



# Cat<sup>®</sup> 309 CR

## MINI HYDRAULIC EXCAVATOR

### FEATURES:

The Cat<sup>®</sup> 309 CR Mini Excavator delivers maximum power and performance in a mini size to help you work in a wide range of applications.

#### ALL DAY COMFORT

- A sealed and pressurized cab is equipped with an improved air conditioning system, adjustable wrist rests and a suspension seat to help keep you working comfortably all day long.

#### EASY TO OPERATE

- Controls are easy to use and the intuitive Next Generation Monitor provides customizable machine operator preferences and easy to read machine information.

#### STICK STEER TRAVEL MODE

- Moving around the job site is even easier with the Cat Stick Steer option. Easily switch from traditional travel controls with levers and pedals to joystick controls with a push of a button. The benefit of less effort and improved control is in your hands!

#### BIG PERFORMANCE IN A MINI DESIGN

- Increased lifting, swinging, travel and multi-functioning performance helps you get the job done more efficiently, and dig-to-blade allows for easy clean up.

#### SAFETY ON THE JOB SITE

- Your safety is our top priority. The Cat Mini Excavator is designed to help keep you safe on the job. A back-up camera, courtesy work lights and a fluorescent retractable seat belt are just a few of the safety features we've built into the machine.

#### SIMPLE SERVICE FOR LESS DOWNTIME

- Maintenance is quick and easy on the Cat Mini Excavator. Routine check points are easy to access at ground level with grouped service points and robust service panels.

#### LOWER OPERATING COSTS

- Equipped with features such as auto idle, auto engine shutdown, and efficient hydraulics with a variable displacement pump, the Cat Mini Excavator was designed with reducing your operating costs in mind.

#### UNMATCHED DEALER SUPPORT

- Your Cat dealer is here to help you reach your business goals. From providing equipment solutions to operator training to service needs and beyond, your Cat dealer is ready to help.

## Specifications†

### Engine

Engine Model	Cat C3.3B	
<b>Rated Net Power @ 2,200 rpm</b>		
U.S. EPA Tier 4 Final	52.4 kW	70.3 hp
EU Stage V	53.3 kW	71.5 hp
ISO 9249/EEC 80/1269		
<b>Gross Power</b>		
ISO 14396	55.4 kW	74.3 hp
Bore	94 mm	3.7 in
Stroke	120 mm	4.7 in
Displacement	3.33 L	203 in <sup>3</sup>

### Weights

Minimum Operating Weight with Cab*	8950 kg	19,735 lb
Maximum Operating Weight with Cab**	9565 kg	21,091 lb

\*Minimum Weight is based on steel tracks, no counterweight, operator, full fuel tank, standard stick, blade and no bucket.

\*\*Maximum Weight is based on steel tracks with rubber pads, counterweight, operator, full fuel tank, long stick, blade and no bucket.

### Weight Increase from Minimum Configuration

Counterweight	250 kg	552 lb
Long Stick	66 kg	146 lb
Steel Tracks with Pads	330 kg	728 lb

†The 309 CR specifications are based on a machine configured with a Long (L) Undercarriage. For specifications representing a 309 CR with a Standard Undercarriage, please refer to the 308 CR information.



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## Travel System

Travel Speed – High	4.9 km/h	3.1 mph
Travel Speed – Low	2.6 km/h	1.6 mph
Maximum Traction Force – High Speed	28.9 kN	6,497 lbf
Maximum Traction Force – Low Speed	84.8 kN	19,064 lbf
Ground Pressure – Minimum Weight	34.7 kPa	5.0 psi
Ground Pressure – Maximum Weight	37.1 kPa	5.4 psi
Gradeability (maximum)	30 degrees	

## Service Refill Capacities

Cooling System	10.0 L	2.6 gal
Engine Oil	11.2 L	3.0 gal
Fuel Tank	147 L	39 gal
Hydraulic Tank	53 L	14 gal
Hydraulic System	110 L	29 gal

## Hydraulic System

Load Sensing Hydraulics with Variable Displacement Piston Pump		
Pump Flow @ 2,400 rpm	233 L/min	62 gal/min
Operating Pressure – Equipment	285 bar	4,134 psi
Operating Pressure – Travel	285 bar	4,134 psi
Operating Pressure – Swing	250 bar	3,626 psi
Auxiliary Circuit – Primary (High Flow)		
Flow	140 L/min	37 gal/min
Pressure	285 bar	4,134 psi
Auxiliary Circuit – Secondary		
Flow	33 L/min	9 gal/min
Pressure	285 bar	4,134 psi
Digging Force – Stick (Standard)	42.3 kN	9,500 lbf
Digging Force – Stick (Long)	35.7 kN	8,023 lbf
Digging Force – Bucket	62.0 kN	13,943 lbf

