

313D Series 2

Hydraulic Excavator



Engine

Engine Model	C4.4	
Engine Power (ISO 14396)	74.5 kW	99.9 hp
Net Power (SAE J1349/ISO 9249)	70.6 kW	94.7 hp

Weights

Operating Weight – Standard Configuration	15 900 kg	35,053 lb
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313D Series 2 Features

Supporting your business through enhanced features

Engine and Hydraulics

A powerful C4.4 engine emits equivalent to U.S. EPA Tier 3 and EU Stage IIIA and is combined with a highly efficient hydraulic system which delivers excellent performance with low fuel consumption.

Structures

Caterpillar design and manufacturing techniques assure outstanding durability and service life in the toughest applications.

Operator Station

The spacious cab features excellent visibility and easy-to-access switches. The monitor features a full-color graphical display that is user intuitive and highly visual. Overall, the new cab provides you with a comfortable working environment for maximum production and efficiency.

Service and Maintenance

This machine has been designed so that routine service and maintenance can be completed quickly to help reduce ownership costs. Convenient access points, extended service intervals, and advanced filtration help keep downtime to a minimum.

Complete Customer Support

Your Cat® dealer offers a wide range of services that can be set up under a customer support agreement when you purchase your equipment.

Cat 313D Series 2 Total Solutions

Caterpillar and its extensive dealer network offer a wide variety of solutions designed to meet the unique needs of your business.

Contents

Operator Station.....	4
Engine	6
Hydraulics	7
Undercarriage and Structures	8
Front Linkage	10
Work Tools.....	11
Service and Maintenance	12
Complete Customer Support.....	13
Specifications.....	14
Standard Equipment.....	20
Optional Equipment.....	21
Notes.....	22

