

328D LCR

Hydraulic Excavator



Engine

Engine Model	Cat® C7 ACERT™	
Net Flywheel Power	152 kW	204 hp

Weights

Minimum Weight	33 270 kg	73,350 lb
Maximum Weight	39 845 kg	87,850 lb

Features

C7 with ACERT Technology

ACERT Technology works at the point of combustion to optimize engine performance and provide low exhaust emissions while meeting U.S. EPA Tier 3 EPA/ARB Flexibility requirements.

Hydraulics

The hydraulic system has been designed to provide reliability and outstanding controllability.

Operator Station

A ROPS cab provides maximum space, wider visibility and easy access to switches. The monitor is a full-color display that allows the operator to understand the machine information easily.

Versatility

Caterpillar offers a wide variety of factory-installed attachments that enhance performance and job site management.

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The D Series incorporates innovations for improved performance and versatility.

Compact Radius

The 328D LCR has been designed to rotate with a minimal amount of counterweight hanging over the tracks, which allows it to work in tight, confined areas.

Space Restriction

The increasing need to work within space-restricted areas has created a demand for larger excavators that can also work within tighter quarters and provide greater productivity. The newest addition to this lineup of compact radius (CR) excavators is the 328D LCR.

Productivity

Even though the 328D LCR has been designed for use in specific applications that require high maneuverability in confined spaces, it still maintains the ability to accomplish tasks in a variety of applications where space is not a factor.

Swing Radius

The Cat 328D LCR has a tail swing radius of 1900 mm compared to 3090 mm for the standard Cat 329E L. This reduction of tail swing may allow for swing operation with greater confidence knowing that the tail of the machine only has a minimal amount of overhang.

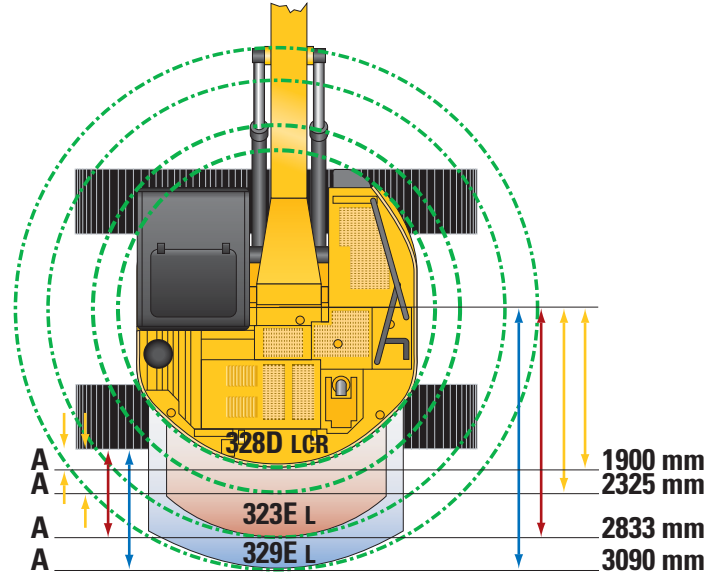
Lift and Stability

The boom on the 328D LCR has been moved more toward the center of the machine. This results in overall greater lift capacity over the front as compared to the standard 329E L. In addition to the repositioning of the boom, the Cat 328D LCR utilizes the undercarriage of the 336D L, which allows for an extremely stable operating platform.

328D LCR versus 329E L

Compare minimum front swing radius and tail swing radius:

	328D LCR	329E L
Tail swing radius (mm)	1900	3090
Minimum front swing radius (mm)	3412	4180



	328D LCR	329E L
Tail swing radius (mm)	1900	3090
A Tail Overhang (mm)		
with 600 mm shoes	305	1495
with 850 mm shoes	180	1370



C7 with ACERT Technology

Built for power reliability, economy and low emissions.

Cat C7 ACERT

The Cat C7 with ACERT Technology introduces a series of evolutionary, incremental improvements that provide breakthrough engine technology. The building blocks of ACERT Technology are fuel delivery, air management, and electronic control. ACERT Technology optimizes engine performance while meeting U.S. EPA Tier 3 EPA/ARB Flexibility requirements and EPA/ARB Tier 4 Interim AB&T requirements for emission regulation.

Performance

The 328D LCR, equipped with the C7 engine with ACERT Technology provides 8 percent more horsepower as compared to the 3126B ATAAC HEUI in the 325C LCR.

Automatic Engine Speed Control

The two-stage, one-touch control maximizes fuel efficiency and reduces sound levels.

ADEM™ A4 Engine Controller

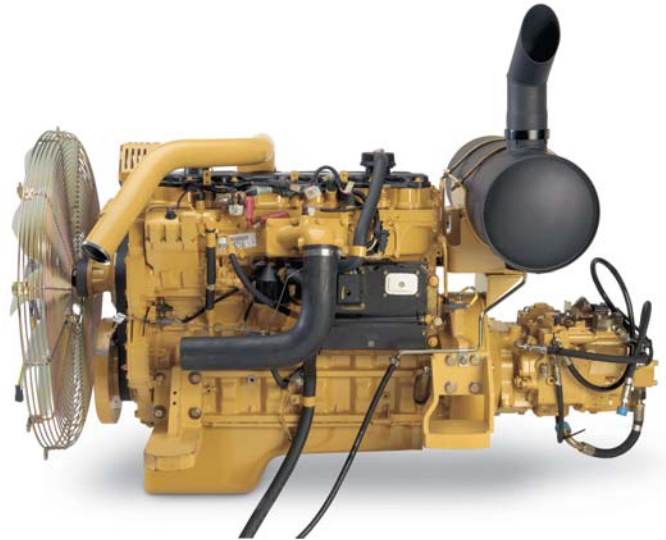
The ADEM A4 electronic control module manages fuel delivery to get the best performance per liter (gallon) of fuel used. The engine management system provides flexible fuel mapping, allowing the engine to respond quickly to varying application needs. It tracks engine and machine conditions while keeping the engine operating at peak efficiency.

Electronic Control Module

The Electronic Control Module (ECM) works as the “brain” of the engine’s control system, responding quickly to operating variables to maximize engine efficiency. Fully integrated with sensors in the engine’s fuel, air, coolant, and exhaust systems, the ECM stores and relays information on conditions such as rpm, fuel consumption, and diagnostic information.

Fuel Delivery

The Cat C7 features electronic controls that govern the fuel injection system. Multiple injection fuel delivery involves a high degree of precision. Precisely shaping the combustion cycle lowers combustion chamber temperatures, generating fewer emissions and optimizing fuel combustion. This translates into more work output for your fuel cost.