## Swing System

Machine Swing Speed	10.6 rpm
Boom Swing – Left	60 degrees
Boom Swing – Right	50 degrees

## Blade

Width (Standard)	2470 mm	97 in
Width (Wide)	2640 mm	104 in
Height	431 mm	17 in

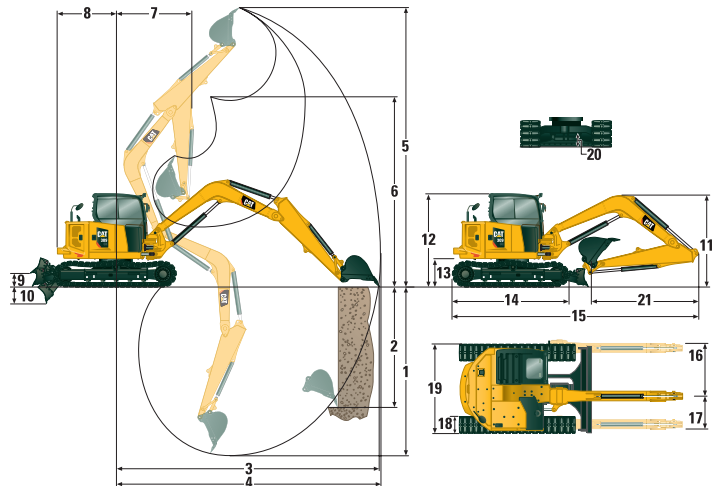
## Certification – Cab

Roll Over Protective Structure (ROPS)	ISO 12117-2:2008
Tip Over Protective Structure (TOPS)	ISO 12117:1997
Top Guard	ISO 10262:1998 (Level II)

## Sound

Operator Sound Pressure (ISO 6396:2008)	72 dB(A)
Average Exterior Sound Pressure (ISO 6395:2008)	99 dB(A)

• European Union Directive “2000/14/EC”



## Dimensions

	Standard Stick	Long Stick
<b>1</b> Dig Depth	4058 mm (160 in)	4593 mm (181 in)
<b>2</b> Vertical Wall	2941 mm (116 in)	3354 mm (132 in)
<b>3</b> Maximum Reach at Ground Level	6930 mm (273 in)	7449 mm (293 in)
<b>4</b> Maximum Reach	7141 mm (281 in)	7637 mm (301 in)
<b>5</b> Maximum Dig Height	3786 mm (149 in)	7089 mm (279 in)
<b>6</b> Maximum Dump Clearance	4810 mm (189 in)	5122 mm (202 in)
<b>7</b> Boom in Reach	3059 mm (120 in)	3215 mm (127 in)
<b>8</b> Tail Swing		
with Counterweight	1645 mm (65 in)	1645 mm (65 in)
without Counterweight	1450 mm (57 in)	1450 mm (57 in)
<b>9</b> Maximum Blade Height	355 mm (14 in)	355 mm (14 in)
<b>10</b> Maximum Blade Depth	671 mm (26 in)	671 mm (26 in)
<b>11</b> Transport Height	2487 mm (98 in)	2514 mm (99 in)
<b>12</b> Cab Height	2607 mm (100 in)	2607 mm (100 in)
<b>13</b> Swing Bearing Height	795 mm (31 in)	795 mm (31 in)
<b>14</b> Overall Undercarriage Length	3200 mm (126 in)	3200 mm (126 in)
<b>15</b> Overall Shipping Length	6731 mm (265 in)	6816 mm (268 in)
<b>16</b> Boom Swing Right	935 mm (37 in)	935 mm (37 in)
<b>17</b> Boom Swing Left	604 mm (24 in)	604 mm (24 in)
<b>18</b> Track Belt/Shoe Width	450 mm (18 in)	450 mm (18 in)
<b>19</b> Overall Track Width	2470 mm (97 in)	2470 mm (97 in)
<b>20</b> Ground Clearance	356 mm (14 in)	356 mm (14 in)
<b>21</b> Stick Length	1823 mm (72 in)	2358 mm (93 in)

## Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.0 kg of refrigerant which has a CO<sub>2</sub> equivalent of 1.430 metric tonnes.

