# 330D2 L

CAT®

Hydraulic Excavator 2017



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Engine Model Cat® C7.1 ACERT™ Engine Power (ISO 14396) 159 kW 213 hp Net Power (SAE J1349/ISO 9249) 156 kW 209 hp

#### Weights

Minimum Operating Weight	28 980 kg	63,880 lb
Maximum Operating Weight	30 120 kg	66,390 lb

The Cat 330D2 L, combined with a new highly efficient hydraulic system, delivers excellent performance with lower fuel consumption and is designed and built for a variety of applications; from quarry to industrial material handling to construction, and more. It is powerful, reliable, and durable with great productivity and versatility, making it an ideal machine to meet your needs.

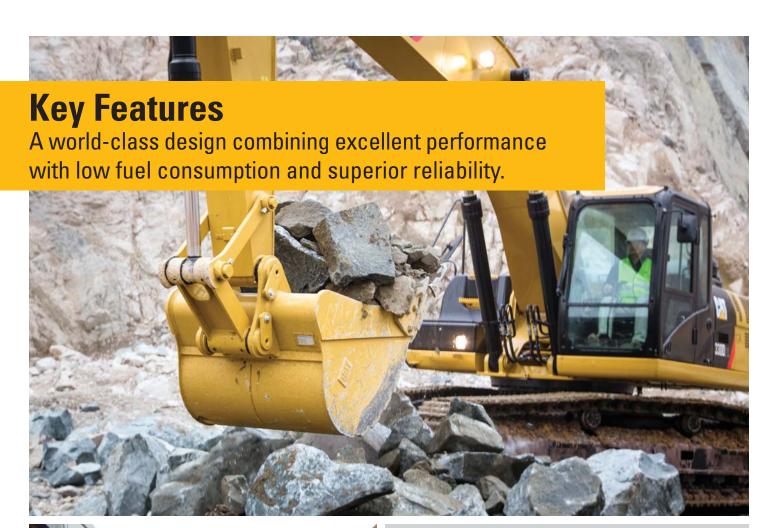
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The 330D2 L comes with a number of new developments and features, including engine speed control, a new fuel filtration system, and a built-in economy mode to help decrease fuel consumption up to 15% (as compared to 329D L China Nonroad Stage II equivalent). A variable-speed fan with viscous clutch reduces noise and saves energy.







#### **Performance/Efficiency**

- Fuel efficiency improved by pump and engine speed control
- Powerful engine meets China Nonroad Stage III emission standards with reduced fuel consumption
- Less maintenance, faster starts with electric fuel priming pump
- Long undercarriage to maximize stability and lift capacity
- Variable-speed fan to reduce noise and save energy

#### **Ease of Operation**

- Ergonomically designed cab with easy-to-operate controls
- Multiple seat and joystick adjustment options to enhance comfort
- Excellent work site visibility from the cab to enhance productivity
- Optimized low-effort joystick controls to reduce operator fatigue
- New monitor with 40% larger viewing screen, 4× higher resolution and 42 language options

#### Reliability/Serviceability

- Robust fuel system to enhance reliability and less sensitivity to low-quality fuel
- Strong, durable structure designed to work in the toughest operating conditions
- Electrical wires colored, numbered, and protected with thick braiding for ease of identification and long life
- Heavy-duty booms and sticks standard and stress-relieved for added durability
- Grease and Lubricated Tracks (GLT) for longer life
- Segmented three-piece track guiding guard for enhanced undercarriage protection

#### **Reduced Costs**

- Improved filtration efficiency and system robustness
- 500 hour service intervals for more uptime
- Two power modes: high horsepower and eco mode

#### **Technology**

- Integrated Cat technology solutions to increase production and minimize operating costs
- Product Link™ to report key information from the machine to any location





## **Engine**

## Power up with strong reliability, high efficiency.

#### **Reliable Cat C7.1 ACERT Engine**

The Cat C7.1 ACERT engine meets China Nonroad Stage III emission standards. The engine incorporates proven, robust components and precision manufacturing you can count on for reliable and efficient operation. It's less sensitive to low-quality fuel and also delivers reduced fuel consumption.

#### **Isochronous Control**

Isochronous engine speed control improves fuel efficiency and reduces fuel consumption and noise levels by managing pump and engine speed.

#### **Automatic Engine Speed Control**

Automatic engine speed control is activated during no-load or light-load conditions to minimize fuel consumption.

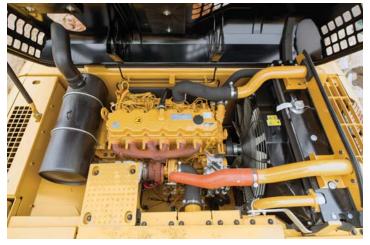
#### Air Cleaner and Air Precleaner

The radial seal air filter features a double-layered filter core for more efficient filtration and is located in a compartment behind the cab.

A warning is displayed on the monitor when dust accumulates above a preset level. An air precleaner reduces the amount of dust and debris that enter the air intake system to help maximize engine performance by extending air filter life.

#### Variable-Speed Fan

A variable-speed fan reduces fuel consumption and noise.





#### **Filtration System**

The C7.1 ACERT engine features an improved filtration system to ensure good reliability of fuel injection system components. Intervals have been extended and the number of filters increased to three. The primary filter and the secondary twin filters improve filtration efficiency and machine robustness.

## **Operator Station**

Ergonomically designed to keep you comfortable and productive all day long.









#### **Monitor**

The monitor on the 330D2 L features a large screen with high-resolution display.

The LCD monitor is equipped with a warning lamp and buzzer for critical engine oil pressure, coolant temperature, and oil temperature. The monitor clearly displays critical information needed to operate efficiently and effectively with 42 language capability.

Filters and fluid change intervals are available in the main menu, which also projects the image from the optional rearview camera, further enhancing your job site safety and productivity.

#### Seat

The mechanical or air suspension seats provide a variety of adjustments to accommodate a wide range of operators. All seats include a reclining back, upper and lower seat slide adjustments, and height and tilt adjustments.

#### Controls

Operators can adjust the right and left joysticks for individual preferences, helping them become more comfortable and productive. Low-effort pilot-operated joystick controls are designed to match your natural wrist and arm position for maximum comfort and minimum fatigue.

#### **Climate Control**

The 330D2 L offers positive filtered ventilation with a pressurized cab. Fresh air or recirculated air can be selected, which makes working in the heat and cold much more pleasant.