Cooling System

The 328D LCR side-by-side cooling allows easy access to keep the cooling cores free of debris.

Air Cleaner

The radial seal air filter features a double-layered core for more efficient filtration.

Noise Reduction Technologies

Engine mounts are rubber coated to reduce vibrations. Further noise reduction is achieved through design changes to the isolated top cover, oil pan, sculpted crankcase, and other components.

Hydraulics

Cat hydraulics deliver power and precise control to keep material moving.





Component Layout

The hydraulic system and component locations have been designed to provide a high level of system efficiency. The main pumps, control valves, and hydraulic tank are located close together. This allows for shorter tubes and lines between components, reducing friction loss and pressure drops in the lines. The layout further provides greater operator comfort by placing the radiator on the cab side of the upper structure. This allows incoming air to enter the engine compartment from the operator side. Hot air and corresponding engine sound exits on the opposite side away from the operator. This reduces engine compartment heat and sound being transmitted to the operator.

Pilot System

The pilot pump is independent from the main pumps and controls the front linkage, swing, and travel operations.

Hydraulic Cross Sensing System

The hydraulic cross sensing system utilizes each of two hydraulic pumps to 100 percent of engine power under all operating conditions. This improves productivity with faster implement speeds and quicker, stronger pivot turns.

Boom and Stick Regeneration Circuit

Boom and stick regeneration circuit saves energy during boom-down and stick-in operation. This increases operator efficiency and reduces cycle times and pressure loss. Benefits include higher productivity, lower operating costs, and increased fuel efficiency.

Auxiliary Hydraulic Valve

The auxiliary valve is standard on the 328D LCR. Control circuits are available as attachments, allowing for operation of high- and medium-pressure tools. These include shears, grapples, hammers, pulverizers, multi-processors, and vibratory plate compactors.

Hydraulic Cylinder Snubbers

Snubbers are located at the rod-end of the boom cylinders and both ends of the stick cylinders. Benefits include reducing sound levels and shocks while extending component life.



Operator Station

The workstation is spacious, quiet, and comfortable, assuring high productivity during a long workday. The attachment switches, key switch, and throttle dial are conveniently located on the right-hand wall. The monitor is easy to see and maximizes visibility.

Monitor

The monitor is a full color Liquid Crystal Display (LCD) programmable in up to 27 different languages to meet today's diverse workforce.

Pre-Start Check

Prior to starting the machine, the system will check for low fluid levels. These include engine oil, hydraulic oil, and engine coolant.

Gauge Display

Fuel level, hydraulic oil temperature, and coolant temperature are displayed.

Seat

A new adjustable air suspension seat is available in the 328D LCR. Wide adjustable armrests and a retractable seat belt are also included.



Joystick Control

The joystick controls are designed for low lever effort and match the operator's natural wrist and arm position.

Hydraulic Activation Control Lever

For added safety, this lever must be in the operate position to activate the machine control functions.

ROPS Certified Operator Station

ROPS (Roll Over Protective Structure) compliant cab is standard with improved visibility. Falling Object Guard System (FOGS) or front windshield guard can be bolted directly to the cab at factory or in the field.

Cab Mounts

The ROPS cab shell is attached to the frame with viscous rubber cab mounts dampening vibrations and sound to increase operator comfort.

Windows

A 70/30 split front window enhances operator visibility. An enlarged skylight provides excellent visibility and ventilation.

Console

Redesigned consoles feature a simple, functional design to reduce operator fatigue, ease of switch operation, and excellent visibility. Both consoles have attached armrests with height adjustments.



Operator Station

Designed for comfort, simple and easy operation, the 328D LCR allows the operator to focus on production.

Structures

328D LCR structural components and undercarriage are the backbone of the machine's durability.

Robotic Welding

Up to 95 percent of the structural welds on a Cat excavator are completed by robots. Robotic welds achieve over three times the penetration of manual welds.

Carbody Design and Track Roller Frames

X-shaped, box-section carbody provides excellent resistance to torsional bending. Robot-welded track roller frames are press-formed, pentagonal units to deliver exceptional strength and service life.

Main Frame

Rugged main frame is designed for maximum durability and efficient use of materials.

Swing Bearing

The swing bearing utilizes cross roller bearings versus the traditional ball bearing design. The cross roller bearing design allows for more surface contact to absorb the stresses that are a result of the high swing torque that Cat offers. It provides exceptional machine stability and reduces machine pitching during boom down operation.

Undercarriage

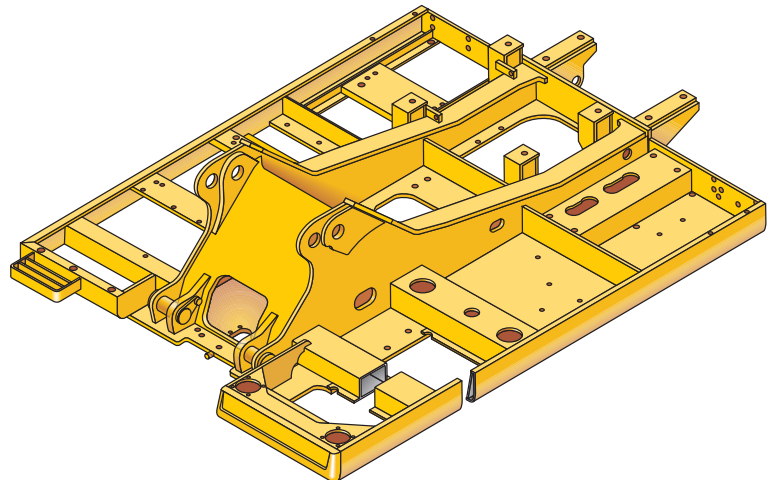
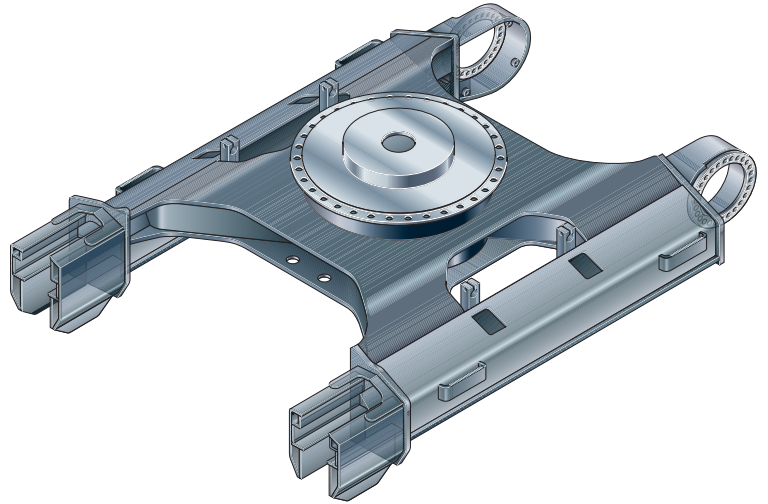
Durable Cat undercarriage absorbs stresses and provides excellent stability.