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## Lift Capacities – Minimum Configuration<sup>1†</sup>

Lift Point Height			3 m (9.8 ft)			4.5 m (14.8 ft)			Lift Point Radius (Maximum)			
			Over Front		Over Side	Over Front		Over Side	Over Front		Over Side	m (ft)
			Blade Down	Blade Up		Blade Down	Blade Up		Blade Down	Blade Up		
4.5 m (14.8 ft)	Standard Stick	kg (lb)				2445* (5,391*)	2445* (5,391*)	1950 (4,300)	2185* (4,818*)	2185* (4,818*)	1540 (3,396)	5.17 (17.0)
	Long Stick	kg (lb)							1620* (3,572*)	1620* (3,572*)	1285 (2,833)	5.78 (19.0)
3 m (9.8 ft)	Standard Stick	kg (lb)				2790* (6,152*)	2355 (5,193)	1880 (4,145)	2130* (4,697*)	1515 (3,341)	1220 (2,690)	5.92 (19.4)
	Long Stick	kg (lb)				2425* (5,347*)	2425* (5,347*)	1900 (4,190)	1585* (3,495*)	1310 (2,889)	1055 (2,326)	6.43 (21.1)
1.5 m (4.9 ft)	Standard Stick	kg (lb)				3365* (7,420*)	2230 (4,917)	1765 (3,892)	2320* (5,116*)	1400 (3,087)	1120 (2,470)	6.13 (20.1)
	Long Stick	kg (lb)				3105* (6,847*)	2230 (4,917)	1760 (3,881)	1700* (3,749*)	1220 (2,690)	975 (2,150)	6.63 (21.8)
0 m (0 ft)	Standard Stick	kg (lb)	3860* (8,511*)	3860* (8,511*)	3070 (6,769)	3525* (7,773*)	2145 (4,730)	1685 (3,715)	2365* (5,215*)	1460 (3,219)	1165 (2,569)	5.88 (19.3)
	Long Stick	kg (lb)	3895* (8,588*)	3895* (8,588*)	3010 (6,637)	3485* (7,684*)	2115 (4,664)	1655 (3,649)	2010* (4,432*)	1260 (2,778)	1000 (2,205)	6.40 (21.0)

<sup>1</sup> Minimum Weight includes steel tracks, cab, operator, full fuel tank, no counterweight, and no bucket.

## Lift Capacities – Maximum Configuration<sup>2†</sup>

Lift Point Height			3 m (9.8 ft)			4.5 m (14.8 ft)			Lift Point Radius (Maximum)			
			Over Front		Over Side	Over Front		Over Side	Over Front		Over Side	m (ft)
			Blade Down	Blade Up		Blade Down	Blade Up		Blade Down	Blade Up		
4.5 m (14.8 ft)	Standard Stick	kg (lb)				2445* (5,391*)	2445* (5,391*)	2445* (5,391*)	2185* (4,818*)	2185* (4,818*)	1715 (3,782)	5.17 (17.0)
	Long Stick	kg (lb)							1620* (3,572*)	1620* (3,572*)	1620* (3,572*)	5.78 (19.0)
3 m (9.8 ft)	Standard Stick	kg (lb)				2790* (6,152*)	2790* (6,152*)	2090 (4,608)	2130* (4,697*)	1690 (3,726)	1365 (3,010)	5.92 (19.4)
	Long Stick	kg (lb)				2425* (5,347*)	2425* (5,347*)	2425* (5,347*)	1585* (3,495*)	1585* (3,495*)	1185 (2,613)	6.43 (21.1)
1.5 m (4.9 ft)	Standard Stick	kg (lb)				3365* (7,420*)	2485 (5,479)	1970 (4,344)	2320* (5,116*)	1570 (3,462)	1260 (2,778)	6.13 (20.1)
	Long Stick	kg (lb)				3105* (6,847*)	2485 (5,479)	1970 (4,344)	1700* (3,749*)	1375 (3,032)	1100 (2,426)	6.63 (21.8)
0 m (0 ft)	Standard Stick	kg (lb)	3860* (8,511*)	3860* (8,511*)	3860* (8,511*)	3525* (7,773*)	2400 (5,292)	1890 (4,167)	2365* (5,215*)	1640 (3,616)	1315 (2,900)	5.88 (19.3)
	Long Stick	kg (lb)	3895* (8,588*)	3895* (8,588*)	3895* (8,588*)	3485* (7,684*)	2370 (5,226)	1860 (4,101)	2010* (4,432*)	1420 (3,131)	1135 (2,503)	6.40 (21.0)

<sup>2</sup> Maximum Weight includes steel tracks with pads, cab, operator, full fuel tank, counterweight, and no bucket.

