

# 313

## HYDRAULIC EXCAVATOR



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<b>Engine Power</b>	
ISO 14396:2002	82 kW (110 hp)
ISO 14396:2002 (DIN)	111 hp (metric)
<b>Operating Weight</b>	13 800 kg (30,400 lbs)

Meets U.S. EPA Tier 4 Final, EU Stage V, and Japan 2014 emission standards.



# THE NEW CAT<sup>®</sup> 313

NEXT LEVEL PERFORMANCE

The 313 Hydraulic Excavator offers superior performance and operator efficiency. Standard, easy-to-use Cat<sup>®</sup> 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.



## NEXT GENERATION EXCAVATORS

The new line of Cat excavators offers more choices than ever for your business.

- + MORE MODEL OPTIONS
- + MORE STANDARD TECHNOLOGIES
- + MORE WAYS TO BOOST PERFORMANCE

Ready to help you make your business stronger, Cat next generation excavators give you new ways to get the most work done at a cost that fits your business.



## UP TO **25% LESS** MAINTENANCE COSTS



**LESS MAINTENANCE,  
MORE PROFITABILITY**

NOTE: COMPARISON IS BASED ON THE 313 VS THE 313F.

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## LOWER MAINTENANCE COSTS BY UP TO 25%<sup>1</sup>

Extended maintenance intervals increase uptime and reduce costs.

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## INCREASE OPERATOR EFFICIENCY BY UP TO 45%<sup>1</sup>

The Cat 313 offers the industry's highest level of standard, factory-equipped technology, including Cat Grade with 2D and Payload.

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## WORK SMART. SAVE MONEY.

Improve fuel efficiency by up to 10%. Three power modes – Power mode, Smart mode, and Eco mode – help manage fuel consumption.

<sup>1</sup> Compared to the 313F

# BOOST YOUR PRODUCTIVITY BY UP TO 45%

WITH SIMPLE-TO-USE INTEGRATED CAT TECHNOLOGY



## STANDARD TECHNOLOGIES INCLUDE:



### CAT GRADE WITH 2D

Cat Grade with 2D helps operators reach grade faster. Onboard processors and sensors provide real-time guidance on distance to grade without guesswork. Work safer with fewer ground personnel needed to check the work area for obstacles or grade.



### CAT PAYLOAD

Cat Payload helps you achieve precise load targets to improve your operating efficiency. Pick up a load of material – with a bucket and thumb combination or grapple and clamshell attachments – and get real-time weight estimates without swinging. Combine with VisionLink® to manage your production targets remotely (available for download to USB).



### CAT GRADE WITH ASSIST

Automated boom, stick, and bucket movements deliver more accurate cuts with less effort. The operator simply sets the depth and slope into the monitor and activates single-lever digging.

# CAT TECHNOLOGY

GETS JOBS DONE FASTER WITH LESS REWORK

## OPTIONAL UPGRADES:

Cat Grade with Advanced 2D\* and Cat Grade with 3D\* increase productivity and your profit potential. Cat Grade with Advanced 2D offers in-field design capability through an additional high-resolution touchscreen monitor. Cat Grade with 3D offers a choice of a single antenna global navigation satellite system (GNSS) for enhanced guidance or dual antenna GNSS for maximum grading efficiency.