#### **Cab Structure and Mounts**

The cab shell is attached to the frame with viscous rubber cab mounts that dampen vibrations and sound levels while enhancing operator comfort. Thick steel tubing along the bottom perimeter of the cab improves resistance to fatigue and vibration.

## **Hydraulics**

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



#### **Hydraulic System**

Hydraulic system pressure from the two-hydraulic pump system delivers terrific digging performance and productivity.

#### **Pilot System**

An independent pilot pump enables smooth, precise control for the front linkage, swing, and travel operations.

#### **Hydraulic Cylinder Snubbers**

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

#### **Hydraulic Return Capsule Filter**

The capsule filter has a cartridge inside to avoid contamination when accessing, enabling changing without oil spillage.

The capable filter takes out impurities and has a sensor that indicates to the operator if it's clogged.

#### **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 to allow for shorter tubes and lines between components, reducing friction loss and pressure drops.

#### **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.

#### **Auxiliary Hydraulic Valve**

Control circuits are available as attachments to improve versatility. They allow operation of high- and medium-pressure tools such as shears, grapples, hammers, pulverizers, multiprocessors, and vibratory plate compactors.

#### **Boom and Stick Regeneration Circuit**

Boom and stick regeneration circuits save energy during boom-down and stick-in operation to increase efficiency and reduce cycle times and pressure loss for higher productivity, lower operating costs, and increased fuel efficiency.



## **Undercarriage and Structures**

Strong and durable, all you expect from Cat excavators.

#### **Robotic Welding**

Up to 95% 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

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

#### **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**

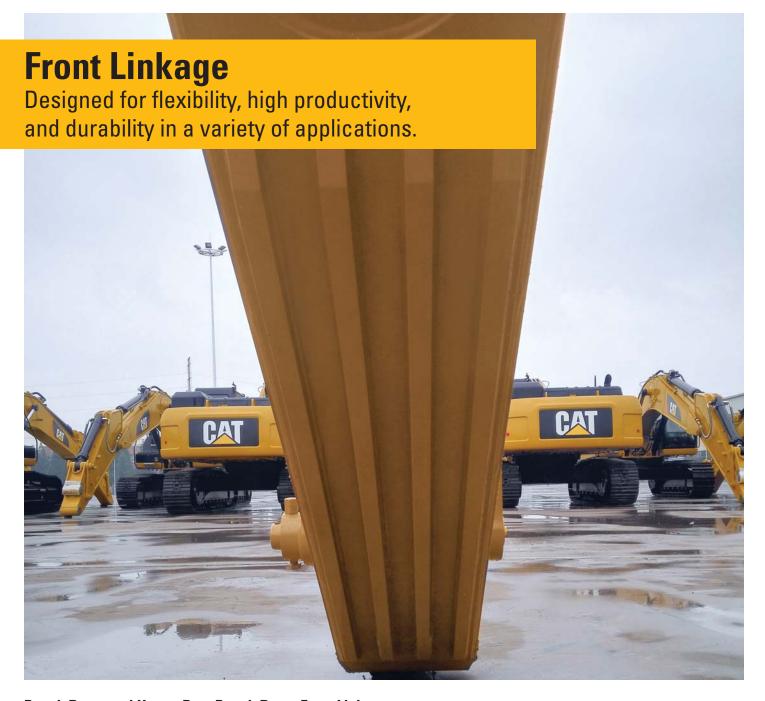
Long undercarriage maximizes stability and lift capacity. Segmented three piece track guiding guard protects undercarriage for long life.

#### **Tracks**

The 330D2 L track links are assembled and sealed with grease to decrease internal bushing wear, reduce travel noise, and extend service life to lower operating costs.

#### **Counterweights**

The 5.9 mt (6.5 t) standard weight makes a better choice for heavy lifting with long undercarriage. Counterweights are bolted directly to the main frame for extra rigidity.



#### **Reach Boom and Heavy-Duty Reach Boom Front Linkage**

The 6.15 m (10'2") heavy-duty (HD) reach boom is reinforced to be used in the severest applications for maximum digging capability. The boom is made of high-tensile-strength steel using a large box-section design with interior baffle plates and an additional bottom guard for long life and durability. Booms and sticks are stress-relieved for added durability.

The HD reach boom has two stick options available to meet all your application requirements:

- R3.2 (10'6") CB2 HD sticks
- R2.65 (8'8") CB2 HD sticks with rebar

Sticks with rebar provide excellent protection in applications such as rocky material handling, greatly extending the life of sticks.

## **Service and Maintenance**

Simplified service and maintenance features save you time and money.



#### **Ground-Level Service**

The design and layout of the 330D2 L was made with the service technician in mind. Most service locations are easily accessible at ground level to allow service and maintenance to get completed 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, pilot filter, and water separator with primary fuel filter.

#### **Radiator Compartment**

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

#### **Greasing Points**

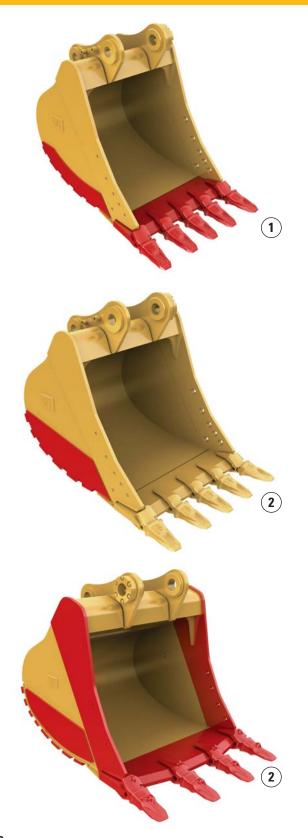
A concentrated remote greasing block on the boom delivers grease to hard-to-reach locations on the front.

#### **Diagnostics and Monitoring**

The 330D2 L is equipped with  $S \cdot O \cdot S^{SM}$  sampling ports and hydraulic test ports for the hydraulic system, engine oil, and for coolant.

## **Attachments**

Dig, hammer, rip, and cut with confidence.



Each Cat work tool attachment is designed to optimize the versatility and performance of your machine. An extensive range of buckets, compactors, grapples, multi-processors, rippers, crushers, pulverizers, hammers, and shears are available for your 330D2 L. Contact your local Cat dealer for more information on the attachments available in your region.