<sup>†</sup>The 309 CR lift capacity specifications are based on a machine configured with a Long (L) Undercarriage.

For lift capacity specifications representing a 309 CR with a Standard Undercarriage, please refer to the 308 CR information.

\*The above loads are in compliance with hydraulic excavator lift capacity rating standard ISO 10567: 2007 and they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. The excavator bucket weight is not included on this chart. Lifting capacities are for standard stick.

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## EQUIPMENT

### ENGINE

- Cat C3.3B Diesel Engine (U.S. EPA Tier 4 Final/EU Stage V) – Electronic Engine, Turbo, Diesel Particulate Filter (DPF)
- Automatic Engine Idle
- Automatic Engine Shutdown
- Automatic Swing Brake
- Automatic Two Speed Travel
- Fuel Water Separator with Indicator
- Radial Seal – Double Element Air Filter
- Extended Life Coolant, –37° C (–35° F)
- Ecology Drain

### HYDRAULICS

- Smart Tech Electronic Pump
- Variable Displacement Piston Pump
- Load Sensing/Flow Sharing Hydraulics
- Power On Demand
- Hydraulic Temperature Monitoring
- Certified Accumulator
- HYDO Advanced Hydraulic Oil

### OPERATOR ENVIRONMENT

- Sealed and Pressurized Cab
- Operator Sound Pressure 72 dB(A) ISO 6396:2008
- Stick Steer Mode
- Travel Cruise Control
- Control Pattern Changer
- Adjustable Wrist Rests
- Molded Footrests
- Removable, Washable Floor Mat

- Travel Pedals and Hand Levers
- Cat Key with Passcode Option
- HVAC with Automatic Temperature Control
- Hydraulic Lockout Controls
- Integrated Lower Front Window
- Assisted Front Window Overhead Storage
- Rear Window Emergency Exit
- Fabric, High Back, Suspension Seat
- Retractable Seat Belt (75 mm/3 in)
- Coat Hook
- Cup Holder
- LED Interior Light
- Literature Holder
- 12V Power Socket
- Radio – Bluetooth®, USB, Auxiliary, Microphone
- Skylight
- Mounting Bosses for Top and Front Guards
- ROPS – ISO 12117-2:2008
- TOPS – ISO 12117:1997
- Top Guard – ISO 10262:1998 (Level II)
- Color LCD Monitor
  - Fuel Level and Coolant Temperature Gauges
  - Maintenance and Machine Monitoring
  - Performance and Machine Adjustments
  - Numeric Security Code
  - Multiple Languages
  - Camera Ready
  - Hour Meter with Wake Up Switch
  - Jog Dial Control Interface

### UNDERCARRIAGE

- Greased and Lubricated Track
- Hydraulic Track Adjusters
- Tie Down Eyes on Track Frame
- Dozer Blade
- Dozer Float
- Bolt-on, Reversible Wear Edge
- Steel Tracks (450 mm/17.7 in wide)

### BOOM, STICK AND LINKAGES

- One Piece Boom (3400 mm/133.9 in)
- Standard Stick (1820 mm/71.7 in)
- Long Stick (2360 mm/92.9 in)
- Front Shovel Capable (Pin-On/Manual Coupler/Hydraulic Coupler – not available in all regions)
- Thumb Ready (not available in all regions)
- Certified Lifting Eye (not available in all regions)

### ELECTRICAL

- 12 Volt Electrical System
- 60 Ampere Alternator
- 900 CCA Maintenance Free Battery
- Circuit Breaker
- Ignition Key Stop Switch
- Signaling/Warning Horn
- Product Link™ Elite Lite (regulations apply)
- Travel Alarm

## OPTIONAL EQUIPMENT

### OPERATOR ENVIRONMENT

- Rain Visor
- Air Suspension Heated Seat

### ELECTRICAL

- Rearview Camera
- Rotating Beacon

### OTHER

- Attachments including Buckets, Augers and Hammers
- Wide Steel Tracks (600 mm/23.6 in)
- Wide Dozer Blade
- 2nd Auxiliary Hydraulic Lines with Case Drain
- Additional Counterweight
- Boom and Stick Hose Burst Check Valves

- Bucket Linkage with Lift Eye
- Track Guides
- Water Jacket Heater
- Refueling Pump
- Variable Angle Boom (please see 309 CR VAB brochure for VAB specs and additional information)
- Cab Guarding

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