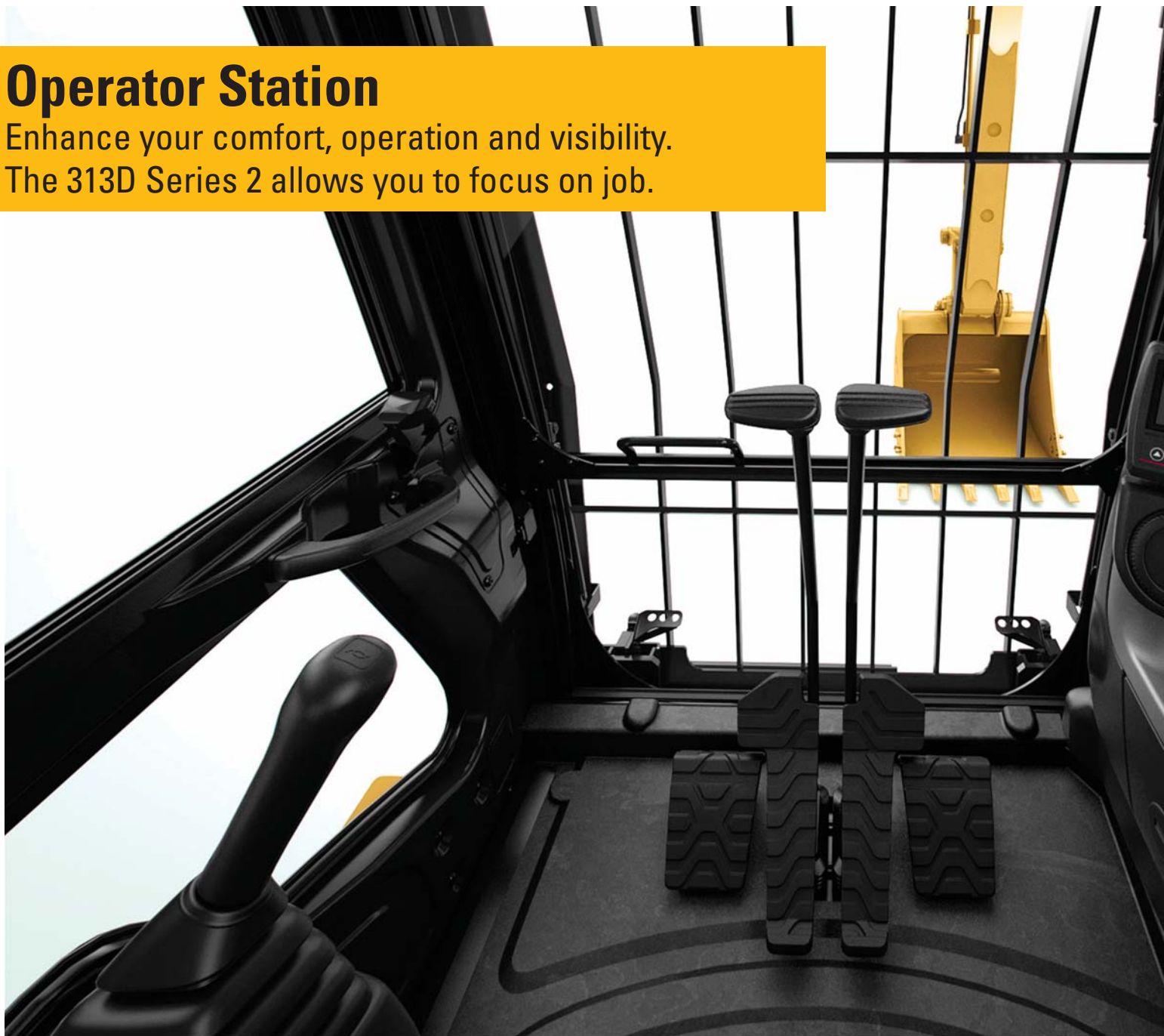




Achieve high productivity and lower operating costs with the Cat 313D Series 2 hydraulic excavator. This low ground pressure machine has been designed in full alignment with critical customer requirements from the agricultural and forestry applications. Unmatched versatility, improved fuel system reliability, excellent ground clearance, easy operation, and a comfortable, redesigned operator station help make the 313D Series 2 an industry-leading performer.

Operator Station

Enhance your comfort, operation and visibility.
The 313D Series 2 allows you to focus on job.



Operator Station

The ergonomically designed operator station is spacious, quiet, and comfortable, assuring high productivity during a long work day. All switches are located in front of the operator for convenient access.

Monitor

The monitor is a full-color Liquid Crystal Display (LCD) that has the capability of displaying information in 42 languages.

Joystick Control

Low-effort pilot-operated joystick controls are designed to match your natural wrist and arm position for maximum comfort and minimum fatigue.