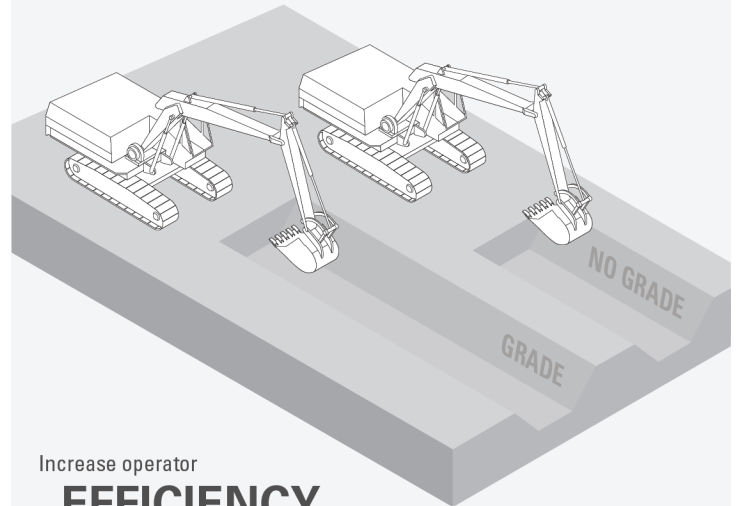
\*Both 2D and 3D Cat Grade upgrades can be installed at the factory or after purchase.

## EASE OF USE (EOU) COMPATIBLE:

All Cat Grade systems are compatible with radios and base stations from Trimble, Topcon, and Leica. Already invested in a grade infrastructure? You can install grade systems from Trimble, Topcon, and Leica onto the machine.

STANDARD CAT® GRADE

**MORE** WORK,  
**LESS** TIME,  
**MORE** MONEY



Increase operator

**EFFICIENCY**  
by up to  
**45%**



# CAT EQUIPMENT MANAGEMENT TECHNOLOGY TAKES THE GUESSWORK OUT OF MANAGING YOUR EQUIPMENT

Cat equipment management telematics technology helps take the complexity out of managing your jobsites by gathering data generated by your equipment, materials, and people and serving it up to you in customizable formats.



## **PRODUCT LINK™**

Product Link™ collects data automatically and accurately from your 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.



## **VISIONLINK®**

Access information anytime, anywhere with VisionLink. Use it to make informed decisions that boost productivity, lower costs, simplify maintenance, and improve safety and security on your jobsite. With different subscription level options, your Cat dealer can help you configure exactly what you need to connect your fleet and manage your business without paying for extras you don't want. Subscriptions are available with cellular or satellite reporting (or both).



**Remote Services** is a suite of technologies that improve your jobsite efficiency.

**Remote Troubleshoot** allows your Cat dealer to perform diagnostic testing on your connected machine remotely, pinpointing potential issues while the machine is in operation. Remote Troubleshoot helps ensure the technician arrives with the correct parts and tools the first time, eliminating additional trips to save you time and money.

**Remote Flash** updates onboard software without a technician being present, potentially reducing update time by as much as 50%. You can initiate the update when convenient, increasing your overall operating efficiency.

The **Cat app** helps you manage your assets – at any time – right from your smartphone. You can see your fleet location, hours, and other information. You will get critical alerts for required maintenance, and you can even request service from your local Cat dealer.

LOWER MAINTENANCE COSTS  
**UP TO 25%**



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## DO MORE. PAY LESS.

With extended and more synchronized maintenance intervals, you get more done at a low cost. Consolidated filter locations make service faster. Your machine's filter life and maintenance intervals are also trackable on the in-cab touchscreen monitor.

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## SERVICE REMINDERS MADE EASY

Boost productivity with proactive service reminders. The new integrated vehicle health management system alerts the operator with step-by-step service guidance, along with parts needed, so you don't experience any unnecessary downtime.

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## NEW LONGER LASTING FILTERS

The new hydraulic oil filter provides improved filtration performance, anti-drain valves to keep oil clean when the filter is replaced, and a 3,000-hour replacement interval – 50% longer than previous filter designs.



# EXPAND YOUR JOBSITE CAPABILITIES

WITH MORE SWING TORQUE AND  
FUEL EFFICIENCY

A 10% increase in swing torque versus the previous model makes traveling, swinging, and working on slopes easy. Backfill trenches and move around your jobsite faster than before – allowing you to be more productive and finish jobs quickly.

## INCREASE FUEL EFFICIENCY BY UP TO 10%

An advanced hydraulic system provides the optimum balance of power and efficiency while giving you the control you need for precise digging requirements.