Rollers and Idlers

Sealed and lubricated track rollers, carrier rollers, and idlers provide excellent service life to keep the machine in the field longer.

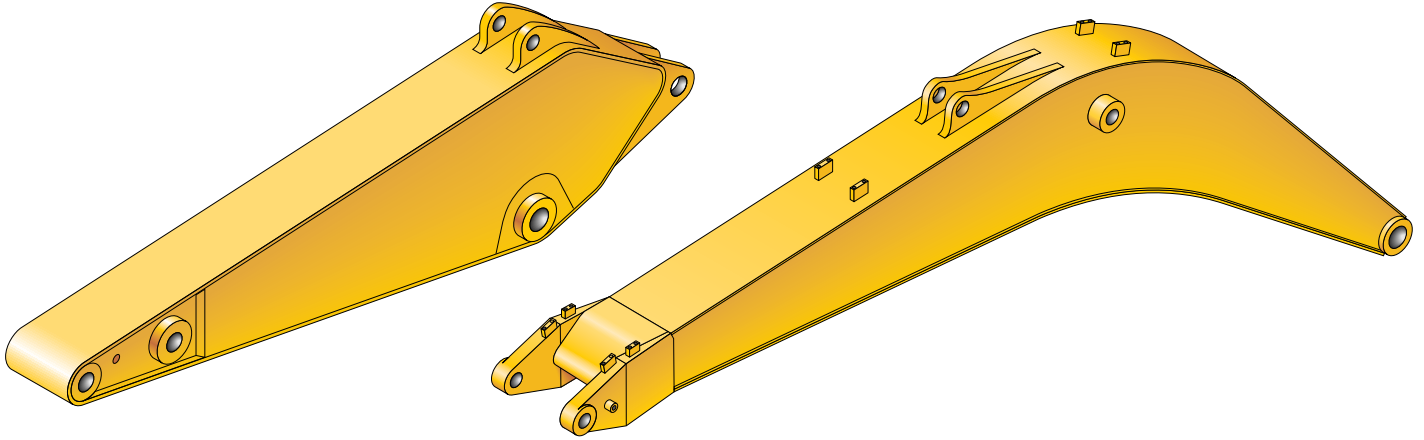
Long Undercarriage

Long (L) undercarriage maximizes stability and lift capacity. Two additional track links have been added to the 328D LCR. This long, wide, and sturdy undercarriage offers a very stable work platform.



Booms, Sticks and Bucket Attachments

Designed for maximum flexibility, productivity and high efficiency on all jobs, the 328D LCR offers a wide range of configurations suitable for a variety of applications.



Reach Boom

The reach boom features an optimum design that maximizes digging envelopes.

R3.2CB2 (10'6") Stick

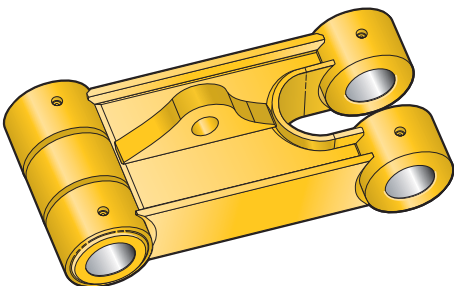
This stick offers excellent reach and depth in trenching and general construction applications.

R2.65CB2 (8'8") Stick

This stick is suited to trenching, excavation, and other general construction work. It has been designed with enough reach and depth to match a large-capacity bucket and high digging force.

Linkage Pins

The bucket linkage pins have been enlarged to improve reliability and durability. All the pins in the front linkages have thick chrome plating, giving them high wear and corrosion resistance.



Bucket Linkage

The power link improves durability and increases machine lifting capability in key lifting positions. With the integrated lift eye, it is easier to use than compared to the previous power link.

Work Tools

You can dig, hammer, rip, and cut with confidence.

An extensive range of Cat work tools for the 328D LCR includes buckets, hydraulic hammers, multi-processors, scrap and demolition shears, grapples, rippers, and thumbs. Each is designed to optimize machine versatility and performance. Consult with your local Cat dealer for product availability.

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 a pin grabber style quick coupler and features a patent-pending locking system. A highly visible secondary 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 328D LCR system and feature new geometry for better performance. The base edge has been repositioned, 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; a new lift eye design accepts a wide range of shackle sizes. All benefits are captured in a new bucket line with a new bucket naming convention.



Durability Categories Suitable for Any Situation

Caterpillar offers four standard bucket categories for excavators. Each category is based on intended bucket durability when used in recommended applications and material. Each bucket durability type is available as pin-on or can be used with a quick coupler. Red areas on bucket images illustrate additional protection against wear as it increases across each category.

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.

Extreme Duty (XD)

XD buckets are the new standard for high-abrasion conditions, including high quartzite granite.



Specialty Buckets

In addition to standard bucket categories, several specialty bucket styles are available for the 328D LCR, each with a different purpose:

- **Ditch Cleaning and Tilt 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
- **Power Buckets** for use in abrasive applications where breakout force and cycle times are critical
- **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 tools 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.

Versatility

A wide variety of optional factory-installed attachments will enhance performance and improve job site management.

Tool Control System

This system offers the most flexibility and versatility of the auxiliary options offered. The system is available in two configurations, as a stand-alone system or with a medium pressure circuit and third pump. This system handles either single or double function, one or two pump tools. Additionally, the medium-pressure circuit allows use of tools that rotate such as grapples, shears, or multi-processors. Up to 10 different tool settings can be pre-programmed and selected through the monitor.

Auxiliary Hydraulics Options

There are four different options that can be factory installed to meet the various demands for hydra-mechanical tools.

- Single Function
- Double Function
- Tool Control System
- Medium Pressure

Single-Function Auxiliary Hydraulics

This single-function circuit utilizes one-way flow action with two pumps. The circuit can run tools such as hammers and vibratory plate compactors.

Double-Function Auxiliary Hydraulics

The double-function circuit utilizes two-way flow and one pump. It is capable of running tools such as a thumb, tilt bucket, or non-rotating grapples or shears.