#### **Buckets**

Cat buckets and Cat Ground Engaging Tools (GET) are designed and matched to the machine to ensure optimal performance and fuel efficiency.

#### 1 – Heavy Duty Buckets (HD)

HD buckets are a good starting point when application conditions vary, especially when conditions include mixed dirt, clay, sand, and gravel.

#### 2 – Severe Duty Buckets (SD)

These buckets are best suited to highly abrasive applications such as shot rock, sand stone, and granite.

#### **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 Pin Grabber Coupler**

The Cat Pin Grabber coupler is easy to activate, easy to engage, and easy to disengage. Operating procedures are simple and easy to learn. It's the easiest way to improve productivity on every job site. One excavator can share buckets and a variety of attachments with similar size excavators. Managing your assets just got easier.

#### **B Series Hammers**

B Series hammers have outstanding field-proven reliability and durability for tough applications. High-grade steel and heat-treatment provides high output and good productivity.

#### **E Series Hammers**

E Series hammers bring together customer expectations of performance, quality, and serviceability along with Caterpillar manufacturing and logistics experience. E Series hammers are quiet, and noise suppression is valuable in urban and restricted work areas.

#### **Grapples**

Cat grapples replace the bucket on Cat excavators, converting them to the ideal machine for handling loose material, sorting trash, and demolition site cleanup. An array of styles and sizes are available to match excavators to the task at hand.

#### **Multi-Processors**

Multi-processors do the work of many types of demolition tools by use of interchangeable jaw sets. Changing jaws allows a single unit to crush, pulverize, and perform a variety of specialized cutting tasks such as cutting steel rebar and tanks.

#### Shear

Cat shears are designed for Cat machines, taking full advantage of the hydraulic flows and pressures to enhance productivity without compromising safety or causing premature wear of the shear and carrier.

#### **Pulverizer**

The excavator mounted mechanical pulverizer is a cost-effective tool for recycling demolished concrete debris. The bucket cylinder on the excavator powers the mechanical pulverizer. This eliminates the need for a dedicated cylinder and associated hydraulics and additional installation cost.

#### **Vibratory Plate Compactor**

Compactors enhance the versatility of your excavator and make compacting faster, more efficient, and cost-effective. Cat compactors are the superior choice for any job site's compaction tasks.

#### Crusher

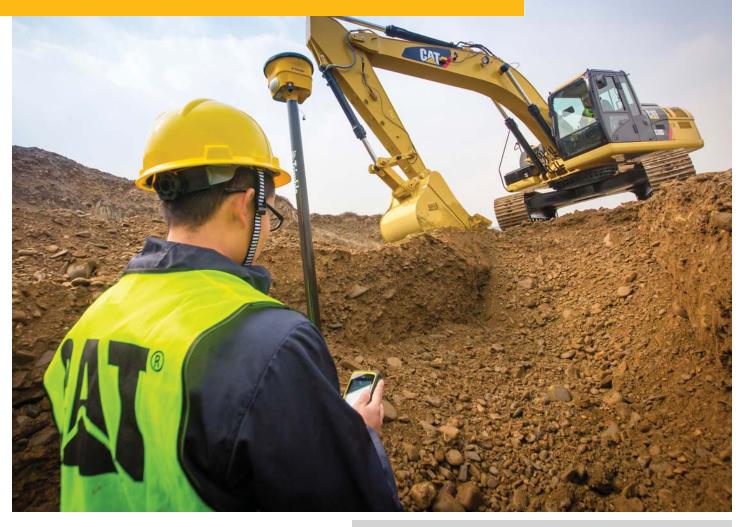
The hydraulic concrete crusher has taken modern demolition technology a step further. It is well suited for concrete demolition in residential areas. The hydraulic concrete crusher combines several concrete demolition operations in one piece of equipment:

- breaking out concrete from fixed structures
- pulverizing concrete
- cutting reinforcement rods and small steel profiles



## **Cat Connect Technologies**

Monitor, manage, and enhance job site operations.



Cat Connect makes smart use of technology and services to improve your job site efficiency. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:



EQUIPMENT

**Equipment Management** – increase uptime and reduce operating costs.



**Productivity** – monitor production and manage job site efficiency.



**Safety** – enhance job site awareness to keep your people and equipment safe.



#### **Cat Connect LINK Technologies**

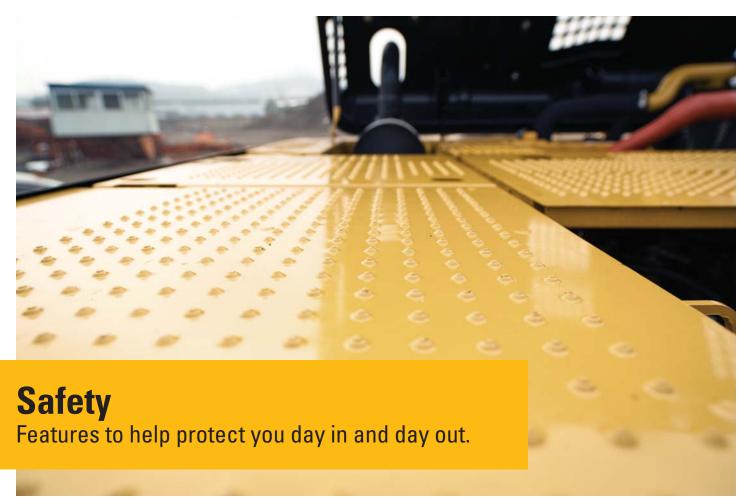
LINK technologies wirelessly connect you to your equipment, giving you access to essential information you need to know to run your business. Link data can give you valuable insight into how your machine or fleet is performing so you can make timely, fact-based decisions that can boost job site efficiency and productivity.

#### **Product Link/VisionLink®**

Product Link is deeply integrated into your machine, helping to take the guesswork out of equipment management. Easy access to timely information like machine location, hours, fuel usage, idle time and event codes via the online VisionLink user interface can help you effectively manage your fleet and lower operating costs.







**Anti-skid plating** with countersunk bolts reduces the potential for slippage and trip hazards, providing a **safe platform** for all routine service and maintenance needs.

The standard **hydraulic lockout lever** isolates all hydraulic and travel functions in the lowered position. It is specifically designed to not allow the operator to leave the cab without first lowering it.

Three circuit breakers protect critical electrical components to increase machine uptime.

