



# Cat<sup>®</sup> 313

## Hydraulic Excavator

***The Cat<sup>®</sup> 313 excavator offers superior performance and operator efficiency. Standard, easy-to-use Cat technologies, a new cab focused on operator comfort and productivity, and low fuel and maintenance costs allow you to move material all day with speed and precision while keeping more money in your pocket.***

***Not all features are available in all regions. Consult your Cat dealer for specific configurations available in your region.***

### High Performance and Productivity

- Increase productivity by up to five percent over the 313F.
- Easily work on slopes and move around your jobsite with 10 percent more swing torque.
- The advanced hydraulic system provides the optimum balance of power and efficiency while giving you the control you need for precise digging requirements.
- Match your machine to the job with power modes. Let smart mode automatically match engine and hydraulic power to working conditions. Power mode constantly provides maximum productivity and ECO mode minimizes fuel consumption in less-demanding applications.
- Get higher production in demanding applications, easier penetration into piles, and faster cycle times with Cat Advansys™ bucket tips. Quickly change tips with a simple lug wrench instead of a hammer or special tool, improving safety and uptime.
- Auxiliary hydraulic options give you the versatility to use a wide range of Cat attachments.
- The Cat C3.6 engine meets U.S. EPA Tier 4 Final, EU Stage V, and Japan 2014 (Tier 4 Final) emission standards.
- Don't let the temperature stop you from working. The 313 has a standard high-ambient temperature capability of 52° C (125° F) without de-rate and cold-start capability of -25° C (-13° F).

### Boost Efficiency and Productivity with Cat Technologies

- Boost productivity up to 45 percent versus traditional grading with the standard Cat GRADE with 2D system – includes indicate-only and laser capability.
- Dig with guidance to depth, slope, and horizontal distance to grade. You can set up to four different depth and slope targets to help save time and money.
- Standard 2D E-fence prevents your machine from moving outside operator-defined parameters.

- Achieve precise load targets and increase loading efficiency with standard Cat PAYLOAD which provides on-the-go weighing and real-time estimates of your payload without swinging.
- Combine Payload with VisionLink<sup>®</sup> and remotely manage your production targets.
- Upgrade to Cat GRADE with Advanced 2D to create and edit grade designs with ease on a second, high-resolution 254 mm (10 in) touchscreen monitor.
- Upgrade to Cat GRADE with 3D to create and edit designs with ease and see the front linkage's full range of motion on a second high-resolution 254 mm (10 in) touchscreen monitor. Use the machine's onboard cell technology to quickly connect to 3D services like TCC or VRS.
- Know the excavator's exact position relative to GPS and GLONASS systems. The machine automatically compensates for excavator pitch and roll caused by sloping ground conditions.
- Use the excavator's onboard cell technology to quickly connect to 3D services like Trimble Connected Community or Virtual Reference Station.
- Already invested in another brand's 3D system? No problem. Standard Cat technology like GRADE with 2D can readily integrate with that system to give you the precise results you need.
- Remote troubleshoot connects you to a dealer service pro to help solve your problem and quickly get you to work.
- Remote flash works around your schedule to ensure your machine's software is up to date for optimal performance.
- The Cat App helps you manage fleet location, hours, and maintenance schedules; it also alerts you for required maintenance and even allows you to request service from your local Cat dealer.
- Standard Product Link™ automatically and accurately collects data from your connected assets – any type and any brand. Information such as location, hours, fuel usage, productivity, idle time, maintenance alerts, diagnostic codes, and machine health can be viewed online through web and mobile applications.



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## Work in Comfort in the All-New Cab

- Increase operator productivity with an all-new, larger cab. Comfort, Deluxe, and Premium cab options vary by region.
- The Comfort cab is equipped with a mechanical suspension seat. The Deluxe seat is heated and air adjustable while the Premium seat is heated and cooled and adjusts automatically.
- Get in and out of the cab easier using the tip-up left console available in the Deluxe and Premium cabs.
- Advanced viscous mounts reduce cab vibration.
- Control the excavator comfortably with easy-to-reach controls all located in front of you.
- Stow your gear with plenty of in-cab storage beneath and behind the seat, overhead, and in the consoles. A cup holder, document holder, and coat hook are also provided.
- Use the standard radio's USB ports and Bluetooth® technology to connect personal devices and make hands-free calls.

## Simple to Operate

- Start the engine with the push of a button, a Bluetooth key fob, a smartphone app, or the unique Operator ID function.
- Program your preferred power mode and joystick settings using your operator ID. The excavator will automatically remember your selections.
- Navigate quickly on the standard high-resolution touchscreen monitor or with the aid of the jog dial control.
- The Cat Locator is a Bluetooth device that makes finding your attachments and other gear quick and easy. The excavator's onboard Bluetooth reader or Cat App on your phone will locate the device automatically.
- Save time and energy with work tool recognition. A simple shake of the attached tool confirms its identity ensuring all attachment settings are correct, so you can get to work quickly and efficiently.
- Not sure how a function works or how to maintain your machine? Simply access the operator's manual through the touchscreen monitor.