Cat Product Link™

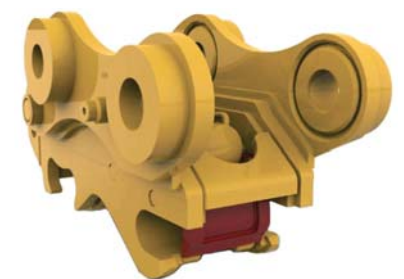
This deeply integrated machine monitoring system is designed to help customers improve their overall fleet management effectiveness. Events and diagnostic codes as well as hours, fuel consumption, idle time, machine location, and other detailed information are transmitted to a secure web application called VisionLink™.

Machine Security

The optional Cat Machine Security System is available from the factory. Utilization of specific keys prevents unauthorized machine use and is a theft deterrent.

Center-Lock Pin Grabber Coupler

This coupler increases excavator versatility by allowing you to pick up a wide variety of work tools without leaving the cab.



Center-Lock Pin Grabber Coupler

Service and Maintenance

Simplified service and maintenance features save you time and money.



Ground Level Service

The design and layout was made with the service technician in mind. Many service locations are easily accessible at ground level, allowing critical maintenance to get done quickly and efficiently.

Air Filter Compartment

The air filter features a double-element construction for superior cleaning efficiency. When the air cleaner plugs, a warning is displayed on the monitor screen inside the cab.

Pump Compartment

A service door on the right side of the upper structure allows ground-level access to the pump and pilot filter.

Radiator Compartment

The left rear service door allows easy access to the engine radiator, oil cooler, and air-to-air-aftercooler. A reserve tank and drain cock are attached to the radiator for simplified maintenance.

Greasing Points

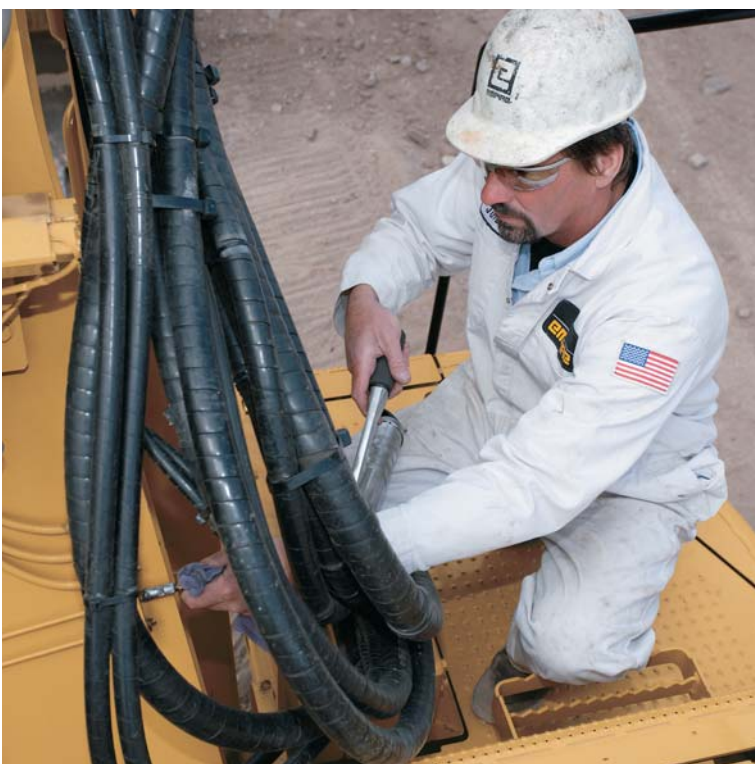
A concentrated remote greasing block on the boom delivers grease to hard-to-reach locations on the front.

Diagnostics and Monitoring

The 328D LCR is equipped with S-O-SSM sampling and hydraulic test ports for the hydraulic system, engine oil, and for coolant. A test connection for the Cat Electronic Technician (Cat ET) service tool is located in the cab.

Extended Service Interval

The service and maintenance intervals have been increased to extend machine up time.



Complete Customer Support

Cat dealer services help you operate longer with lower costs.



Product Support

You will find nearly all parts at our dealer parts counter. Cat dealers utilize a worldwide computer network to find in-stock parts to minimize machine downtime. Save money with remanufactured components.

Customer Support Agreements

Cat dealers offer a variety of product support agreements and work with customers to develop a plan that best meets specific needs. These plans can cover the entire machine, including attachments, to help protect the customer's investment.

Operation

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

Maintenance Services

Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as scheduled oil sampling, coolant sampling, and technical analysis help you avoid unscheduled repairs.

328D LCR Hydraulic Excavator Specifications

Engine

Engine Model	Cat C7 ACERT	
Net Flywheel Power	152 kW	204 hp
Net Power – ISO 9249	152 kW	204 hp
Net Power – SAE J1349	151 kW	202 hp
Net Power – EEC 80/1269	152 kW	204 hp
Bore	110 mm	4.3 in
Stroke	127 mm	5 in
Displacement	7.2 L	440 in ³

- The 328D LCR meets U.S. EPA Tier 3 EPA/ARB Flexibility requirements and EPA/ARB Tier 4 Interim AB&T requirements.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator.
- No engine derating needed up to 2300 m (7,500 ft).

Weights

Minimum Weight*	33 270 kg	73,350 lb
Maximum Weight**	39 845 kg	87,850 lb

*Long Undercarriage, 6.15 m (20'2") Reach Boom, R2.65CB1 (8'8") Stick, 0.63 m³ (0.83 yd³) Bucket, 600 mm (24") TG Shoes.

**Long Undercarriage, 6.15 m (20'2") Reach Boom, R3.75CB1 (12'4") Stick, 1.54 m³ (2.02 yd³) HD Bucket, 850 mm (34") TG Shoes.

Service Refill Capacities

Fuel Tank Capacity	406 L	106 gal
Cooling System	32 L	8.5 gal
Engine Oil	32 L	8.5 gal
Swing Drive	10 L	2.6 gal
Final Drive (each)	8 L	2.1 gal
Hydraulic System (including tank)	290 L	76.6 gal
Hydraulic Tank	153 L	40.4 gal

Track

Optional	850 mm	34 in
Optional	700 mm	28 in
Optional	600 mm	24 in
Number of Shoes Each Side – Long Undercarriage	49	
Number of Track Rollers Each Side – Long Undercarriage	9	
Number of Carrier Rollers Each Side – Long Undercarriage	2	

Swing Mechanism

Swing Speed	10.2 rpm	
Swing Torque	82.2 kN·m	60,628 lb ft

Drive

Maximum Drawbar Pull	300 kN	67,443 lb
Maximum Travel Speed	4.2 km/h	2.6 mph

Hydraulic System

Main Implement System – Maximum Flow (2x)	235 L/min	62 gal/min
Maximum Pressure – Equipment	35 000 kPa	5,076 psi
Maximum Pressure – Equipment – Heavy	36 000 kPa	5,221 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	27 500 kPa	3,989 psi
Pilot System – Maximum Flow	32.4 L/min	8.6 gal/min
Pilot System – Maximum Pressure	3900 kPa	566 psi
Boom Cylinder – Bore	140 mm	5.5 in
Boom Cylinder – Stroke	1407 mm	55.4 in
Stick Cylinder – Bore	150 mm	5.9 in
Stick Cylinder – Stroke	1646 mm	64.8 in
CB2 Family Bucket Cylinder – Bore	135 mm	5.3 in
CB2 Family Bucket Cylinder – Stroke	1156 mm	46 in

Sound Performance

Performance ANSI/SAE

- 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.