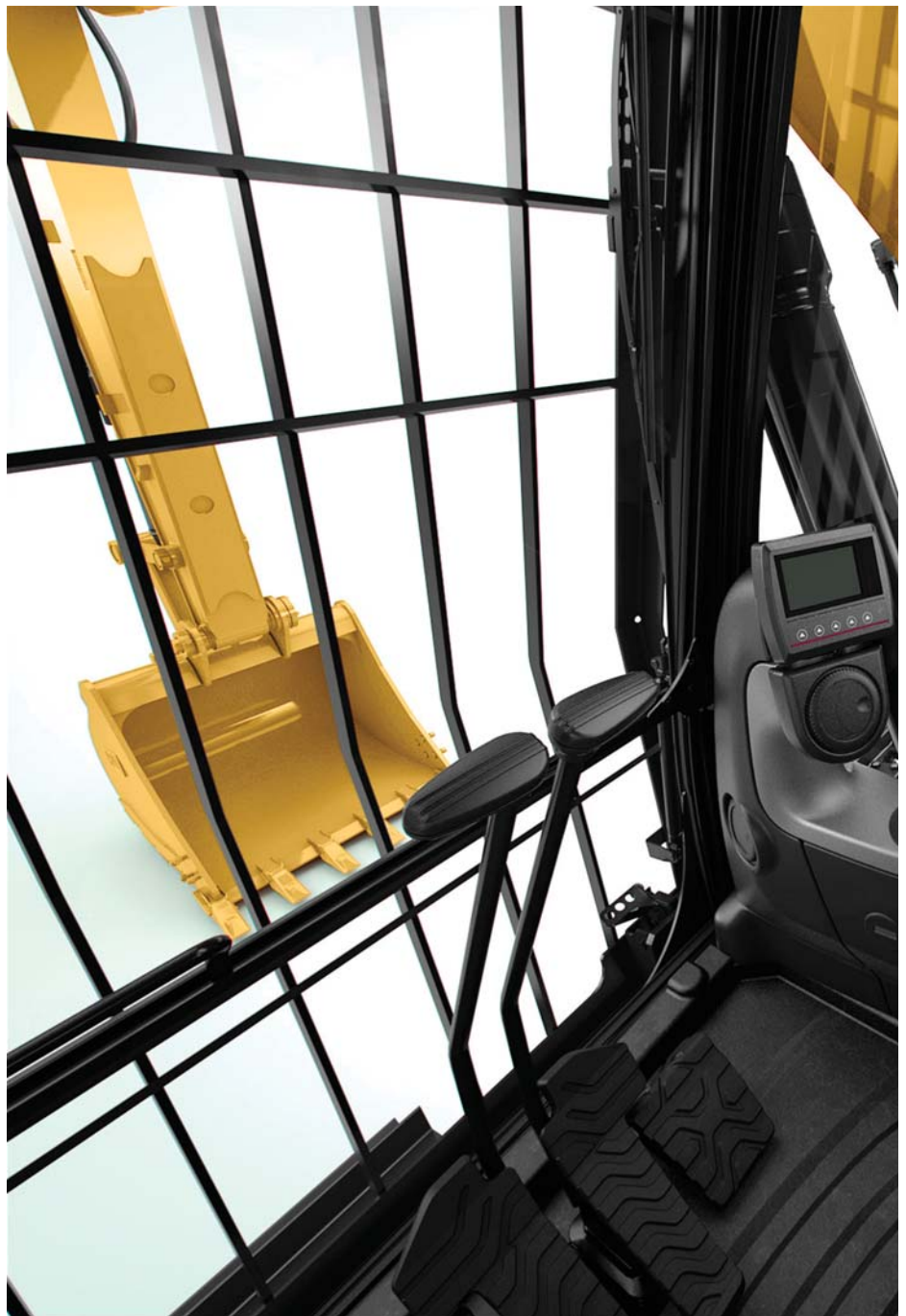
Seat

The standard suspension seat provides a variety of adjustments to meet operator needs for comfort and productivity.



Cab Structure and Mounts

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



Windows

To maximize visibility, all glass is affixed directly to the cab, eliminating window frames. The upper front windshield opens, closes, and stores on the roof above the operator with a one-touch action release system.

Wipers

Pillar-mounted wipers increase the operator's viewing area and offer continuous and intermittent modes.



Engine

A powerful engine with excellent reliability and low fuel consumption delivering more while boosting your bottom line.

The Cat C4.4 engine has been designed to emit equivalent to Tier 3 and Stage IIIA. This engine incorporates a time-proven low-pressure fuel injection system that is a major contributor to the improvement of fuel system robustness, high fuel efficiency, and ease of troubleshooting. High filtration performance from the primary filter incorporating a water separator and a secondary filter also help to improve fuel filtration system reliability.

Automatic Engine Control (AEC) and Fuel Delivery

With a net power of 70.6 kW (94.7 hp) the 313D Series 2 has a proven engine that delivers better fuel consumption, boasts improved reliability, and it's less sensitive to fuel cleanliness.

Power Modes

Two power modes are available including the Standard mode and the Economy mode which allows you to balance the demands of performance and fuel economy while maintaining the breakout forces and lift capacity enjoyed at standard power.

Hydraulics

Efficient hydraulic system with low effort joysticks provides precise control regardless of your application.



Outstanding Performance

The 313D Series 2 hydraulic system is designed for high efficiency and performance. The compact design utilizes shorter tubes and lines to reduce friction and pressure drops, resulting in a more efficient use of power.

- Hydraulic snubbers at the rod end of the boom cylinders and both ends of the stick cylinders cushion shock, reduce sound, and increase cylinder life.
- A hydraulic cross-sensing system uses two hydraulic pumps under all operating conditions, improving productivity with faster implement speeds and quicker, stronger pivot turns.