A **battery disconnect switch** helps to deter theft by isolating the battery and enhances safety when servicing the machine.

A full-length **firewall** separates the engine from the hydraulic pump and offers protection in the event of an incident.

A ground-level **shut-off switch** stops all fuel to the engine when activated and shuts down the machine.

**Fan Guard** – The engine radiator fan is completely enclosed by fine wire mesh, reducing the risk of an accident.









Cat dealer services help you operate longer with lower costs.



You can maximize your machines' uptime with the Cat worldwide dealer network. You can also decrease your repair costs by utilizing Cat remanufactured components while contributing to sustainable development.

#### **Machine Selection**

What are the job requirements and machine attachments? What production do you need? Your Cat dealer can provide recommendations to help you make the right machine configuration.

#### **Purchase**

You can ensure lower owning and operating costs by utilizing unique Cat dealer services and financing options.

#### **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**

You can boost your profits by improving your operators' techniques. Your Cat dealer has videos, literature, and other ideas to help 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.

Engine			
Engine Model	Cat C7.1 ACERT		
Туре	Electronic Control Fuel Injection		
Engine Power (ISO 14396)	159 kW	213 hp	
Net Power (SAE J1349/ISO 9249)	156 kW	209 hp	
Displacement	7.01 L	428 in <sup>3</sup>	
Bore	105 mm	4.13 in	
Stroke	135 mm	5.31 in	
Engine rpm			
Operation	1,700 rpm		
Travel	1,800 rpm		
Low-Idle Speed	950 rpm		
Maximum Torque (torque peak) @ 1,400 rpm	900 N·m	663.8 lbf-ft	
Maximum Altitude (without derate)	3000 m	9,842 ft	
Maximum Altitude (with derate)	5000 m	16,404 ft	

- All engine horsepower (hp) are metric including front page.
- The C7.1 ACERT engine meets China Nonroad Stage III emission standards.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator.
- Full engine net power up to 3000 m (9,842 ft) altitude (engine derating required above 3000 m [9,842 ft]).
- Power rating at 1,800 rpm.

Weights		
Minimum Operating Weight*	28 980 kg	63,880 lb
Maximum Operating Weight**	30 120 kg	66,390 lb

\*6.15 m (20'2") HD reach boom, R2.65 (8'8") HD stick with rebar, 1.54 m³ (2.02 yd³) bucket, 600 mm (24") triple grouser track shoes \*6.15 m (20'2") HD reach boom, R3.2CB2 (10'6") HD stick,

1.54 m<sup>3</sup> (2.02 yd<sup>3</sup>) bucket, 800 mm (32") triple grouser track shoes

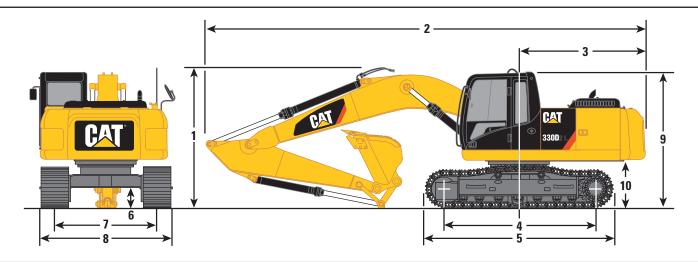
Swing Mechanism		
Swing Speed	9.6 rpm	
Maximum Swing Torque	105 kN·m	77,350 lbf-ft
<b>Sound Performance</b>		
Operator Sound (ISO 6396)	71 dB(A)	
Spectator Sound (ISO 6395)	104 dB(A)	
Standards		

Standards	
Brakes	ISO 10265:2008
Cab/FOGS	SAE J1356 MAR2013 ISO 10262:1998

Drive		
Maximum Gradeability	35°/70%	
Maximum Travel Speed	5.3 km/h	3.4 mph
Maximum Drawbar Pull	248 kN	55,753 lbf
Service Refill Capacities		
Fuel Tank Capacity	520 L	137.4 gal
Cooling System	31 L	8.2 gal
Engine Oil	22 L	5.8 gal
Swing Drive	10 L	2.6 gal
Final Drive (each)	6 L	1.6 gal
Hydraulic System (including tank)	310 L	81.9 gal
Hydraulic Tank	257 L	67.9 gal
Hydraulic System		
Main System – Maximum Flow at Travel H/L (1,800 rpm)	254 × 2 (508 total) L/min	67.1 × 2 (134.2 total) gal/min
Main System – Maximum Flow at Travel L/L (1,750 rpm)	247 × 2 (494 total) L/min	65.2 × 2 (130.4 total) gal/min
Main System – Maximum Flow (each) at Operation (1,700 rpm)	240 × 2 (480 total) L/min	63.4 × 2 (126.8 total) gal/min
Swing System – Maximum Flow	240 L/min	63.4 gal/min
Maximum Pressure – Equipment	35 MPa	5,076 psi
Maximum Pressure – Travel	35 MPa	5,076 psi
Maximum Pressure – Swing	27.5 MPa	3983 psi
Pilot System – Maximum Flow	23.1 L/min	6.1 gal/min
Pilot System – Maximum Pressure	3920 kPa	569 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 Bucket Cylinder – Bore	135 mm	5.3 in
CB2 Bucket Cylinder – Stroke	1156 mm	45.5 in
DB Bucket Cylinder – Bore	150 mm	5.9 in
DB Bucket Cylinder – Stroke	1151 mm	45.3 in

### **Dimensions**

All dimensions are approximate.