## SEAT AND JOYSTICK CONSOLE HELP REDUCE FATIGUE

Comfort and movement efficiency help keep operators productive and alert all shift long. A tip-up left console lets you get in and out of the cab easily, and the standard seat is wide and adjustable for operators of virtually any size. Controls are easy to reach, allowing you to operate comfortably with minimal twists and turns.



# CAB TAKES THE HARD OUT OF WORK

The new 313 cab protects the operator as much as possible from the fatigue, stresses, sounds, and temperatures of the job.



## NEW SMART MODE

The new Smart mode, one of three power mode settings, automatically adjusts engine and hydraulic power for the highest fuel efficiency – less power for tasks such as swinging and more power for digging. Operators can set and store their power mode preference using operator ID. Owners can lock in the mode they want their operators to use to help manage fuel consumption.



## KEYLESS PUSH TO START

A keyless push-button engine start adds security for the machine by using operator ID codes to limit and track machine access. Codes can be entered manually or via an optional Bluetooth® key fob.



## CUSTOMIZABLE JOYSTICKS

Joystick function can be customized through the monitor. Joystick pattern as well as response can be set to match operator preferences. All preferences are saved with the operator ID and restored at log in. Make moving the excavator much easier with Cat Stick Steer. Simply push a button and use one hand to travel and turn instead of both hands or feet on levers or pedals. Adding an auxiliary relay allows you to power on or turn off a CB radio, beacon light, and even a dust suppression watering system without taking your hands off the joysticks.



## TOUCHSCREEN MONITOR

Most machine settings can be controlled through the high-resolution 203 mm/8-inch touchscreen monitor. It offers 42 languages and is easy to read from the seat. A second 254 mm/10-inch touchscreen monitor is available.

## NEW CAB DESIGN

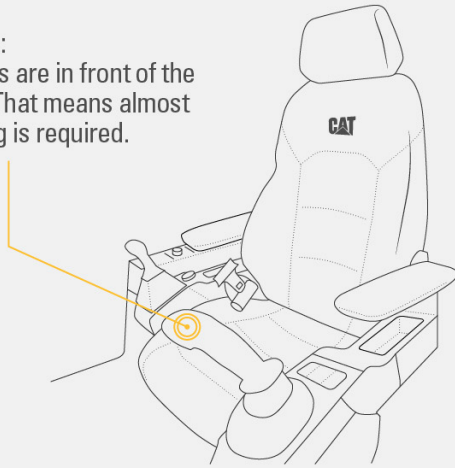
# HELPS KEEP YOU SAFE

## WE'VE GOT YOUR BACK.

**BACK PAIN IS ONE OF THE MOST COMMON REASONS PEOPLE MISS WORK.\***

### NEW CAB:

All controls are in front of the operator. That means almost no twisting is required.



**OLD CAB:** 2,000+ twists a year to reach controls in back of cab that can strain your back.

ASSUME 1 TWIST PER HOUR  
1 TWIST x 8-HOUR WORKDAY = 8 TWISTS PER DAY  
8 TWISTS x 5 WORKDAYS PER WEEK = 40 TWISTS PER WEEK  
40 TWISTS x 52 WEEKS PER YEAR = **2,080 TWISTS PER YEAR**

\*SOURCE: [HTTPS://WWW.NINDS.NIH.GOV/DISORDERS/PATIENT-CAREGIVER-EDUCATION/FACT-SHEETS/LOW-BACK-PAIN-FACT-SHEET](https://www.ninds.nih.gov/disorders/patient-caregiver-education/fact-sheets/low-back-pain-fact-sheet)

## ALL-AROUND VISIBILITY

Enlarged windows and improved machine layout increase visibility from the seat of the cab. Standard rearview and right-side-view cameras always keep operators aware of their surroundings. An optional 360° visibility feature is also available. Powerful, long-lasting LED lights consume minimal power, keeping you safe while working in the dark.