Boom and Stick Regeneration Circuit

The boom and stick regeneration circuit saves energy during boom-down and stick-in operation, increasing efficiency and lowering operating costs.

Undercarriage and Structures

Strong and durable, all you expect from Cat Excavators.



Caterpillar uses advanced engineering and software to analyze all structures, creating a durable, reliable machine for robust applications. More than 70 percent of the structural welds are robotic and achieve additional penetration over manual welds. These structural components and undercarriage are the backbone of the machine's durability.

Falling Objects Guarding System

The 313D Series 2 can be equipped with an optional impact-absorbing cab front guard and cab top guard that conforms to ISO 10262:1998 standards. These guards can be bolted to the cab shell directly and offer additional protection from falling objects.

Upper Structure Guards

Optional upper structure guards protect the side of the machine from potential damage. They are designed to be tough and durable and will protect your machine when working in the toughest applications. The upper structure guards can be easily opened for maintenance.

High Wide Carbody

The 313D Series 2 features an X-shaped box section high wide carbody design which is extremely durable and designed specifically to work in forestry and agricultural applications. The carbody ring height has increased along with the height of the carbody frame to provide more clearance for additional protection.

Undercarriage

The 313D Series 2 incorporates a re-designed undercarriage giving the machine a larger footprint for lower ground pressure, and significantly improved durability to cope with the harsh environments that these machines work in. This undercarriage has been designed specifically for agricultural and forestry applications and includes the following features:

- 650 mm (2'2") of ground clearance
- 1250 mm (4'1") of counterweight clearance
- Dress welding added to roller frame for increased strength
- Additional rib added to the idler support for increased protection

Carrier Rollers, Track Rollers and Track Roller Supports

The 313D Series 2 features durable Carrier and Track rollers which have been designed to work in the toughest applications. The Track Roller Supports have also been redesigned to ensure high durability and a long life.

Final Drives

Powerful final drives ensure high drawbar pull for increased tractive effort, better turnability and excellent climbability.

Track Links

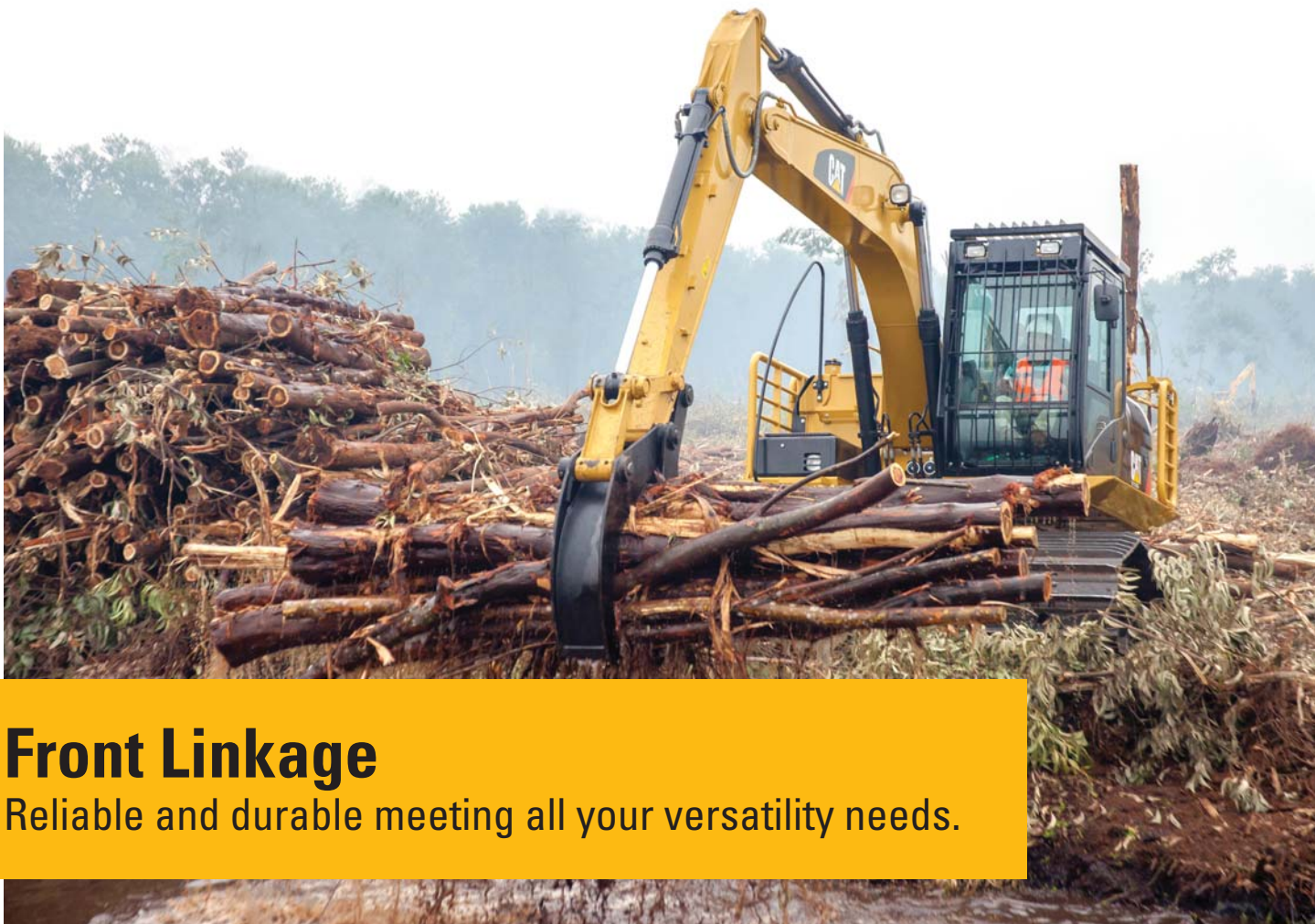
The 313D Series 2 incorporates a strong, durable, grease lubricated track link ensuring long undercarriage life in the toughest applications.