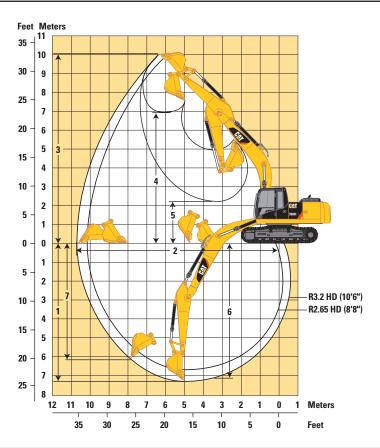
	HD Reach Boom 6.15 m (20'2")			
Stick Type: HD	R3.2CB2	(10'6")	R2.65CB	2 (8'8")
1 Shipping Height*	3330 mm	10'11"	3420 mm	11'3"
2 Shipping Length	10 360 mm	34'0"	10 370 mm	34'0"
3 Tail Swing Radius	3080 mm	10'1"	3080 mm	10'1"
4 Length to Center of Rollers				
Long Undercarriage	3990 mm	13'1"	3990 mm	13'1"
5 Track Length				
Long Undercarriage	4860 mm	15'11"	4860 mm	15'11"
6 Ground Clearance**	480 mm	19"	480 mm	19"
7 Track Gauge				
Long Undercarriage	2590 mm	8'6"	2590 mm	8'6"
8 Transport Width				
Long Undercarriage				
600 mm (24") Shoes	3190 mm	10'6"	3190 mm	10'6"
800 mm (31") Shoes	3390 mm	11'1"	3390 mm	11'1"
9 Cab Height*	3040 mm	10'0"	3040 mm	10'0"
10 Counterweight Clearance**	1100 mm	3'7"	1100 mm	3'7"
Bucket Type	SI	)	SI	)
Bucket Capacity	1.54 m³	2.01 yd³	1.54 m³	2.01 yd³
Bucket Tip Radius	1690 mm	5'7"	1690 mm	5'7"

<sup>\*</sup>Including shoe lug height.

 $<sup>\</sup>hbox{\rm **Without shoe lug height.}$ 

### **Working Ranges**

All dimensions are approximate.



	HD Reach Boom 6.15 m (20'2")			
Stick Type	R3.2 HD (10'6")		R2.65 HD (8'8")	
Bucket	1.54 m³ (2	2.01 yd³)	1.54 m³ (2	2.01 yd³)
1 Maximum Digging Depth	7290 mm	23'11"	6740 mm	22'1"
2 Maximum Reach at Ground Level	10 720 mm	35'2"	10 240 mm	33'7"
3 Maximum Cutting Height	10 040 mm	32'11"	9930 mm	32'7"
4 Maximum Loading Height	6900 mm	22'8"	6760 mm	22'2"
5 Minimum Loading Height	2250 mm	7'5"	2800 mm	9'2"
6 Maximum Depth Cut for 2440 mm (8'1") Level Bottom	7130 mm	23'5"	6560 mm	21'6"
7 Maximum Digging (Vertical Wall)	6160 mm	20'3"	5840 mm	19'2"
Bucket Type	18	)	18	)
Bucket Capacity	1.54 m³	2.01 yd³	1.54 m³	2.01 yd³
Bucket Tip Radius	1690 mm	5'7"	1690 mm	5'7"

### **Operating Weight and Ground Pressure**

Boom	Reach (HD)			
Stick	R3.2 HD (10'6")		R2.65 HD (8'8")	
Bucket Linkage	C	В	C	В
Bucket Capacity	1.54 m³	2.01 yd³	1.54 m³	2.01 yd³
Bucket Width	1400 mm	55 in	1400 mm	155 in
Total Weight – 600 mm (24") Triple Grouser Shoes	29 115 kg	64,280 lb	28 955 kg	63,830 lb
Total Weight – 800 mm (31") Triple Grouser Shoes (LC)	30 118 kg	66,260 lb	29 914 kg	65,811 lb
Ground Pressure				
Long Undercarriage				
600 mm (24") Triple Grouser Shoes (LC)	55.4 kPa	8.0 psi	55.0 kPa	8.0 psi
600 mm (24") Double Grouser Shoes (LC)	56.2 kPa	8.1 psi	55.8 kPa	8.1 psi
800 mm (31") Triple Grouser Shoes (LC)	42.9 kpa	6.2 psi	43.2 kpa	6.2 psi

The ground pressure information is based on operating weights shown below.

ISO 6016 configuration: machine (upper and lower structure), front structure, 100% full fuel tank, fluids at normal level (i.e.: oils/water/lubricants), bucket (currently = WW major bucket) without fill materials, 75 kg (165 lb) operator.

Notes: No optional attachments are included, the bucket is empty.

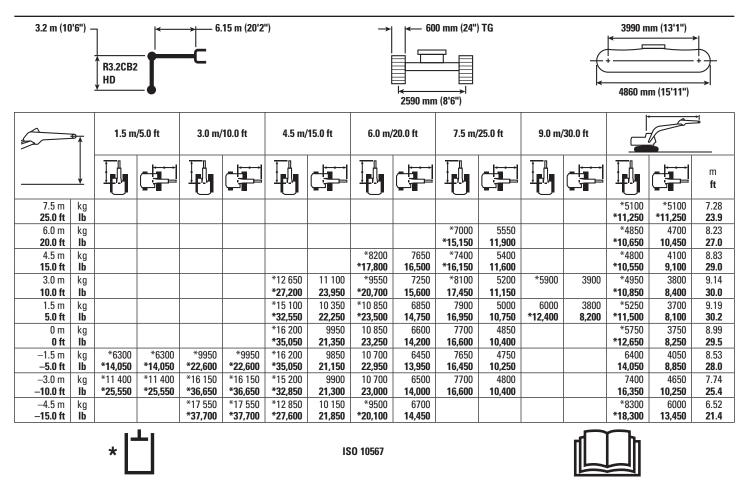
### **Major Component Weights**

se Machine – Includes: Boom Cylinders, Pins, Fluids	7030 kg	15,500 lb
Full Fuel Tank	430 kg	950 lb
Counterweight (for use with HD Reach boom)	5860 kg	12,920 lb
Boom (includes lines, pins, and stick cylinder)		
Reach Boom HD – 6.15 m (20'2")	2420 kg	5,340 lb
Stick (includes lines, stick pins, bucket pins, bucket cylinder, and bucket linkage)		
R3.2CB2 HD (10'6")	1610 kg	3,550 lb
R2.65CB2 HD (8'8") with rebar	1430 kg	3,150 lb
Undercarriage		
Long Undercarriage	6630 kg	14,620 16
Tracks		
Long Undercarriage		
600 mm (24") Triple Grouser Shoes	3580 kg	7,890 lb
600 mm (24") Double Grouser Shoes	4000 kg	8,820 lb
800 mm (31") Triple Grouser Shoes	4540 kg	10,010 18