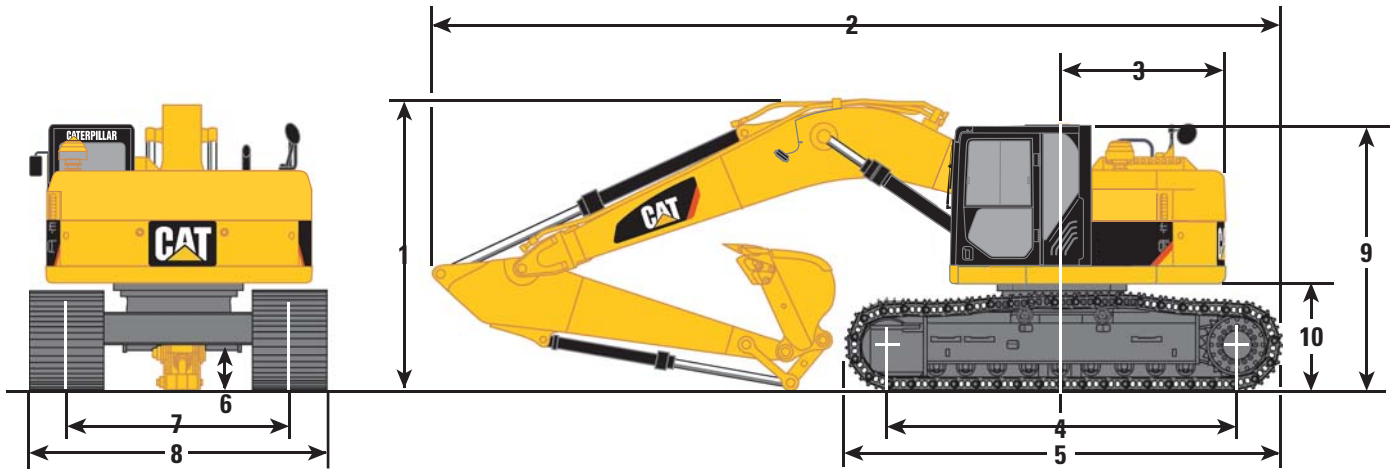
Standards

Brakes	SAE J1026 APR90
Cab/FOGS	SAE J1356 FEB88 ISO 10262
Cab/ROPS	ISO 12117-2:2008

328D LCR Hydraulic Excavator Specifications

Dimensions

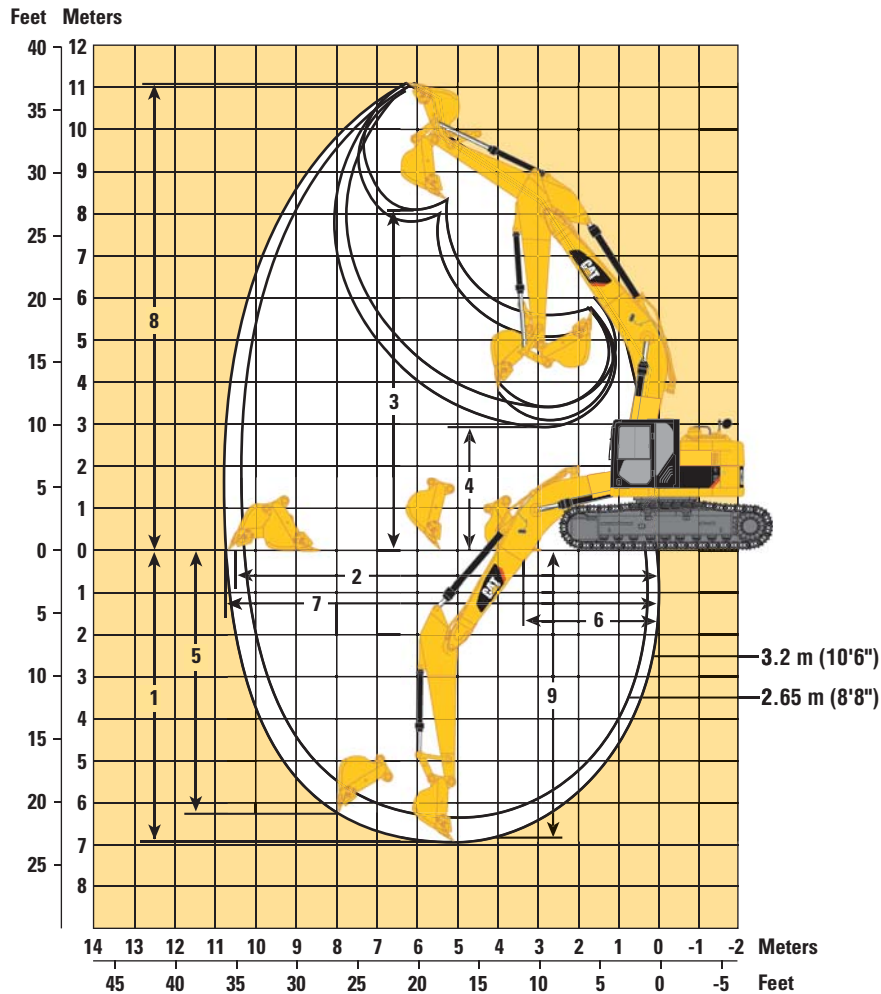
All dimensions are approximate.



Boom Options	Reach 6.15 m (20'2")	Reach 6.15 m (20'2")
Stick Size	R3.2CB2 m (10'6")	R2.65CB2 m (8'8")
1 Shipping Height	3370 mm (11'1")	3400 mm (11'2")
2 Shipping Length	9820 mm (32'3")	9820 mm (32'3")
3 Tail Swing Radius	1900 mm (6'3")	1900 mm (6'3")
4 Length to Center of Idler and Sprocket	4040 mm (13'3")	4040 mm (13'3")
5 Track Length	5020 mm (16'6")	5020 mm (16'6")
6 Ground Clearance	510 mm (1'8")	510 mm (1'8")
7 Track Gauge	2590 mm (8'6")	2590 mm (8'6")
8 Transport Width		
850 mm (34") Shoes	3440 mm (11'3")	3440 mm (11'3")
700 mm (28") Shoes	3290 mm (10'10")	3290 mm (10'10")
600 mm (24") Shoes	3190 mm (10'6")	3190 mm (10'6")
9 Cab Height	3190 mm (10'0")	3190 mm (10'0")
10 Counterweight Clearance	1200 mm (3'11")	1200 mm (3'11")

Working Ranges

All dimensions are approximate.