## Lower Maintenance Costs

- Expect up to 25 percent less maintenance costs than the 313F.
- Quickly check and service your machine with all daily maintenance points accessible from ground level.
- Check the engine oil level quickly and safely from the ground. Fill and check engine oil on top of the machine with a conveniently located second dipstick.
- Track your machine's filter life and maintenance intervals on the in-cab monitor.
- The new hydraulic oil filter provides improved filtration performance, anti-drain valves to keep oil clean when the filter is replaced, and longer life with a 3,000-hour replacement interval – 50 percent longer than previous filter designs.
- S-O-S<sup>SM</sup> ports are located at ground level, simplifying maintenance and allowing for quick, easy extraction of fluid samples for analysis.

## Safety

- Access all daily maintenance points from ground level – no need for you to climb on top of the machine.
- The standard ROPS cab meets ISO 12117-2:2008 requirements.
- The standard hydraulic lockout lever isolates all hydraulic and travel functions in the lowered position.
- A ground-level shut-off switch stops all fuel to the engine and shuts down the machine when activated.
- A rearview and right-side-view camera are standard. Upgrade to 360° visibility to easily see objects and personnel around the excavator in a single view.
- New service platform design provides easy, safe, and quick access to the upper service platform. Prevent slipping with the anti-skid punch plate on the platform steps.
- Optional boom and stick lowering check valves prevent reverse flow, keeping your front linkage securely in place should the hydraulic system unexpectedly lose power.
- Brightly colored seatbelts allow easy recognition of properly utilized safety restraints.
- Optional antennas have theft-prevention bolts; a special tool makes them easy to remove at the end of a shift.

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>BOOMS AND STICKS</b>			<b>HYDRAULIC SYSTEM</b>		
One-piece boom		✓	Boom and stick regeneration circuits	✓	
Variable angle boom		✓ <sup>1</sup>	Automatic hydraulic warm up	✓	
R2.2 m (7'3") stick		✓ <sup>1</sup>	Automatic two speed travel	✓	
R2.5 m (8'2") stick		✓ <sup>2</sup>	Electric main control valve	✓	
R2.8 m (9'2") stick		✓ <sup>3</sup>	Boom and stick drift reduction valve	✓	
R3.0 m (9'8") stick		✓	Auxiliary line support	✓	
<b>CAB</b>			Boom and stick lowering check valves		✓
ROPS, Sound Suppression	✓		Medium-pressure line		✓
Comfort Cab: mechanical suspension seat, 203 mm (8") touchscreen monitor		✓ <sup>4</sup>	High-pressure line		✓
Deluxe Cab: air suspension heated seat, 254 mm (10") touchscreen monitor		✓	Quick coupler line		✓
Premium Cab: air suspension heated and cooled seat, 254 mm (10") touchscreen monitor		✓ <sup>1</sup>	<b>SAFETY AND SECURITY</b>		
<b>CAT TECHNOLOGIES</b>			Rear and right-side-view cameras	✓	
Cat Product Link™	✓		360° visibility		✓
Cat GRADE with 2D	✓		Ground level engine shutoff switch	✓	
Cat GRADE with Advanced 2D		✓	Service platform with anti-skid plate and countersunk bolts	✓	
Cat GRADE with 3D		✓	Signaling/warning horn	✓	
Cat PAYLOAD	✓		Hydraulic lock out lever	✓	
2D E-Fence	✓		<b>SERVICE AND MAINTENANCE</b>		
Remote flash capability	✓		Grouped engine oil and fuel filters	✓	
Remote troubleshoot capability	✓		Ground level engine oil dipstick	✓	
Auto hammer stop	✓		S-O-S <sup>SM</sup> sampling ports	✓	
<b>ELECTRICAL SYSTEM</b>			<b>UNDERCARRIAGE AND STRUCTURES</b>		
Maintenance free battery	✓		Grease lubricated track link	✓	
LED chassis light, left-side/right-side boom lights, cab lights	✓		ISO 15818:2017 tie down points on base frame	✓	
Programmable time-delay LED working lights	✓		500 mm (20") triple grouser shoes		✓
360° lighting		✓	600 mm (24") triple grouser shoes		✓
<b>ENGINE</b>			700 mm (28") triple grouser shoes		✓
C3.6 Stage V/Tier 4 Final	✓		770 mm (30") triple grouser shoes		✓ <sup>1</sup>
One-touch low idle with automatic engine speed control	✓		2140 kg (4,718 lb) counterweight	✓ <sup>4</sup>	
Automatic engine shutdown	✓		2470 kg (5,445 lb) counterweight	✓ <sup>5</sup>	
52° C (125° F) high-ambient cooling capacity without de-rate	✓		2500 mm (8'2") blade		✓
-25° C (-13° F) cold start capability	✓		2600 mm (8'6") blade		✓
Electric fuel priming pump	✓		2700 mm (8'10") blade		✓
Variable speed fan	✓				
Single fuel filtration system	✓				
Double element air filter with integrated precleaner	✓				
Biodiesel capability up to B20	✓				