### **Bucket and Stick Forces**

Stick Type Bucket Capacity	HD Reach Boom 6.15 m (20'2")						
	R3.2 H	R2.65 HD (8'8")					
	1.54 m <sup>3</sup>	2.01 yd <sup>3</sup>	1.54 m³	2.01 yd³			
Cutting Edge							
Bucket Digging Force (ISO)	179 kN	40,152 lbf	179 kN	40,152 lbf			
Stick Digging Force (ISO)	126 kN	28,374 lbf	145 kN	32,526 lbf			
Bucket Tip							
Bucket Digging Force (SAE)	154 kN	34,709 lbf	154 kN	34,709 lbf			
Stick Digging Force (SAE)	122 kN	27,423 lbf	139 kN	31,263 lbf			

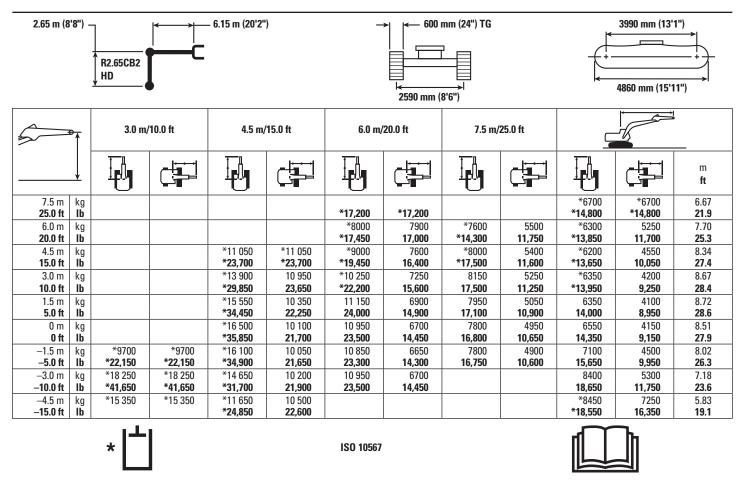
#### 330D2 L HD Reach Boom Lift Capacities – Counterweight: 5.9 mt (6.5 t) – Without Bucket



<sup>\*</sup>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.

Lift capacity stays with ±5% for all available track shoes.

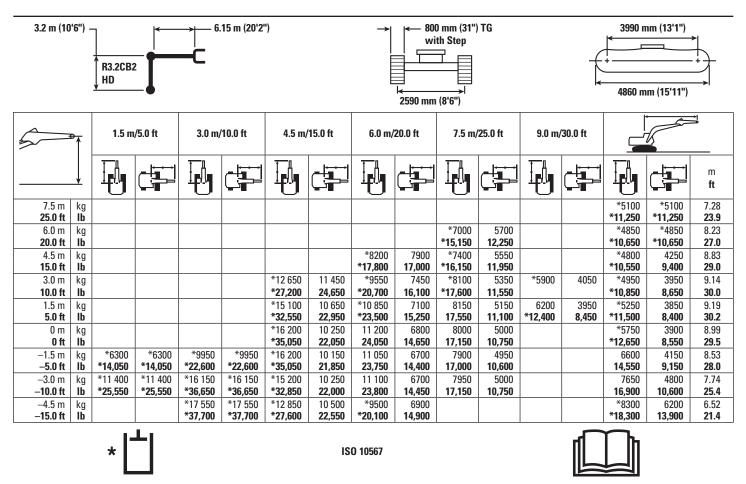
#### 330D2 L HD Reach Boom Lift Capacities – Counterweight: 5.9 mt (6.5 t) – Without Bucket



<sup>\*</sup>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.

Lift capacity stays with ±5% for all available track shoes.

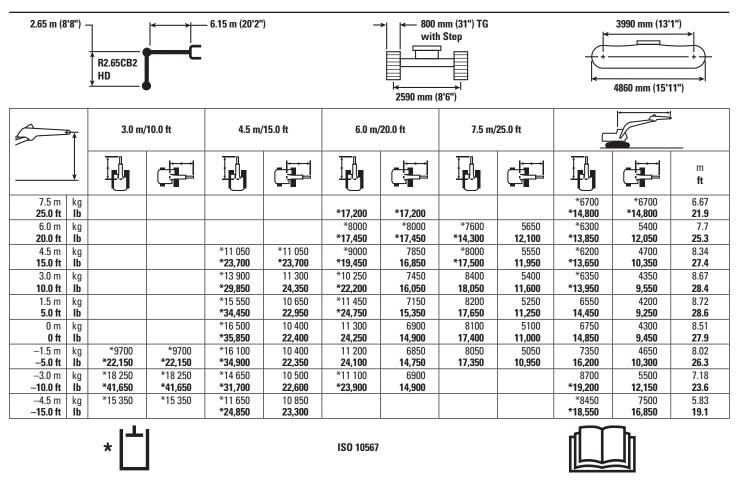
#### 330D2 L HD Reach Boom Lift Capacities – Counterweight: 5.9 mt (6.5 t) – Without Bucket



<sup>\*</sup>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.

Lift capacity stays with ±5% for all available track shoes.

#### 330D2 L HD Reach Boom Lift Capacities – Counterweight: 5.9 mt (6.5 t) – Without Bucket



<sup>\*</sup>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.

Lift capacity stays with ±5% for all available track shoes.

### **Work Tool Offering Guide\***

Boom Type		HD Reach Boom				
		6.15 m (20'2")				
Stick Size		R3.2 HD (10'6")	R2.65 HD (8'8")			
Hydraulic Hammer		B30 B35**	B30 B35^ ^^			
Multi-Processor		MP324 CC Jaw^ ^^ MP324 D Jaw^ ^^ MP324 P Jaw^	MP324 CC Jaw MP324 D Jaw MP324 P Jaw			
		MP324 U Jaw^ ^^ MP324 S Jaw MP324 TS Jaw^	MP324 U Jaw MP324 S Jaw MP324 TS Jaw			
Crusher		P325^ ^^	P325			
Pulverizer		P225	P225			
Demolition and Sorting Grapple (D-Demolition Shells, R-Recycling Shells)		G320B-D/R G325B-D**	G320B-D/R G325B-D^ ^^			
Scrap and Demolition Shear		S320B S325B** S340B#	S320B S325B^ ^^ S340B#			
Compactor (Vibratory Plate)		CVP110	CVP110			
Orange Peel Grapple						
Rippers		TT1 1 1	11.11.6.4.22002.1			
Pin Grabber Coupler	Cat-PG	These work tools are available for the 330D2 L.  Consult your Cat dealer for proper work tool match.				
Dedicated Quick Coupler	CW45s	Consuit your Cat dealer for	proper work toormaten.			
	CW45					

<sup>\*</sup> Offerings not available in all areas. Matches are dependent on excavator configurations. Consult your Cat dealer to determine what is offered in your area and for proper work tool match.