Track Shoes

The 313D Series 2 incorporates 600 mm (2'0") triple grouser track shoes which provide good flotation and traction in soft, muddy, and loose conditions. These wide track shoes help to reduce ground pressure and increase tractive effort.

Track Guard

The 313D Series 2 incorporates a three-piece track guiding guard which provides excellent protection from large debris and also improves track roller durability.



Front Linkage

Reliable and durable meeting all your versatility needs.

Robust applications require robust machine designs. In order to meet your job site needs we use advanced engineering and software to analyze all structures, creating a durable, reliable machine.

Front Linkage

The 313D Series 2 incorporates a 4.65 m (15'3") heavy duty boom and one stick option. The 2.5 m (8'2") heavy duty stick is available.

Heavy Duty Boom

The 4.65 m (15'3") heavy duty reach boom is designed with interior baffle plates for increased durability, and is reinforced making it more durable and recommended for use in severe applications.

Heavy Duty Stick

A 2.5 m (8'2") heavy-duty stick has thicker plates, new forged parts, and welded joints for increased durability, and digging force.

Work Tools

Operate efficiently with confidence.

Buckets

Cat Buckets and Cat Ground Engaging Tools (GET) are designed and matched to the machine ensuring optimal performance and fuel consumption.

General Duty Buckets (GD)

These buckets are designed for digging in low-impact, moderately abrasive materials such as dirt, loam, gravel and clay.

Grapple

Grapples expand the versatility of your excavator making it the ideal machine for land clearing, log sorting, and debris cleanup. A number of different design options are available to optimize your specific application.



Each Cat work tool is designed to optimize the versatility and performance of your machine.

Comprehensive Product Support

All Cat work tools are backed up by a world-wide network of well-stocked spare parts depots and highly experienced after-sales service and support personnel.

**Offering varies for different regions*

Work tools available vary by region. Contact your local Cat dealer for more information about the work tools available in your region.

Service and Maintenance

Simplified service and maintenance features save you time and money.

Radiator Compartment

The left service door allows easy access to the engine radiator, oil cooler, water separator and first and second fuel filter.

A reserve tank and drain cock are attached to the radiator for simplified maintenance.

