- Halogen boom lights

SECURITY
- FOGS, bolt-on
- Side rubber bumper
- Cat MSS (anti-theft device)

GUARD
- Side rubber bumper

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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