<sup>\*\*</sup> Match; Pin-on only

<sup>#</sup>Match; Boom Mount

<sup>^</sup> Work over the front only with Dedicated Quick Coupler (match; Pin-on and Dedicated Quick Coupler)

<sup>^^</sup> Work over the front only with Cat-PG (match; Pin-on, Dedicated Quick Coupler and Cat-PG)

### **Bucket Specifications and Compatibility**

									330	D2 L
									HD Rea	ch Boom
									6.15 m (20'2")	6.15 m (20'2"
									Stick	Stick
									3.2 HD (10'6")	2.65 HD (8'8")
		Wid		Capacity		Weight		Fill	Shoes	Shoes
	Linkage	mm	in	m³	yd³	kg	lb	%	800 mm (31")	600 mm (24")
Without Quick Coupler									•	
General Duty (GD)	СВ	1400	55	1.54	2.02	1116	2,459	100	•	•
Heavy Duty (HD)	СВ	1250	49	1.33	1.74	1120	2,469	100		•
	СВ	1250	49	1.33	1.74	1130	2,491	100	•	
	СВ	1300	51	1.36	1.78	1146	2,526	100	•	•
	СВ	1350	53	1.45	1.90	1180	2,601	100	•	•
	СВ	1400	55	1.54	2.02	1221	2,692	100	$\Theta$	•
	СВ	1400	55	1.54	2.02	1230	2,712	100	$\Theta$	
	СВ	1450	57	1.57	2.05	1248	2,751	100	$\Theta$	•
	СВ	1500	59	1.65	2.16	1275	2,811	100		•
Severe Duty (SD)	СВ	1250	50	1.33	1.74	1235	2,723	90	•	•
	СВ	1300	51	1.36	1.78	1263	2,784	90	•	•
	СВ	1350	54	1.45	1.90	1286	2,834	90	•	•
	СВ	1400	56	1.54	2.02	1355	2,985	90	•	•
	'									
				Maxir	num load pii	n on (payloa	d + bucket)	kg	3782	4119
				Maxir	num load pii	n on (payloa	d + bucket)	lb	3782 8,336	9,078
With Pin Grabber Coupler				Maxir	num load pi	n on (payloa	d + bucket)			
	СВ	1400	55	1.54	2.02	n on (payloa	2,459			
General Duty (GD)	CB	1400 1250	55 49					lb	8,336	9,078
With Pin Grabber Coupler General Duty (GD) Heavy Duty (HD)				1.54	2.02	1116	2,459	100	8,336	9,078
General Duty (GD)	СВ	1250	49	1.54 1.33	2.02 1.74	1116 1072	2,459 2,363	100 100	8,336	9,078
General Duty (GD)	CB CB	1250 1250	49 49	1.54 1.33 1.33	2.02 1.74 1.74	1116 1072 1130	2,459 2,363 2,491	100 100 100	8,336	9,078 ⊖ •
General Duty (GD)	CB CB	1250 1250 1300	49 49 51	1.54 1.33 1.33 1.36	2.02 1.74 1.74 1.78	1116 1072 1130 1146	2,459 2,363 2,491 2,526	100 100 100 100	8,336 O	9,078
General Duty (GD)	CB CB CB	1250 1250 1300 1350	49 49 51 53	1.54 1.33 1.33 1.36 1.45	2.02 1.74 1.74 1.78 1.90	1116 1072 1130 1146 1132	2,459 2,363 2,491 2,526 2,496	100 100 100 100 100	8,336 O  ——————————————————————————————————	9,078 ⊖ ●
General Duty (GD)	CB CB CB CB	1250 1250 1300 1350 1400	49 49 51 53 55	1.54 1.33 1.33 1.36 1.45 1.54	2.02 1.74 1.74 1.78 1.90 2.02	1116 1072 1130 1146 1132 1163	2,459 2,363 2,491 2,526 2,496 2,564	100 100 100 100 100 100	8,336 O  ——————————————————————————————————	9,078 ⊖ • •
General Duty (GD)	CB CB CB CB CB	1250 1250 1300 1350 1400 1400	49 49 51 53 55 55	1.54 1.33 1.33 1.36 1.45 1.54	2.02 1.74 1.74 1.78 1.90 2.02 2.02	1116 1072 1130 1146 1132 1163 1230	2,459 2,363 2,491 2,526 2,496 2,564 2,712	100 100 100 100 100 100 100	8,336  O  ————————————————————————————————	9,078
General Duty (GD) Heavy Duty (HD)	CB CB CB CB CB CB CB	1250 1250 1300 1350 1400 1400	49 49 51 53 55 55 57	1.54 1.33 1.33 1.36 1.45 1.54 1.54	2.02 1.74 1.74 1.78 1.90 2.02 2.02 2.05	1116 1072 1130 1146 1132 1163 1230 1248	2,459 2,363 2,491 2,526 2,496 2,564 2,712 2,751	100 100 100 100 100 100 100 100	8,336  O  O  O  O  O  O  O  O  O	9,078
General Duty (GD) Heavy Duty (HD)	CB CB CB CB CB CB CB CB	1250 1250 1300 1350 1400 1400 1450	49 49 51 53 55 55 57	1.54 1.33 1.33 1.36 1.45 1.54 1.54 1.57	2.02 1.74 1.74 1.78 1.90 2.02 2.02 2.02 2.05 2.16	1116 1072 1130 1146 1132 1163 1230 1248 1275	2,459 2,363 2,491 2,526 2,496 2,564 2,712 2,751 2,811	100 100 100 100 100 100 100 100 100	8,336  O  O  O  O  O  O  O  O  O  O  O  O	9,078
General Duty (GD) Heavy Duty (HD)	CB	1250 1250 1300 1350 1400 1400 1450 1500	49 49 51 53 55 55 57 59 50	1.54 1.33 1.33 1.36 1.45 1.54 1.54 1.57 1.65	2.02 1.74 1.74 1.78 1.90 2.02 2.02 2.05 2.16 1.74	1116 1072 1130 1146 1132 1163 1230 1248 1275 1235	2,459 2,363 2,491 2,526 2,496 2,564 2,712 2,751 2,811 2,723	100 100 100 100 100 100 100 100 100 100	8,336  O  O  O  O  O  O  O  O  O  O  O	9,078
General Duty (GD) Heavy Duty (HD)	CB	1250 1250 1300 1350 1400 1400 1450 1500 1250	49 49 51 53 55 55 57 59 50	1.54 1.33 1.36 1.45 1.54 1.54 1.57 1.65 1.33	2.02 1.74 1.74 1.78 1.90 2.02 2.02 2.05 2.16 1.74 1.78	1116 1072 1130 1146 1132 1163 1230 1248 1275 1235 1263	2,459 2,363 2,491 2,526 2,496 2,564 2,712 2,751 2,811 2,723 2,784	100 100 100 100 100 100 100 100 100 100	8,336  O  O  O  O  O  O  O  O  O  O  O  O  O	9,078
General Duty (GD)	CB	1250 1250 1300 1350 1400 1400 1450 1500 1250 1300	49 49 51 53 55 55 57 59 50 51	1.54 1.33 1.36 1.45 1.54 1.54 1.57 1.65 1.33 1.36	2.02 1.74 1.74 1.78 1.90 2.02 2.02 2.05 2.16 1.74 1.78	1116 1072 1130 1146 1132 1163 1230 1248 1275 1235 1263 1286	2,459 2,363 2,491 2,526 2,496 2,564 2,712 2,751 2,811 2,723 2,784 2,834	100 100 100 100 100 100 100 100 100 90 90	8,336  O  O  O  O  O  O  O  O  O  O  O  O  O	9,078
General Duty (GD) Heavy Duty (HD)	CB C	1250 1250 1300 1350 1400 1400 1450 1500 1250 1300 1350	49 49 51 53 55 55 57 59 50 51 54 56 42	1.54 1.33 1.36 1.45 1.54 1.54 1.57 1.65 1.33 1.36 1.45 1.45 1.54 1.12	2.02 1.74 1.78 1.90 2.02 2.02 2.05 2.16 1.74 1.78 1.90 2.02 1.46	1116 1072 1130 1146 1132 1163 1230 1248 1275 1235 1263 1286 1355	2,459 2,363 2,491 2,526 2,496 2,564 2,712 2,751 2,811 2,723 2,784 2,834 2,985 2,734	100 100 100 100 100 100 100 100 100 100	8,336  O  O  O  O  O  O  O  O  O  O  O  O  O	9,078