The air filter features a double-element construction for superior cleaning efficiency. When the air cleaner plugs, a warning is displayed on the monitor screen inside the cab.

Pump Compartment

A service door on the right side of the upper structure allows easy access to the pump, pilot filter, case drain filter, the engine oil filter, S·O·SSM sampling port, and diagnostic pressure taps.

Hydraulic Return Filter

The hydraulic return filter is located inside the hydraulic tank.

This filter prevents contaminants from entering the system when hydraulic oil is changed and keeps the operation clean.

Greasing Points

A concentrated remote greasing block on the boom delivers grease to hard-to-reach locations on the structures. Remote mounted greasing points are easily accessible to reduce maintenance time.

Fan Guard

The engine radiator fan guard is enclosed by a heavy wire guard, reducing the risk of an accident.

Anti-Skid Plate with Counter Sunk Bolts

Anti-skid plate covers the top of storage box and upper structure to prevent slipping during maintenance. All bolts are countersunk to reduce trip hazards.

Diagnostics and Monitoring

The 313D Series 2 is equipped with S·O·S sampling ports and hydraulic test ports for the hydraulic system and coolant. A test connection for the Cat Electronic Technician (Cat ET) service tool is located behind the cab.

Extended Service Interval

313D Series 2 service and maintenance intervals have been extended to reduce machine service time and increase machine availability.

Complete Customer Support

Cat dealer services help you operate longer
with lower costs.



Product Support

You will find nearly all parts at our dealer parts counter. Cat dealers utilize a worldwide computer network to find in-stock parts to minimize machine downtime. A wide range of Cat remanufactured components are available for the 313D Series 2, further lowering repair costs and supporting sustainable practices.

Machine Selection

Make detailed comparisons of the machines you are considering before you buy. What are the job requirements, machine attachments and operating hours? What production is needed? Your Cat dealer can provide recommendations.

Maintenance Services

Repair option programs guarantee the cost of repairs up front. Condition monitoring services and diagnostic programs such as scheduled oil sampling, coolant sampling, and technical analysis help you avoid unscheduled repairs.

Customer Support Agreements

Cat dealers offer a variety of product support agreements, and work with customers to develop a plan that best meets specific needs. These plans can cover the entire machine, including attachments, to help protect the customer's investment.

Replacement

Repair, rebuild, or replace? Your Cat dealer can help you evaluate the cost involved so you can make the right choice.

313D Series 2 Hydraulic Excavator Specifications

Engine

Engine Model	C4.4	
Net Power – ISO 14396	74.5 kW	99.9 hp
Net Power – SAE J1349/ISO 9249	70.6 kW	94.7 hp
Bore	105 mm	4.13 in
Stroke	127 mm	5.00 in
Displacement	4.4 L	269 in ³

- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- No engine derating required below 2300 m (7,545 ft) altitude.
- The 313D Series 2 with a powerful C4.4 engine emits equivalent to Tier 3 and Stage IIIA.

Weights

Operating Weight – Standard Configuration 15 900 kg 35,053 lb

- HD Boom 4.65 m (15'3"), HD Stick 2.5 (8'2"), Triple Grouser Track Shoes 600 mm (2'0"), GD 0.65 m³ (0.84 yd³) Bucket

Swing Mechanism

Swing Speed	12.2 rpm	
Swing Torque	30.9 kN·m	22,791 lbf-ft

Drive

Maximum Travel Speed	4.6 km/h	2.9 mph
Maximum Drawbar Pull	156 kN	34,980 lbf

Hydraulic System

Main System – Maximum Flow	2 × 127 L/min	2 × 34 gal/min
Maximum Pressure – Equipment	30.5 MPa	4,430 psi
Maximum Pressure – Swing	23 MPa	3,340 psi
Maximum Pressure – Travel	35 MPa	5,080 psi
Pilot System – Maximum Flow	22 L/min	1,340 in ³ /min
Pilot System – Maximum Pressure	4120 kPa	600 psi
Boom Cylinder – Bore	110 mm	4 in
Boom Cylinder – Stroke	1015 mm	40 in
Stick Cylinder – Bore	120 mm	5 in
Stick Cylinder – Stroke	1197 mm	47 in
Bucket Cylinder – Bore	100 mm	4 in
Bucket Cylinder – Stroke	939 mm	37 in

