



# Cat<sup>®</sup>

## 309 CR VAB

(LONG UNDERCARRIAGE)

### MINI HYDRAULIC EXCAVATOR

#### FEATURES:

The Cat<sup>®</sup> 309 CR Variable Angle Boom (VAB) Mini Excavator delivers maximum power and performance in a mini size to help you work in a wide range of applications. The Variable Angle Boom provides the maximum in linkage flexibility in tight 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. Dig-to-blade and dozer blade float features allow for easy clean up and long undercarriage provides improved stability.

#### HIGH FLOW

- Dedicated auxiliary hydraulic pump is ideal for running power-hungry attachments while allowing the machine to simultaneously travel and multifunction. This feature allows consistent pressure to the auxiliary lines with no loss of hydraulic power keeping your attachment running at full power maintaining optimal productivity.

#### 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 with optional seat belt reminder system 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.



# 309 CR VAB Mini Hydraulic Excavator

## CAT TECHNOLOGY

### EASE OF USE FOR CAT MINI EXCAVATORS

Ease of Use assists operators in controlling the machine to simplify operation, improve accuracy and enhance overall productivity on the job site. Ease of Use is available equipped on your mini excavator from the factory or as an upgrade kit post purchase.

Operators can choose from two software packages, Indicate or E-Fence to suit their application needs.

#### INDICATE

Ease of Use Indicate is an entry-level grade system providing visual and audible indicators to where the bucket is versus a target grade to cut and fill to exact specifications the first time without overcutting.

- Ideal for digging footings, septic systems, foundations, slope work and similar applications with level sites.
- Machine integrated depth measurement system from selected bench
- Operators can target a grade relative to the machine chassis (machine reference) or relative to gravity (earth reference).
- Operator can program a flat grade or a slope.
- Does not include the ability to automatically adjust stick, boom or bucket position. Cat Grade is required for autos functionality.
- Includes Swing Assist ideal for truck loading and trenching applications, and Bucket Assist ideal for sloping, leveling, fine grading and trenching applications.

#### E-FENCE

Ease of Use E-Fence automatically constrains machine motion within operator pre-set boundaries for Ceiling, Floor, Wall and Swing to avoid structures overhead, underground, in front or to the left or right of the machine.

- Ideal for applications near high-traffic, protecting structures on the job site, avoiding fiber optic cables and other underground utilities.
- Limits boom, stick, bucket, house and boom swing from operating beyond set boundaries.
- Includes Swing Assist ideal for truck loading and trenching applications, and Bucket Assist ideal for sloping, leveling, fine grading and trenching applications.

### CAT GRADE

Cat Grade is available as an aftermarket-installed automatics system that is easy to learn and use. Cat Grade Advanced 2D and 3D give you the ability to create, manage and grade simple to complex designs with accuracy ensuring cuts and fills are made to exact specifications. Cat Grade reduces costs, improves accuracy, provides improved operator efficiency and enhances safety.

#### GRADE ADVANCED 2D

Cat Grade Advanced 2D allows the operator to set parameters for digging and leveling operations, including cross slope and work site main fall. Grade Advanced 2D also lets the operator input, edit and work to basic 2D design plans from the operator's seat.

- Ideal for commercial site pad designs, trenches, commercial septic systems and similar applications.
- Provides bucket position in real time, and the operator can select from a number of different viewing angles.

#### GRADE 3D

Cat Grade 3D for excavators adds deeper design capabilities, plus, Global navigation satellite system (GNSS) receivers and a correctional data source to achieve Real Time Kinematic (RTK) positioning guidance for more complex planes, slopes, contours and curves.

- Provides operator with bucket positioning in relation to preloaded 3D design files or background maps.
- Helps to coordinate multiple machine operations while maintaining accurate digging parameters across large job sites.

Availability varies by region, please contact our Cat dealer to discuss the best technology options for you and your application.

## Specifications†

### Engine

|                       |           |                     |
|-----------------------|-----------|---------------------|
| Engine Model          | Cat C3.3B |                     |
| <b>Net Power</b>      |           |                     |
| ISO 9249, 80/1269/EEC | 51.8 kW   | 69.5 hp             |
| <b>Engine 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> |

- Meets U.S. EPA Tier 4 Final and EU Stage V emissions standards.
- Advertised power is tested per the specified standard in effect at the time of manufacture.
- Net power advertised is the power available at the flywheel when the engine is at the rated speed of 2,200 rpm and the engine is installed with the factory configured fan, air intake system, exhaust system and alternator with a minimum alternator load.