## CAB HELPS KEEP YOU SAFE

The ISO-certified rollover protective structure (ROPS) cab is sound suppressed and sealed. The large windows and lower front, right, and rear profile of the machine give outstanding visibility to the work area without the strain of constantly leaning forward.

## EASY ACCESS, CONNECTIVITY, AND STORAGE

Several built-in convenience features make work more comfortable.

- + ERGONOMIC CONTROL LAYOUT
- + BLUETOOTH INTEGRATED RADIO
- + USB PORTS FOR CHARGING AND PHONE CONNECTIVITY
- + 12V DC OUTLETS AND AUX PORT
- + STORAGE IN REAR, OVERHEAD, AND CONSOLE COMPARTMENTS
- + CUP AND BOTTLE HOLDERS

# SAFETY FEATURES

## LOOK OUT FOR YOUR PEOPLE AND EQUIPMENT

Help keep your people and equipment safe with new safety technology features, ground-level daily maintenance, and new upper platform access.



### GROUND-LEVEL DAILY MAINTENANCE

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All daily maintenance checks can be performed from ground level, making maintenance faster, easier, and safer. Checkpoints include the engine oil dipstick, fuel water separator, fuel tank water and sediment drains, and cooling system coolant level check.

### CAT DETECT PEOPLE DETECTION

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Cat Detect People Detection helps protect the most valuable asset on any jobsite – people. The system uses smart cameras with depth sensors to provide the operator with visual and auditory alerts so he or she can take immediate action when a person is too close to the excavator.

### CAT COMMAND REMOTE CONTROL

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Enhance jobsite safety by adding Cat Command to your fleet. The remote control system comes with everything you need to operate outside of the cab. Command console lets you operate up to 400 meters (437 yards) away. Command station lets you work virtually anywhere.

### UPPER PLATFORM ACCESS

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New right service platform design provides easy, safe, and quick access to the upper service platform; the service platform steps use anti-skid punch plate to help prevent slipping.

### E-FENCE TECHNOLOGY

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Whether you are using a bucket and thumb combination or a hammer, grapple, or clamshell, E-Fence automatically stops excavator motion using boundaries you set through the monitor for the entire working envelope – above, below, sides, and front. E-Fence protects equipment from damage and reduces fines related to zoning or underground utility damage. Automatic boundaries even help prevent operator fatigue by reducing overswinging and overdigging.

### INSPECTION LIGHTING

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Make service work easier and safer with optional inspection lighting. With the flip of a switch, lights will illuminate the engine, pump, battery, and radiator compartments to enhance visibility.

# INCREASE YOUR PRODUCTIVITY AND PROFIT WITH CAT ATTACHMENTS

Easily expand the performance of your machine by using any of the variety of Cat attachments. Each Cat attachment is designed to fit the weight and horsepower of Cat excavators for improved performance, safety, and stability.

## PREVENT HAMMER WEAR AND TEAR

Protect your hammer tool from overheating and rapid wear. Auto hammer stop warns you after 15 seconds of continuous firing and then automatically shuts it off after 30 seconds – all to extend the tool's service life.

## HYDRAULIC HAMMERS



## GRAPPLES



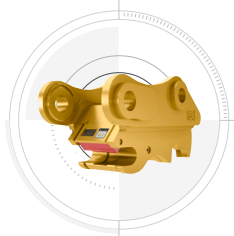
## DO HARD-TO-REACH WORK

With 360° rotation and 40° side-to-side tilting action, a Cat tiltrotator will help you get complex work done faster. A new system upgrade from the factory allows the tool to work with Cat 2D Grade, Assist, Payload, and E-Fence. It includes factory-fit joysticks, but uses the standard cab monitor to display the tool and engage its SecureLock™ so you don't need to spend money on an extra monitor. It also works seamlessly with other brands with no additional hardware required. All you have to do is simply select "Third Party Tiltrotator System Installation" in the monitor, do the calibration, and get to work.