Boom Options	Reach 6.15 m (20'2")	Reach 6.15 m (20'2")
Stick Size	R3.2CB2 m (10'6")	R2.65CB2 m (8'8")
Bucket	HD 1.2 m ³ (1.57 yd ³)	HD 1.2 m ³ (1.57 yd ³)
1 Maximum Digging Depth	6920 mm (22'8")	6370 mm (20'11")
2 Maximum Reach at Ground Level	10 560 mm (34'8")	10 080 mm (33'1")
3 Maximum Loading Height	8040 mm (26'5")	7820 mm (25'8")
4 Minimum Loading Height	2990 mm (9'10")	3560 mm (11'8")
5 Maximum Vertical Wall Digging Depth	6260 mm (20'6")	5730 mm (18'10")
6 Minimum Front Swing Radius	3412 mm (11'2")	3392 mm (11'1")
7 Maximum Reach	10 770 mm (35'4")	10 310 mm (33'10")
8 Maximum Cutting Height	11 110 mm (36'5")	10 910 mm (35'10")
9 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6760 mm (22'2")	6190 mm (20'4")

328D LCR Hydraulic Excavator Specifications

Bucket and Stick Forces

Power Buckets				
Stick Size	R3.2CB2 (10'6")	R3.2CB2 (10'6") with Coupler	R2.65CB2 (8'8")	R2.65CB2 (8'8") with Coupler
	Bucket Digging Force (ISO)	200 kN (44,962 lb)	162 kN (36,419 lb)	201 kN (45,187 lb)
Stick Digging Force (ISO)	133 kN (29,900 lb)	125 kN (28,101 lb)	152 kN (34,171 lb)	142 kN (31,923 lb)
Bucket Digging Force (SAE)	176 kN (39,566 lb)	157 kN (35,295 lb)	176 kN (39,566 lb)	157 kN (35,295 lb)
Stick Digging Force (SAE)	129 kN (29,000 lb)	124 kN (27,876 lb)	147 kN (33,047 lb)	141 kN (31,698 lb)

HD and HDR Buckets				
Stick Size	R3.2CB2 (10'6")	R3.2CB2 (10'6") with Coupler	R2.65CB2 (8'8")	R2.65CB2 (8'8") with Coupler
	Bucket Digging Force (ISO)	179 kN (40,241 lb)	155 kN (34,845 lb)	180 kN (40,466 lb)
Stick Digging Force (ISO)	130 kN (29,225 lb)	123 kN (27,651 lb)	149 kN (33,497 lb)	139 kN (31,248 lb)
Bucket Digging Force (SAE)	159 kN (35,745 lb)	142 kN (31,923 lb)	159 kN (35,745 lb)	142 kN (31,923 lb)
Stick Digging Force (SAE)	126 kN (28,326 lb)	120 kN (26,977 lb)	143 kN (32,148 lb)	136 kN (30,574 lb)

Major Component Weights

All weights are approximate.

Base Machine with Counterweight (without front linkage) with 850 mm (34") Shoe	29 700 kg	65,480 lb
Two Boom Cylinders (each)	270 kg	595 lb
Counterweight		
Standard Counterweight	7720 kg	17,020 lb
Boom (includes lines, pins and stick cylinder)		
Reach Boom 6.15 m (20'2")	2300 kg	5,071 lb
Stick (includes lines, pins, bucket cylinder and linkage)		
R3.2CB2 m (10'6")	1390 kg	3,064 lb
R2.65CB2 m (8'8")	1300 kg	2,866 lb

Bucket Specifications and Compatibility*

	Linkage	Width		Capacity		Weight		Fill	Reach Booms		
		mm	in	m ³	yd ³	kg	lb		%	R2.65 (8'8")	R3.2 (10'6")
Without Quick Coupler											
General Duty (GD)	CB	600	24	0.63	0.83	724	1,595	100%	●	●	●
	CB	750	30	0.86	1.13	810	1,785	100%	●	●	●
	CB	900	36	1.09	1.43	907	1,998	100%	●	●	●
	CB	1050	42	1.34	1.75	979	2,157	100%	●	●	●
	CB	1200	48	1.58	2.07	1070	2,358	100%	⊙	⊙	⊙
	CB	1350	54	1.83	2.40	1164	2,564	100%	⊙	⊖	⊖
Heavy Duty (HD)	CB	600	24	0.52	0.68	763	1,681	100%	●	●	●
	CB	750	30	0.71	0.93	847	1,866	100%	●	●	●
	CB	900	36	0.91	1.19	935	2,061	100%	●	●	●
	CB	1050	42	1.12	1.46	1024	2,256	100%	●	●	●
	CB	1200	48	1.33	1.74	1095	2,413	100%	●	●	●
	CB	1350	54	1.54	2.02	1188	2,618	100%	●	●	⊙
	CB	1500	60	1.76	2.30	1285	2,831	100%	⊙	⊖	⊖
	CB	1650	66	1.97	2.58	1357	2,990	100%	⊙	⊖	○
	DB	1500	60	1.88	2.46	1624	3,579	100%			
Severe Duty (SD)	CB	600	24	0.52	0.68	810	1,784	90%	●	●	●
	CB	750	30	0.71	0.93	902	1,987	90%	●	●	●
	CB	900	36	0.91	1.19	999	2,202	90%	●	●	●
	CB	1050	42	1.12	1.46	1097	2,417	90%	●	●	●
	CB	1200	48	1.33	1.74	1178	2,595	90%	●	●	●
Maximum load pin-on (payload + bucket)								kg	4740	4290	3970
								lb	10,447	9,455	8,750

*Matches are dependent on excavator configurations. Consult your local Cat dealer for proper work tool match and product availability.

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.

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- ⊙ 1800 kg/m³ (3,000 lb/yd³)
- ⊖ 1500 kg/m³ (2,500 lb/yd³)
- 1200 kg/m³ (2,000 lb/yd³)

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.