### Weights

|                            |         |           |
|----------------------------|---------|-----------|
| Minimum Operating Weight*  | 9125 kg | 20,121 lb |
| Maximum Operating Weight** | 9955 kg | 21,951 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, (500 kg/1,103 lb) counterweight, operator, full fuel tank, standard stick, blade and no bucket.

### Weight Increase from Minimum Configuration

|                        |        |          |
|------------------------|--------|----------|
| Counterweight          | 250 kg | 551 lb   |
| Counterweight          | 500 kg | 1,103 lb |
| Standard Stick         | 35 kg  | 77 lb    |
| Steel Tracks with Pads | 330 kg | 728 lb   |

### Travel System

|                                     |            |            |
|-------------------------------------|------------|------------|
| Travel Speed – High                 | 4.7 km/h   | 2.9 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    | 35.4 kPa   | 5.1 psi    |
| Ground Pressure – Maximum Weight    | 38.6 kPa   | 5.6 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  |

†The 309 CR VAB specifications are based on a machine configured with a Long (L) Undercarriage.

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

### 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 – High Flow                                  |           |            |
| Flow at Pump*                                                  | 140 L/min | 37 gal/min |
| Pressure at Pump*                                              | 285 bar   | 4,134 psi  |
| Auxiliary Circuit – Secondary                                  |           |            |
| Flow at Pump*                                                  | 33 L/min  | 9 gal/min  |
| Pressure at Pump*                                              | 285 bar   | 4,134 psi  |
| Digging Force – Stick (Standard)                               | 42.3 kN   | 9,509 lbf  |
| Digging Force – Bucket                                         | 62.0 kN   | 13,946 lbf |

\*Flow and pressure are not combinable. Under load, as flow rises pressure goes down.

### Swing System

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

### Blade

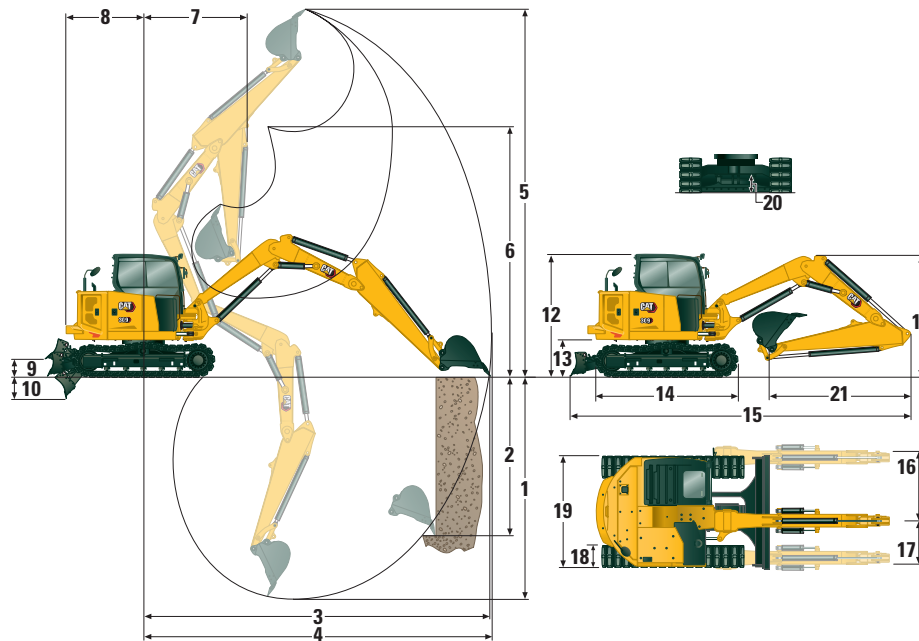
|                  |         |          |
|------------------|---------|----------|
| Width (Standard) | 2470 mm | 97.2 in  |
| Width (Wide)     | 2640 mm | 103.9 in |
| Height           | 431 mm  | 17 in    |

### Certification – Cab

|                                       |                          |
|---------------------------------------|--------------------------|
| Roll Over Protective Structure (ROPS) | ISO 12117-2:2008         |
| Top Guard                             | ISO 10262:1998 (Level I) |