<sup>1</sup>Europe only

<sup>2</sup>All regions except North America

<sup>3</sup>North America only

<sup>4</sup>Japan only

<sup>5</sup>Optional for Japan

**Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area.**

For additional information and additional regional offerings, refer to the Technical Specifications brochure available at [www.cat.com](http://www.cat.com) or your Cat dealer.

# Cat® 313 Hydraulic Excavator

## Technical Specifications

Engine		
Engine Model	Cat C3.6	
Engine Power – ISO 14396	82.0 kW	110 hp
Engine Power – ISO 9249	80.9 kW	108 hp
Bore	98 mm	4 in
Stroke	120 mm	5 in
Displacement	3.6 L	220 in <sup>3</sup>

Hydraulic System		
Main System – Maximum Flow	247 L/min	65 gal/min
Maximum Pressure – Equipment	35 000 kPa	5,075 psi
Maximum Pressure – Travel	35 000 kPa	5,075 psi
Maximum Pressure – Swing	26 000 kPa	3,770 psi

Swing Mechanism		
Swing Speed	11.5 rpm	
Maximum Swing Torque	35 kN·m	25,741 lbf·ft

Weights		
Operating Weight	12 700 kg	28,000 lb
• Standard Undercarriage, Reach Boom, R2.5 (8'2") Stick, GD 0.52 m <sup>3</sup> (0.68 yd <sup>3</sup> ) bucket, 500 mm (20") triple grouser shoes, and 2,140 kg (4,718 lb) counterweight.		
Operating Weight	13 800 kg	30,400 lb
• Long Undercarriage, Reach Boom, R3.0 (9'8") Stick, GD 0.53 m <sup>3</sup> (0.69 yd <sup>3</sup> ) bucket, 700 mm (28") triple grouser shoes, and 2,470 kg (5,445 lb) counterweight.		

Service Refill Capacities		
Fuel Tank Capacity	258 L	68.2 gal
Cooling System	15 L	4 gal
Engine Oil	8 L	2.1 gal
Final Drive	3 L	0.8 gal
Hydraulic System (including tank)	145 L	38.3 gal
Hydraulic Tank	70 L	18.5 gal
DEF Tank	21 L	5.6 gal

Dimensions		
<b>Boom</b>	<b>Reach 4.65 m (15'3")</b>	
<b>Stick</b>	<b>Reach R3.0 m (9'8")</b>	
<b>Bucket</b>	<b>GD 0.53 m<sup>3</sup> (0.69 yd<sup>3</sup>)</b>	
Shipping Height (top of cab)	2810 mm	9'2"
Handrail Height	2810 mm	9'2"
Shipping Length	7780 mm	25'6"
Shipping Length (with blade)	8050 mm	26'4"
Tail Swing Radius	2190 mm	7'2"
Counterweight Clearance	915 mm	3'0"
Ground Clearance	445 mm	1'5"
Track Length	3750 mm	12'3"
Track Length (standard undercarriage)	3490 mm	11'5"
Length to Center of Rollers	3040 mm	9'11"
Length to Center of Rollers (standard undercarriage)	2780 mm	9'1"
Track Gauge	1990 mm	6'6"
Transport Width – 500 mm (20") shoe	2490 mm	8'2"

Working Ranges		
<b>Boom</b>	<b>Reach 4.65 m (15'3")</b>	
<b>Stick</b>	<b>Reach R3.0 m (9'8")</b>	
<b>Bucket</b>	<b>GD 0.53 m<sup>3</sup> (0.69 yd<sup>3</sup>)</b>	
Maximum Digging Depth	6040 mm	19'9"
Maximum Reach at Ground Line	8660 mm	28'4"
Maximum Cutting Height	8830 mm	28'11"
Maximum Loading Height	6420 mm	21'0"
Minimum Loading Height	1600 mm	5'2"
Maximum Depth Cut for 2400 mm (8'0") Level Bottom	5860 mm	19'2"
Maximum Vertical Wall Digging Depth	5190 mm	17'0"
Minimum Working Equipment Radius	2570 mm	8'5"
Bucket Digging Force (ISO)	98.67 kN	22,180 lbf
Stick Digging Force (ISO)	59.29 kN	13,330 lbf

**Air Conditioning System**

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.85 kg of refrigerant which has a CO<sub>2</sub> equivalent of 1.216 metric tonnes.

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

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