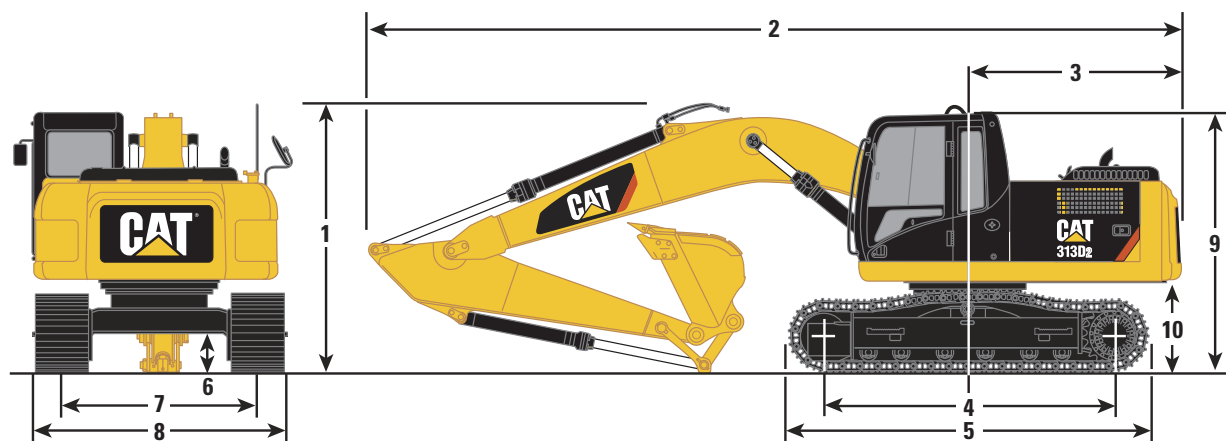
Service Refill Capacities

Fuel Tank Capacity	250 L	66 gal
Cooling System	18 L	4.7 gal
Engine Oil (with filter)	16 L	4.2 gal
Swing Drive	3 L	0.8 gal
Final Drive (each)	3 L	0.8 gal
Hydraulic System (including tank)	146 L	38.6 gal
Hydraulic Tank	86 L	22.7 gal

313D Series 2 Hydraulic Excavator Specifications

Dimensions

All dimensions are approximate.



Boom Options

HD Boom
4.65 m (15'3")

Stick Options

R2.5 HD (8'2")

1 Shipping Height*	3220 mm	10'7"
2 Shipping Length		
Standard Undercarriage	7600 mm	24'11"
3 Tail Swing Radius	2090 mm	6'10"
4 Length to Center of Rollers	3130 mm	10'3"
5 Track Length	4020 mm	13'2"
6 Ground Clearance	650 mm	2'2"
7 Track Gauge	2080 mm	6'10"
8 Transport Width		
600 mm (2'0") Shoes	2680 mm	8'10"
9 Cab Height	3150 mm	10'4"
Cab Height with Top Guard	3290 mm	10'10"
10 Counterweight Clearance**	1250 mm	4'1"
Bucket	Type	GD
	Capacity	0.65 m ³ 0.84 yd ³
	Tip Radius	1230 mm 4'0"