# 309 CR VAB Mini Hydraulic Excavator

## Specifications† (continued)



## Dimensions

|                                      | Standard Stick     |                    |
|--------------------------------------|--------------------|--------------------|
|                                      | VAB In             | VAB Out            |
| 1 Dig Depth                          | 3815 mm (150.2 in) | 3460 mm (136.2 in) |
| 2 Vertical Wall                      | 2520 mm (99.2 in)  | 3725 mm (146.7 in) |
| 3 Maximum Reach at Ground Level      | 6300 mm (248.0 in) | 7715 mm (303.7 in) |
| 4 Maximum Reach                      | 6515 mm (256.5 in) | 7885 mm (310.4 in) |
| 5 Maximum Dig Height                 | 5220 mm (205.5 in) | 8180 mm (322.0 in) |
| 6 Maximum Dump Clearance             | 3450 mm (135.8 in) | 6285 mm (247.4 in) |
| 7 Boom in Reach                      | 3120 mm (122.8 in) | 2710 mm (106.7 in) |
| 8 Tail Swing                         |                    |                    |
| with Counterweight (250 kg/551 lb)   | 1585 mm (62.4 in)  | 1585 mm (62.4 in)  |
| with Counterweight (500 kg/1,103 lb) | 1626 mm (64.0 in)  | 1626 mm (64.0 in)  |
| without Counterweight                | 1450 mm (57.1 in)  | 1450 mm (57.1 in)  |
| 9 Maximum Blade Height               | 408 mm (16.1 in)   | 408 mm (16.1 in)   |
| 10 Maximum Blade Depth               | 484 mm (19.1 in)   | 484 mm (19.1 in)   |
| 11 Boom Height in Shipping Position  | 2475 mm (97.4 in)  | 2475 mm (97.4 in)  |
| 12 Cab Height                        | 2541 mm (100.0 in) | 2541 mm (100.0 in) |
| 13 Swing Bearing Height              | 756 mm (29.8 in)   | 756 mm (29.8 in)   |
| 14 Overall Undercarriage Length      | 3200 mm (126.0 in) | 3200 mm (126.0 in) |
| 15 Overall Shipping Length           | 6495 mm (255.7 in) | 6495 mm (255.7 in) |
| 16 Boom Swing Right                  | 935 mm (37.0 in)   | 935 mm (37.0 in)   |
| 17 Boom Swing Left                   | 605 mm (24.0 in)   | 605 mm (24.0 in)   |
| 18 Track Belt/Shoe Width             | 450 mm (17.7 in)   | 450 mm (17.7 in)   |
| 19 Overall Track Width               | 2470 mm (97.2 in)  | 2470 mm (97.2 in)  |
| 20 Ground Clearance                  | 356 mm (14.0 in)   | 356 mm (14.0 in)   |
| 21 Stick Length                      | 1820 mm (71.7 in)  | 1820 mm (71.7 in)  |

†The 309 CR VAB specifications are based on a machine configured with a Long (L) Undercarriage.