328D LCR Hydraulic Excavator Specifications

Bucket Specifications and Compatibility*

	Linkage	Width		Capacity		Weight		Fill	Reach Booms		
		mm	in	m ³	yd ³	kg	lb		%	R2.65 (8'8")	R3.2 (10'6")
With Center-Lock Quick Coupler											
General Duty (GD)	CB	600	24	0.63	0.83	724	1,595	100%	●	●	●
	CB	750	30	0.86	1.13	810	1,785	100%	●	●	●
	CB	900	36	1.09	1.43	907	1,998	100%	●	●	●
	CB	1050	42	1.34	1.75	979	2,157	100%	●	●	⊙
	CB	1200	48	1.58	2.07	1070	2,358	100%	●	⊙	⊖
	CB	1350	54	1.83	2.40	1164	2,564	100%	⊖	⊖	○
Heavy Duty (HD)	CB	600	24	0.52	0.68	763	1,681	100%	●	●	●
	CB	750	30	0.71	0.93	847	1,866	100%	●	●	●
	CB	900	36	0.91	1.19	935	2,061	100%	●	●	●
	CB	1050	42	1.12	1.46	1024	2,256	100%	●	●	●
	CB	1200	48	1.33	1.74	1095	2,413	100%	●	●	⊙
	CB	1350	54	1.54	2.02	1188	2,618	100%	⊙	⊖	⊖
	CB	1500	60	1.76	2.30	1285	2,831	100%	⊖	○	○
	CB	1650	66	1.97	2.58	1357	2,990	100%	⊖	○	◇
	DB	1500	60	1.88	2.46	1624	3,579	100%			
Severe Duty (SD)	CB	600	24	0.52	0.68	810	1,784	90%	●	●	●
	CB	750	30	0.71	0.93	902	1,987	90%	●	●	●
	CB	900	36	0.91	1.19	999	2,202	90%	●	●	●
	CB	1050	42	1.12	1.46	1097	2,417	90%	●	●	●
	CB	1200	48	1.33	1.74	1178	2,595	90%	●	●	⊙
Maximum load with coupler (payload + bucket)								kg	4235	3785	3465
								lb	9,335	8,343	7,638

*Matches are dependent on excavator configurations. Consult your local Cat dealer for proper work tool match and product availability.

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- ⊙ 1800 kg/m³ (3,000 lb/yd³)
- ⊖ 1500 kg/m³ (2,500 lb/yd³)
- 1200 kg/m³ (2,000 lb/yd³)
- ◇ 900 kg/m³ (1,500 lb/yd³)

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.

Work Tool Offering Guide*

Boom Option	Reach Boom – 6.15 m (20'2")		
Stick Size	R3.75CB2 (12'4")	R3.2CB2 (10'6")	R2.65CB2 (8'8")
Hydraulic Hammer	H120E S H130E S H140D S**	H120E S H130E S H140D S	H120E S H130E S H140D S
Multi-Processor	MP20 with CC Jaw** MP20 with CR Jaw** MP20 with PS Jaw** MP20 with S Jaw** MP20 with TS Jaw**	MP20 with CC Jaw MP20 with CR Jaw MP20 with PP Jaw** MP20 with PS Jaw*** MP20 with S Jaw MP20 with TS Jaw***	MP20 with CC Jaw MP20 with CR Jaw MP20 with PP Jaw MP20 with PS Jaw MP20 with S Jaw MP20 with TS Jaw
Pulverizer	P225**	P225***	P225
Mobile Scrap and Demolition Shear	S320B*** S340B (Boom Mount)	S320B S325B** S340B (Boom Mount)	S320B S325B*** S340B (Boom Mount)
Compactor (Vibratory Plate)	CVP110	CVP110	CVP110
Orange Peel Grapple			
Thumbs			
Rakes			
Center-Lock Pin Grabber Coupler			
Dedicated Quick Coupler			

These work tools are available for the 328D LRC.
Consult your local Cat dealer for proper work tool match and product availability.

*Matches are dependent on excavator configurations. Consult your local Cat dealer for proper work tool match and product availability.

**Pin-on only.

***Pin-on and CW coupler only.

328D LCR Hydraulic Excavator Specifications

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front

















Load Radius Over Side

Boom – 6.15 m (20'2")
Stick – R3.2CB2 (10'6")

Heavy Lift – On
Shoes – 850 mm (34") triple grouser















Bucket – None

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		9.0 m/30.0 ft			m ft		
																
9.0 m 30.0 ft	kg lb							*6000 *6000					*5800 *13,000	*5800 *13,000	6.04 19.24	
7.5 m 25.0 ft	kg lb							*7600 *16,700	*7600 *16,700				*5250 *11,600	*5250 *11,600	7.43 24.09	
6.0 m 20.0 ft	kg lb							*8050 *17,550	*8050 *17,550	*7550 *16,350	6050 13,000		*5050 *11,100	*5050 *11,100	8.33 27.18	
4.5 m 15.0 ft	kg lb			*16 050 *34,100	*16 050 *34,100	*11 150 *24,000	*11 150 *24,000	*9100 *19,650	8300 17,850	*8000 *17,350	5900 12,700		*5050 *11,050	4550 10,000	8.88 29.08	
3.0 m 10.0 ft	kg lb				*13 850 *29,750	12 000 25,900	*10 350 *22,350	7900 17,000	*8600 *18,600	8000 12,300	5750 12,300	*6350 *11,550	4350 9,350	*5200 *11,400	4250 9,350	9.16 30.03
1.5 m 5.0 ft	kg lb				*15 750 *33,950	11 350 24,400	*11 400 *24,650	7550 16,250	*9100 *19,750	5550 11,900	5400 11,900	*7050 *12,850	4300 9,200	*5550 *12,150	4150 9,150	9.18 30.11
Ground Line	kg lb			*5900 *13,500	*5900 *13,500	*16 200 *35,150	11 000 23,700	*11 900 *25,750	7300 15,750	9150 19,700	5400 11,650			*6100 *13,450	4250 9,350	8.94 29.34
-1.5 m -5.0 ft	kg lb	*7300 *16,300	*7300 *16,300	*11 100 *25,150	*11 100 *25,150	*15 600 *33,750	10 950 23,500	*11 700 *25,300	7250 15,550	9100 19,600	5350 11,500			*7150 *15,750	4600 10,100	8.43 27.63
-3.0 m -10.0 ft	kg lb			*17 750 *40,350	*17 750 *40,350	*13 900 *30,100	11 050 23,700	*10 600 *22,800	7250 15,650	*7850	5400			*7650 *16,800	5350 11,800	7.59 24.81
-4.5 m -15.0 ft	kg lb			*14 050 *30,000	*14 050 *30,000	*10 800 *23,000	*10 800 *23,000	*7850 *16,250	7500 16,150					*7150 *15,600	7050 *15,600	6.29 20.38

Boom – 6.15 m (20'2")
Stick – R2.65CB2 (8'8")