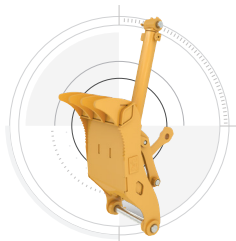
## TILTROTATOR



## COUPLERS



## THUMBS

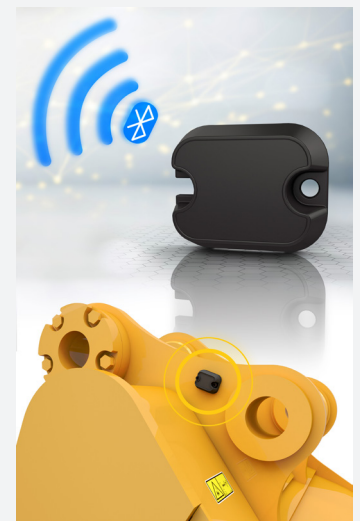


## BUCKETS



## ATTACHMENT TRACKING MADE EASY

The Cat PL161 Attachment Locator is a Bluetooth device that makes finding your attachments and other gear quick and easy. The excavator's onboard Bluetooth reader or the Cat app on your phone will locate the device automatically.



Save more time and energy with the available work tool recognition feature. A simple shake of the attached tool confirms its identity; it also ensures all the attachment settings are correct, so you can get to work quickly and efficiently.

# TECHNICAL SPECIFICATIONS

See [cat.com](http://cat.com) for complete specifications.

ENGINE		
Engine Model	Cat® C3.6	
Engine Power		
ISO 14396	82.0 kW	110 hp
ISO 14396 (DIN)	111 hp (metric)	
Net Power		
ISO 9249	80.9 kW	108 hp
ISO 9249 (DIN)	110 hp (metric)	
Bore	98 mm	4 in
Stroke	120 mm	5 in
Displacement	3.6 L	220 in <sup>3</sup>

- 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 equipped with fan, air intake system, exhaust system and alternator.
- Engine speed at 2,400 rpm.

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	13 800 kg	30,400 lb
• Long undercarriage, Reach boom, R3.0 (9'10") stick, GD 0.53 m <sup>3</sup> (0.69 yd <sup>3</sup> ) bucket, 700 mm (28") triple grouser shoes, and 2470 kg (5,445 lb) counterweight.		

SERVICE REFILL CAPACITIES		
Fuel Tank	258 L	68.2 gal
Cooling System	15 L	4.0 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
Diesel Exhaust Fluid (DEF) Tank	21 L	5.6 gal

DIMENSIONS		
Boom	Reach 4.65 m (15'3")	
Stick	Reach R3.0 m (9'10")	
Bucket	GD 0.53 m <sup>3</sup> (0.69 yd <sup>3</sup> )	
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"
Length to Center of Rollers	3040 mm	9'11"
Track Gauge	1990 mm	6'6"
Transport Width – 500 mm (20") shoes	2490 mm	8'2"

WORKING RANGES AND FORCES		
Boom	Reach 4.65 m (15'3")	
Stick	Reach R3.0 m (9'10")	
Bucket	GD 0.53 m <sup>3</sup> (0.69 yd <sup>3</sup> )	
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 2440 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.		