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

## Standard Stick

### Lift Capacities – Minimum Configuration

| Lift Point Height  |         |         | Lift Point Radius – 3 m (9.8 ft) |                    |                   | Lift Point Radius – 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<br>(14.8 ft) | VAB out | kg (lb) | 2324*<br>(5,124*)                | 2324*<br>(5,124*)  | 2324*<br>(5,124*) | 2582*<br>(5,693*)                   | 2582*<br>(5,693*) | 1840<br>(4,057)   | 2030*<br>(4,476*)           | 1364<br>(3,008)   | 1073<br>(2,366) | 6.03<br>(19.8) |
|                    | VAB in  | kg (lb) |                                  |                    |                   |                                     |                   |                   |                             |                   |                 |                |
| 3 m<br>(9.8 ft)    | VAB out | kg (lb) |                                  |                    |                   | 2847*<br>(6,278*)                   | 2179<br>(4,805)   | 1702<br>(3,753)   | 1758*<br>(3,876*)           | 1124<br>(2,478)   | 877<br>(1,934)  | 6.67<br>(21.9) |
|                    | VAB in  | kg (lb) |                                  |                    |                   | 1968*<br>(4,339*)                   | 1968*<br>(4,339*) | 1968*<br>(4,339*) | 1910*<br>(4,212*)           | 1910*<br>(4,212*) | 1454<br>(3,206) | 5.24<br>(17.2) |
| 1.5 m<br>(4.9 ft)  | VAB out | kg (lb) |                                  |                    |                   | 3009*<br>(6,635*)                   | 1992<br>(4,392)   | 1528<br>(3,369)   | 1534*<br>(3,382*)           | 1049<br>(2,313)   | 813<br>(1,793)  | 6.87<br>(22.5) |
|                    | VAB in  | kg (lb) | 4542*<br>(10,015*)               | 4542*<br>(10,015*) | 3248<br>(7,162)   | 2563*<br>(5,651*)                   | 2563*<br>(5,651*) | 1748<br>(3,854)   | 2172*<br>(4,789*)           | 1597<br>(3,521)   | 1259<br>(2,776) | 5.5<br>(18)    |
| 0 m<br>(0 ft)      | VAB out | kg (lb) |                                  |                    |                   | 2646*<br>(5,834*)                   | 1900<br>(4,190)   | 1442<br>(3,180)   | 1256*<br>(2,769*)           | 1256*<br>(2,769*) | 840<br>(1,852)  | 6.67<br>(21.9) |
|                    | VAB in  | kg (lb) | 5637*<br>(12,430*)               | 3967<br>(8,747)    | 2899<br>(6,392)   | 3027*<br>(6,675*)                   | 2067<br>(4,558)   | 1597<br>(3,521)   | 2488*<br>(5,486*)           | 1639<br>(3,614)   | 1277<br>(2,816) | 5.24<br>(17.2) |

Minimum Weight includes Steel Tracks, cab, operator, full fuel tank, no counterweight, and no bucket.

### Lift Capacities – Maximum Configuration

| 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<br>(14.8 ft) | VAB out | kg (lb) | 2324*<br>(5,124*)  | 2324*<br>(5,124*)  | 2324*<br>(5,124*) | 2582*<br>(5,693*) | 2582*<br>(5,693*) | 2197<br>(4,844)   | 2030*<br>(4,476*)           | 1655<br>(3,649)   | 1320<br>(2,911)   | 6.03<br>(19.8) |
|                    | VAB in  | kg (lb) |                    |                    |                   |                   |                   |                   |                             |                   |                   |                |
| 3 m<br>(9.8 ft)    | VAB out | kg (lb) |                    |                    |                   | 2847*<br>(6,278*) | 2847*<br>(6,278*) | 2059<br>(4,540)   | 1758*<br>(3,876*)           | 1381<br>(3,045)   | 1095<br>(2,414)   | 6.67<br>(21.9) |
|                    | VAB in  | kg (lb) |                    |                    |                   | 1968*<br>(4,339*) | 1968*<br>(4,339*) | 1968*<br>(4,339*) | 1910*<br>(4,212*)           | 1910*<br>(4,212*) | 1910*<br>(4,212*) | 5.24<br>(17.2) |
| 1.5 m<br>(4.9 ft)  | VAB out | kg (lb) |                    |                    |                   | 3009*<br>(6,635*) | 2423<br>(5,343)   | 1885<br>(4,156)   | 1534*<br>(3,382*)           | 1296<br>(2,858)   | 1024<br>(2,258)   | 6.87<br>(22.5) |
|                    | VAB in  | kg (lb) | 4542*<br>(10,015*) | 4542*<br>(10,015*) | 3883<br>(8,562)   | 2563*<br>(5,651*) | 2563*<br>(5,651*) | 2105<br>(4,642)   | 2172*<br>(4,789*)           | 2172*<br>(4,789*) | 1535<br>(3,385)   | 5.5<br>(18)    |
| 0 m<br>(0 ft)      | VAB out | kg (lb) |                    |                    |                   | 2646*<br>(5,834*) | 2646*<br>(5,834*) | 1799<br>(3,967)   | 1256*<br>(2,769*)           | 1256*<br>(2,769*) | 1058<br>(2,333)   | 6.67<br>(21.9) |
|                    | VAB in  | kg (lb) | 5637*<br>(12,430*) | 4781<br>(10,542)   | 3534<br>(7,792)   | 3027*<br>(6,675*) | 2498<br>(5,508)   | 1954<br>(4,309)   | 2488*<br>(5,486*)           | 1989<br>(4,386)   | 1570<br>(3,462)   | 5.24<br>(17.2) |

Maximum Weight includes steel tracks with pads, cab, operator, full fuel tank, (500 kg/1,103 lb) counterweight, and no bucket.