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.

 $\label{eq:Bucket weight with General Duty tips.} Bucket weight with General Duty tips.$ 

#### **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 (2000 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.

#### **Standard Equipment**

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

#### **ENGINE**

- C7.1 ACERT electronic control engine
- Meets China Nonroad Stage III emission standards
- 3000 m (9,842 ft) altitude capability without derating (Maximum 5000 m [16,404 ft] with derate from 3000 m [9,842 ft])
- Radial seal air filters (primary and secondary filter)
- · Glow plugs
- Automatic engine speed control with one touch low idle
- High ambient cooling package 52° C (126° F)
- Water separator with water level indicator sensor
- Radiator and oil cooler side by side with enough space for cleaning
- Two speed travel
- Electric (priming) pump
- Power modes (Eco and High Power)
- · Variable fan with viscous clutch
- New fuel filtration system (primary ×1, twin main ×2)
- Up to B20 biodiesel fuel capability
- Air-to-air-aftercooler
- · Air precleaner

#### **HYDRAULIC SYSTEM**

- Regeneration circuits for boom and stick
- · Auxiliary hydraulic valve
- Reverse swing damping valve
- Automatic swing parking brake
- Boom drift reducing valve
- Stick drift reducing valve
- High performance hydraulic return filters
- Hydraulic main pump
- Universal seal used in cylinders

 Capability of installing additional valves, pumps, circuits

#### CAB

- · Pressurized cab
- · Mechanical suspension seat
- Positive filtered ventilation
- Adjustable armrest
- Flexible seat belt, retractable (51 mm [2 in])
- 70/30 split front windshield
- Laminated upper front windshield and tempered other windows
- Sliding upper door window
- Openable front windshield with assist device
- · Openable roof hatch
- Removable lower windshield, within cab storage bracket
- Pillar mounted upper windshield wiper and washer
- Bi-level air conditioner (automatic) with defroster (pressurized function)
- Full color and full graphic LCD display with warning, filter/fluid change, and working hour information
- · Control lever joysticks, seat integrated
- Neutral lever (lock out) for all controls
- Travel control pedals with removable hand levers
- Two stereo speakers
- · Radio mounting
- Beverage holder
- · Coat hook
- Interior lighting
- · Ashtray and lighter
- Rear window, emergency exit
- Capability to install two additional pedals
- Bolt-on FOGS (Falling Objects Guarding System) capability

· Sun screen

#### **UNDERCARRIAGE**

- Idler and segmented track guiding guards (three pieces)
- Towing eyes on base frame
- Grease lubricated track GLT2, resin
- · Long undercarriage

#### **ELECTRICAL**

- Batteries (2 900 CCA)
- · Capability to connect a beacon

#### **LIGHTS**

- Working light, storage box mounted
- Interior lighting
- Cab mounted working lights

#### SAFETY AND SECURITY

- Cat one key security system
- Door and compartment locks
- Signaling/warning horn
- Rearview mirrors
- Fire wall between engine and pump compartment
- Emergency engine shutoff switch
- Rear window, emergency exit
- · Battery disconnect switch
- Cap locks on fuel and hydraulic tanks
- · Lockable tool box

#### COUNTERWEIGHT

• 5860 kg (12,920 lb) counterweight

#### **TECHNOLOGY**

· Product Link

## **330D2 L Optional Equipment**

### **Optional Equipment**

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

#### **ENGINE**

• Starting kit, cold weather, <-32° C (-26° F)

#### **HYDRAULIC SYSTEM**

· Hammer circuit, foot pedal operated

#### **UNDERCARRIAGE AND GUARDS**

- 600 mm (24 in) double grouser shoes
- 600 mm (24 in) triple grouser shoes
- 800 mm (31 in) triple grouser shoes
- HD bottom guard
- HD travel motor guard
- · Swivel guard

#### **FRONT LINKAGE**

- Heavy Duty 6.15 m (20'2") reach boom with left side light
- -R3.2CB2 (10'6") HD stick
- -R2.65CB2 (8'8") HD stick with rebars

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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