# STANDARD & OPTIONAL EQUIPMENT

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

BOOMS AND STICKS	STANDARD	OPTIONAL
4.65 m (15'3") Reach boom		●
2.4 m (7'8")/2.44 (8'0") Variable Angle boom		● <sup>1</sup>
2.2 m (7'3") Reach stick		● <sup>1</sup>
2.5 m (8'2") Reach stick		● <sup>2</sup>
2.8 m (9'2") Reach stick		● <sup>3</sup>
3.0 m (9'10") Reach stick		●
2.8 m (9'2") Thumb Ready stick		● <sup>3</sup>
CAB	STANDARD	OPTIONAL
Rollover protective structure (ROPS)	●	
Deluxe cab: air suspension heated seat, 10" touchscreen monitor		●
Premium cab: air suspension heated and cooled seat, 10" touchscreen monitor		● <sup>1</sup>
Cat® Stick Steer		●
Auxiliary relay		●
CAT TECHNOLOGIES	STANDARD	OPTIONAL
Cat Product Link™	●	
Remote Flash	●	
Remote Troubleshoot	●	
Cat Grade with 2D	●	
Cat Grade with Advanced 2D		●
Cat Grade with 3D single GNSS		●
Cat Grade with 3D dual GNSS		●
Cat Assist	●	
Cat Payload	●	
2D E-Fence	●	
ELECTRICAL SYSTEM	STANDARD	OPTIONAL
Maintenance free battery	●	
LED chassis light, left-side/right-side boom lights, cab lights	●	
Centralized electrical disconnect switch	●	
Programmable time-delay LED working lights	●	
360° lighting		●
ENGINE	STANDARD	OPTIONAL
Cat C3.6 single turbo diesel engine	●	
One-touch low idle with automatic engine speed control	●	
Auto engine shutdown	●	
52°C (125°F) high-ambient cooling capacity without derate	●	
-25°C (-13°F) cold start capability	●	
Electric fuel priming pump	●	
Variable fan	●	
Single fuel filtration system	●	
Double element air filter with integrated precleaner	●	
Biodiesel capability up to B20	●	

HYDRAULIC SYSTEM	STANDARD	OPTIONAL
Boom and stick regeneration circuits	●	
Auto hydraulic warmup	●	
Auto two-speed travel	●	
Electric main control valve	●	
Boom and stick drift reduction valve	●	
Swing drive with fine swing control function	●	
Auxiliary line support	●	
Boom and stick lowering check valves		●
Medium-pressure line		●
High-pressure line		●
Quick coupler line		●
SAFETY AND SECURITY	STANDARD	OPTIONAL
Cat Detect People Detection		●
Cat Command remote control		●
Rear- and right-side-view cameras	●	
360° visibility		●
Hydraulic lockout lever	●	
Ground-level engine shutoff switch	●	
Swing alarm		●
Service platform with anti-skid plate and countersunk bolts	●	
Signaling/warning horn	●	
Inspection lighting		●
SERVICE AND MAINTENANCE	STANDARD	OPTIONAL
Integrated vehicle health management system		●
Grouped engine oil and fuel filters	●	
Ground-level engine oil dipstick	●	
Scheduled Oil Sampling (S•O•S <sup>SM</sup> ) sampling ports	●	
UNDERCARRIAGE AND STRUCTURES	STANDARD	OPTIONAL
Grease lubricated track link	●	
ISO 15818 tie-down points on base frame	●	
Long undercarriage	●	
500 mm (20") triple grouser shoes		●
500 mm (20") rubber track shoes		●
500 mm (20") triple grouser shoes with rubber pad		●
600 mm (24") triple grouser shoes		●
600 mm (24") rubber track shoes		●
700 mm (28") triple grouser shoes		●
770 mm (30") triple grouser shoes		● <sup>1</sup>
2470 kg (5,450 lb) counterweight	●	
2500 mm (8'2") blade		●
2600 mm (8'6") blade		●
2700 mm (8'10") blade		●

<sup>1</sup>Europe only

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

<sup>3</sup>North America only

**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, refer to the Technical Specifications brochures for the 313 available at [www.cat.com](http://www.cat.com) or your Cat dealer.

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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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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[www.cat.com](http://www.cat.com) [www.caterpillar.com](http://www.caterpillar.com)

PEDJ0466-04  
Replaces PEDJ0466-03  
Build Number: 07D  
(N Am, Eur, Aus-NZ)