# 309 CR VAB Environmental Declaration

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit <https://www.caterpillar.com/en/company/sustainability>.

## Engine

- The Cat® C3.3B engine meets U.S. EPA Tier 4 Final and EU Stage V emission standards.
- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels\*\* up to:
  - ✓ 20% biodiesel FAME (fatty acid methyl ester)\*
  - ✓ 100% renewable diesel, HVO (hydrogenated vegetable oil) and GTL (gas-to-liquid) fuelsRefer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.  
*\*Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel (for use of blends higher than 20% biodiesel, consult your Cat dealer).*  
*\*\*Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.*

## 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 (2.20 lb) of refrigerant which has a CO<sub>2</sub> equivalent of 1.430 metric tonnes (1.576 tons).

## Paint

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
  - Barium < 0.01%
  - Cadmium < 0.01%
  - Chromium < 0.01%
  - Lead < 0.01%

## Sound Performance

Operator Sound Pressure 72 dB(A) (ISO 6396:2008)\*  
Exterior Sound Power Level 99 dB(A) (ISO 6395:2008)\*\*

- \*The declared dynamic operator sound pressure levels per ISO 6396:2008. The measurements were conducted with the cab doors and windows closed.  
\*\*The labeled sound power level for the CE marked configurations when measured according to the test procedure and conditions specified in 2000/14/EC.

## Oils and Fluids

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

## Features and Technology

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
  - Advanced hydraulic systems balance power and efficiency
  - Power On Demand provides full time efficiency and power when you need it, and is transparent to the operator
  - Auto idle and auto engine shutdown
  - Extended maintenance intervals reduce fluid and filter consumption
  - Remote Flash and Remote Troubleshoot (if equipped)
  - Mini Hydraulic Excavator Ease of Use features improve operator efficiency minimizing fuel consumption (if equipped)
  - Cat Grade with Advanced 2D and 3D improves operator efficiency minimizing fuel consumption (if equipped)

## Recycling

- The materials included in machines are categorized as below with approximate weight percentage. Because of variations of product configurations, the following values in the table may vary.

| Material Type            | Weight Percentage |
|--------------------------|-------------------|
| Steel                    | 65.52%            |
| Iron                     | 21.19%            |
| Rubber                   | 3.50%             |
| Mixed Metal              | 2.20%             |
| Other                    | 1.89%             |
| Nonferrous Metal         | 1.81%             |
| Plastic                  | 1.55%             |
| Fluid                    | 1.47%             |
| Mixed-Metal and Nonmetal | 0.85%             |
| Mixed Nonmetallic        | 0.01%             |
| Uncategorized            | 0.00%             |
| Total                    | 100.00%           |

- A machine with higher recyclability rate will ensure more efficient usage of valuable natural resources and enhance End-of-Life value of the product. According to ISO 16714 (Earth-moving machinery – Recyclability and recoverability – Terminology and calculation method), recyclability rate is defined as percentage by mass (mass fraction in percent) of the new machine potentially able to be recycled, reused or both.

All parts in the bill of material are first evaluated by component type based on a list of components defined by the ISO 16714 and Japan CEMA (Construction Equipment Manufacturers Association) standards. Remaining parts are further evaluated for recyclability based on material type.

Because of variations of product configurations, the following values in the table may vary.

Recyclability – 96%

The data provided above was based on the product configuration as provided by the individual product group.

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## Standard and Optional Equipment