Heavy Lift – On
Shoes – 850 mm (34") triple grouser

Bucket – None

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft	
														
9.0 m 30.0 ft	kg lb											*7850 *17,600	*7850 *17,600	5.29 16.70
7.5 m 25.0 ft	kg lb							*8450 *18,550	*8450 *18,550			*6850 *15,200	*6850 *15,200	6.84 22.13
6.0 m 20.0 ft	kg lb							*8800 *19,150	8500 18,350	*8200 *16,700	6000 12,850	*6500 *14,350	5600 12,500	7.81 25.46
4.5 m 15.0 ft	kg lb					*12 300 *26,400	*12 300 *26,400	*9750 *21,100	8200 17,700	*8500 *18,450	5900 12,700	*6450 *14,250	4950 10,950	8.40 27.48
3.0 m 10.0 ft	kg lb					*14 850 *31,950	11 800 25,500	*10 900 *23,550	7850 16,950	*9000 *19,500	5750 12,350	*6650 *14,650	4600 10,150	8.69 28.48
1.5 m 5.0 ft	kg lb					*15 600 *35,150	11 300 24,300	*11 800 *25,500	7550 16,300	9350 20,100	5550 12,000	*7100 *15,600	4550 9,950	8.71 28.57
Ground Line	kg lb					*16 200 *35,150	11 100 23,850	*12 050 *26,050	7400 15,900	9200 19,850	5450 11,800	7800 17,150	4650 10,250	8.46 27.75
-1.5 m -5.0 ft	kg lb			*11 200 *25,450	*11 200 *25,450	*15 150 *32,850	11 100 23,850	*11 550 *24,950	7350 15,800	*8900 *19,100	5450 11,750	*8150 *17,900	5100 11,250	7.92 25.94
-3.0 m -10.0 ft	kg lb			*16 600 *36,000	*16 600 *36,000	*13 050 *28,150	11 250 24,150	*10 000 *21,400	7400 16,000			*7850 *17,300	6050 13,450	7.02 22.90
-4.5 m -15.0 ft	kg lb					*9150 *19,200	*9150 *19,200					*6800 *14,800	*6800 *14,800	5.58 18.00

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with 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.

Standard Equipment

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

ELECTRICAL

- 65 Ampere alternator
- Base machine light (frame)
- Horn
- Pre-start monitoring system – checks for low fluids (engine oil, coolant, hydraulic oil) prior to starting machine

OPERATOR ENVIRONMENT

- Air conditioner, heater, defroster with automatic climate control
- AM/FM radio with antenna and two speakers
- Ashtray
- Beverage/cup holder
- Bolt-on Falling Object Guarding System (FOGS) capability
- Cab glass
 - Openable and retractable two-piece front windshield
 - Sky-light, pop-up, polycarbonate
 - Rear window, emergency exit
- Coat hook
- Floor mat
- Instrument panel and gauges
- Joysticks, console mounted, pilot operated
- Light, interior
- Literature compartment
- Monitor, full graphic color display
- Neutral lever (lock out) for all controls
- Polycarbonate side windows
- Positive filtered ventilation
- Pressurized cab
- ROPS cab
- Seat, suspension, with high back and head rest
- Seat belt, retractable — 76 mm (3")
- Sun shade (for skylight)
- Travel control pedals with removable hand levers
- Windshield wiper and washer

ENGINE/POWER TRAIN

- Cat C7 ACERT
 - Air intake heater
 - Air-to-Air Aftercooler (ATAAC)
 - 24V electric starting
 - Hydraulic Electronic Unit Injectors (HEUI)
 - 2300 m (7,500 ft) altitude capability without derate
- Automatic engine speed control with one touch low idle
- Cooling
 - Protection of 43° C to –18° C (109° F to 0° F) at 50% concentration
- Electric priming pump
- Straight line travel
- Two speed auto-shift travel
- Water separator in fuel line
 - Water level indicator for water separator

UNDERCARRIAGE

- Grease lubricated track
- Heavy-duty rollers
- Hydraulic track adjusters
- Idler and center section track guards

OTHER STANDARD EQUIPMENT

- Automatic swing parking brake
- Auxiliary hydraulic valve
- Capability of stackable valves (maximum of two) for main valve
- Capability of auxiliary circuit
- Counterweight – 7720 kg (17,020 lb)
- Door locks, cap locks and Cat one key security system
- Fine swing control
- Fully pressurized hydraulic system
- Heavy lift
- Mirrors (upper frame, rear)
- S·O·S quick sampling valves for engine and hydraulic oil
- Travel alarm

328D LCR Optional Equipment

Optional Equipment

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

FRONT LINKAGE

- Booms
 - Reach 6.15 m (20'2")
- Sticks
 - Reach 3.75 m (12'4")
 - Reach 3.2 m (10'6")
 - Reach 2.65 m (8'8")
- Bucket linkage
 - CB1 family
- Boom lowering control device

ELECTRICAL

- Light, cab mounted (one)
- Machine Security System (MSS)
- Power supply (12V – 10 Amp)
- Product Link (PL522)

GUARDING

- Falling Object Guarding System (FOGS)
 - Either as a system or separate (Top/Bottom)
- Front windshield guard
 - Full length, wire mesh
- Heavy-duty bottom guards
- Track guiding guards
 - Sprocket end, idler end guard
 - Two-piece full length (center guard removed)
- Vandalism guards

OPERATOR ENVIRONMENT

- Hand control pattern changer (ISO-SAE)
- Rear window, secondary exit (hinged)
- Seat, high back with air suspension and heater

ENGINE/POWER TRAIN

- Prefilter, air
- Starting, cold weather package
 - Two additional high capacity, maintenance-free batteries
 - Heavy-duty cable
 - Jump-start receptacle
 - Ether aid
 - Block heater

UNDERCARRIAGE

- Track shoes (mandatory attachment)
 - 600 mm (24") double grouser
 - 700 mm (28") triple grouser
 - 850 mm (34") triple grouser

AUXILIARY HYDRAULICS

- Hammer circuit
 - For single function (1 way/2 pump) hydraulic tools
- Thumb circuit
 - For double function (2 way/1 pump) hydraulic tools
- Tool control system
 - For single or double function, (1 or 2 way/1 or 2 pump) hydraulic tools
 - Joysticks with additional switches
 - Program up to 10 tools in memory
 - Capability of adding medium pressure
 - Medium pressure circuit for tools requiring medium pressure
- Center-Lock pin grabber coupler and controller
- Lines for booms and sticks

WORK TOOLS

- Wide offering of buckets, tips and sidecutters available through Cat Work Tools directly

328D LCR Hydraulic Excavator

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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(NACD, LACD)