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

|                                                                                                                              | Standard | Optional |                                                                                  | Standard | Optional |
|------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------------------------------------------------------------------------------|----------|----------|
| <b>ENGINE</b>                                                                                                                |          |          | <b>OPERATOR ENVIRONMENT (continued)</b>                                          |          |          |
| Cat C3.3 Diesel Engine (U.S. EPA Tier 4 Final/<br>EU Stage V) – Electronic Engine, Turbo,<br>Diesel Particulate Filter (DPF) | ✓        |          | Literature Holder                                                                | ✓        |          |
| Automatic Engine Idle                                                                                                        | ✓        |          | Mounting Bosses for Top and Front Guards                                         | ✓        |          |
| Automatic Engine Shutdown                                                                                                    | ✓        |          | 12V Power Socket                                                                 | ✓        |          |
| Automatic Swing Brake                                                                                                        | ✓        |          | Radio – Bluetooth, Auxiliary, Microphone,<br>USB (charging only)                 | ✓        |          |
| Automatic Two Speed Travel                                                                                                   | ✓        |          | Skylight                                                                         | ✓        |          |
| Fuel Water Separator with Indicator                                                                                          | ✓        |          | Signaling/Warning Horn                                                           | ✓        |          |
| Radial Seal – Double Element Air Filter                                                                                      | ✓        |          | Cab and (left side) Boom Work Lights                                             | ✓        |          |
| Extended Life Coolant, –37° C ( –35° F)                                                                                      | ✓        |          | Utility Space for Mobile Phone                                                   | ✓        |          |
| Ecology Drain                                                                                                                | ✓        |          | Rain Visor                                                                       |          | ✓        |
| <b>HYDRAULICS</b>                                                                                                            |          |          | Next Generation Color LCD Monitor (IP66)                                         | ✓        |          |
| Smart Tech Electronic Pump                                                                                                   | ✓        |          | – Jog Dial Interface                                                             |          |          |
| Electronic Variable Displacement<br>Piston Pump                                                                              | ✓        |          | – Fuel Level and Coolant<br>Temperature Gauges                                   |          |          |
| Load Sensing/Flow Sharing Hydraulics                                                                                         | ✓        |          | – Maintenance and Machine Monitoring                                             |          |          |
| Dedicated Auxiliary Hydraulic Pump                                                                                           | ✓        |          | – Performance and Machine Adjustments                                            |          |          |
| Power On Demand                                                                                                              | ✓        |          | – Numeric Security Code                                                          |          |          |
| Hydraulic Temperature Monitoring                                                                                             | ✓        |          | – Multiple Languages                                                             |          |          |
| Certified Accumulator                                                                                                        | ✓        |          | – Camera Ready (IP68 and IP69K)                                                  |          |          |
| HYDO™ Advanced Hydraulic Oil                                                                                                 | ✓        |          | – Hour Meter with Wake Up Switch                                                 |          |          |
| <b>OPERATOR ENVIRONMENT</b>                                                                                                  |          |          | Next Generation Advanced Monitor                                                 |          | ✓        |
| Top Guard ISO 10262 1998 Level I                                                                                             | ✓        |          | <i>(below are all included with<br/>Next Generation Advanced Monitor option)</i> |          |          |
| ROPS ISO 12117-2:2008                                                                                                        | ✓        |          | – Touch Screen                                                                   |          |          |
| Sealed and Pressurized Cab                                                                                                   | ✓        |          | – Site Reference System                                                          |          |          |
| Stick Steer Mode                                                                                                             | ✓        |          | – High Definition Camera Capable<br>(IP68 and IP69K)                             |          |          |
| Travel Cruise Control                                                                                                        | ✓        |          | – Numeric Security Code                                                          |          |          |
| Control Pattern Changer                                                                                                      | ✓        |          | <b>TECHNOLOGY (availability varies by region)</b>                                |          |          |
| Adjustable Wrist Rests                                                                                                       | ✓        |          | Ease of Use Indicate                                                             |          | ✓        |
| Molded Footrests                                                                                                             | ✓        |          | Ease of Use E-Fence                                                              |          | ✓        |
| Removable, Washable Floor Mat                                                                                                | ✓        |          | Cat Grade Advanced 2D                                                            |          | ✓        |
| Travel Pedals and Hand Levers                                                                                                | ✓        |          | Cat Grade 3D                                                                     |          | ✓        |
| Cat Key with Passcode Option                                                                                                 | ✓        |          | Product Link™ Basic                                                              | ✓        |          |
| Push to Start with Bluetooth® Key                                                                                            |          | ✓        | Product Link Elite (regulations apply)                                           |          | ✓        |
| HVAC with Automatic Temperature Control                                                                                      | ✓        |          | <b>UNDERCARRIAGE</b>                                                             |          |          |
| Hydraulic Lockout Controls                                                                                                   | ✓        |          | Greased and Lubricated Track                                                     | ✓        |          |
| Integrated Lower Front Window                                                                                                | ✓        |          | Hydraulic Track Adjusters                                                        | ✓        |          |
| Assisted Front Window Overhead Storage                                                                                       | ✓        |          | Tie Down Eyes on Track Frame                                                     | ✓        |          |
| Rear Window Emergency Exit                                                                                                   | ✓        |          | Dozer Blade                                                                      | ✓        |          |
| Cab Mirrors (vary by region)                                                                                                 | ✓        |          | Wide Dozer Blade                                                                 |          | ✓        |
| Fabric, High Back, Suspension Seat                                                                                           | ✓        |          | Dozer Float                                                                      | ✓        |          |
| Air Suspension Heated Seat                                                                                                   |          | ✓        | Bolt-on, Reversible Wear Edge                                                    | ✓        |          |
| Retractable Seat Belt (75 mm/3 in)                                                                                           | ✓        |          | Steel Tracks (450 mm/17.7 in wide)                                               |          | ✓        |
| Seat Belt Reminder System                                                                                                    |          | ✓        | Wide Steel Tracks (600 mm/23.6 in)                                               |          | ✓        |
| Coat Hook                                                                                                                    | ✓        |          | Steel Track with Rubber Pads                                                     |          | ✓        |
| Cup Holder                                                                                                                   | ✓        |          | Track Guides                                                                     |          | ✓        |
| LED Interior Light                                                                                                           | ✓        |          |                                                                                  |          |          |

# 309 CR VAB Mini Hydraulic Excavator

## Standard and Optional Equipment *(continued)*

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

|                                                                                               | Standard | Optional |                                                    | Standard | Optional |
|-----------------------------------------------------------------------------------------------|----------|----------|----------------------------------------------------|----------|----------|
| <b>BOOM, STICK AND LINKAGES</b>                                                               |          |          | <b>GUARDING</b>                                    |          |          |
| Variable Angle Boom                                                                           | ✓        |          | ROPS ISO 12117-2:2008                              | ✓        |          |
| Standard Stick (1820 mm/71.7 in)                                                              | ✓        |          | Top Guard ISO 10262:1998 (Level I)                 | ✓        |          |
| Front Shovel Capable – Pin-on/Manual Coupler/Hydraulic Coupler (not available in all regions) | ✓        |          | Top Guard ISO 10262:1998 (Level II)                |          | ✓        |
| Thumb Ready (not available in all regions)                                                    | ✓        |          | Front Guard (Mesh) ISO 10262:1998 (Level I)        |          | ✓        |
| Boom Lowering Control Valve (Europe only)                                                     | ✓        |          | Front Guard (Heavy Duty) ISO 10262:1998 (Level II) |          | ✓        |
| Stick Lowering Control Valve (Europe only)                                                    | ✓        |          | Track Guards                                       |          | ✓        |
| Attachments including Buckets, Augers and Hammers                                             |          | ✓        | <b>OTHER</b>                                       |          |          |
| 2nd Auxiliary Hydraulic Lines                                                                 |          | ✓        | Counterweight (250 kg/551 lb)                      |          | ✓        |
| Boom Lowering Check Valve                                                                     |          | ✓        | Counterweight (500 kg/1,103 lb)                    |          | ✓        |
| Stick Lowering Check Valve                                                                    |          | ✓        | Locks on External Enclosure Doors                  | ✓        |          |
| Certified Lifting Eye                                                                         |          | ✓        | Lockable Fuel Cap                                  | ✓        |          |
| <b>ELECTRICAL</b>                                                                             |          |          | Beacon Socket                                      | ✓        |          |
| 12 Volt Electrical System                                                                     | ✓        |          | Rear Reflectors                                    | ✓        |          |
| 90 Ampere Alternator                                                                          | ✓        |          | Water Jacket Heater                                |          | ✓        |
| Circuit Breaker                                                                               | ✓        |          | Refueling Pump                                     |          | ✓        |
| 850 CCA Maintenance Free Battery                                                              | ✓        |          |                                                    |          |          |
| Lock Out/Tag Out Battery Disconnect                                                           | ✓        |          |                                                    |          |          |
| Ignition Key Stop Switch                                                                      | ✓        |          |                                                    |          |          |
| Travel Alarm                                                                                  |          | ✓        |                                                    |          |          |
| Rear Camera                                                                                   | ✓        |          |                                                    |          |          |
| Rear and Side Camera                                                                          |          | ✓        |                                                    |          |          |
| Rotating Beacon                                                                               |          | ✓        |                                                    |          |          |

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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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