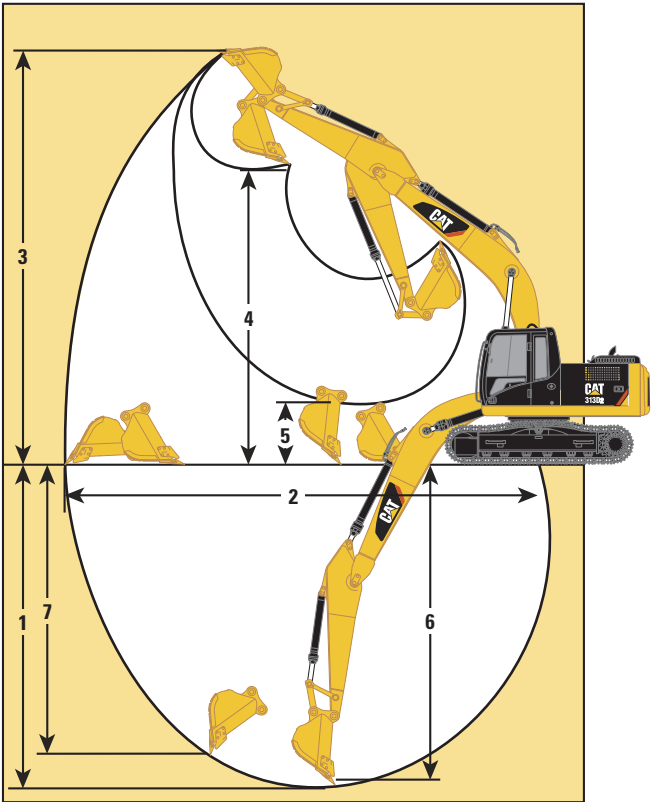
*Including shoe lug height.

**Without shoe lug height.

313D Series 2 Hydraulic Excavator Specifications

Working Ranges

All dimensions are approximate.



Boom Options		HD Boom 4.65 m (15'3")	
Stick Options		R2.5 HD (8'2")	
1	Maximum Digging Depth	5190 mm	17'0"
2	Maximum Reach at Ground Level	8110 mm	26'7"
3	Maximum Cutting Height	8850 mm	29'0"
4	Maximum Loading Height	6450 mm	21'2"
5	Minimum Loading Height	2370 mm	7'9"
6	Maximum Depth Cut for 2440 mm (8'0") Level Bottom	4980 mm	16'4"
7	Maximum Vertical Wall Digging Depth	4590 mm	15'1"
Bucket	Type	GD	
	Capacity	0.65 m ³	0.65 m ³
	Tip Radius	1230 mm	4'0"

313D Series 2 Hydraulic Excavator Specifications

Operating Weight and Ground Pressure

600 mm (2'0") Triple Grouser Shoes				
Standard Configuration with Upper Structure Guard				
HD Boom – 4.65 m (15'3")				
HD Stick – 2.5 (8'2")	15 900 kg	37.9 kPa	35,053 lb	5.50 psi

Weights are rounded up to nearest 100 kg and lb including GD 0.65 m³ (0.84 yd³) bucket (520 kg/1,150 lb).

Major Component Weights

Base Machine (with boom cylinder, without counterweight, front linkage and track)	4660 kg	10,280 lb
Undercarriage		
Standard Undercarriage	4260 kg	9,390 lb
Standard Undercarriage with Drawbar	4280 kg	9,440 lb
Counterweight	1100 kg	2,430 lb
Boom (includes lines, pins and stick cylinder)		
4.65 m (15'3") HD	1220 kg	2,690 lb
Stick (includes lines, pins and bucket cylinder)		
R2.5 HD (8'2")	640 kg	1,410 lb
Track Shoes (per two tracks)		
600 mm (2'0") Triple Grouser	2800 kg	6,173 lb
Cab, Top Guard	60 kg	130 lb
Cab, Front Guard	70 kg	150 lb
Upper Structure Guards	270 kg	600 lb
Buckets		
GD 0.65 m ³ (0.84 yd ³) with Sidecutter and Tip	520 kg	1,150 lb

All weights are rounded up to nearest 10 kg and lb except for quick coupler and buckets. Kg and lb were rounded up separately so some of the kg and lb do not match.

Base machine includes 75 kg (165 lb) operator weight and 90% fuel weight, and undercarriage with center guard.

313D Series 2 Hydraulic Excavator Specifications

Bucket and Stick Forces

			HD Boom 4.65 m (15'3")
Stick Options			R2.5 HD (8'2")
General Duty			
Bucket Digging Force (ISO)	95 kN	21,400 lbf	
Stick Digging Force (ISO)	65 kN	14,700 lbf	
Bucket Digging Force (SAE)	85 kN	19,200 lbf	
Stick Digging Force (SAE)	64 kN	14,300 lbf	

Bucket Specifications and Compatibility

	Width		Capacity		Weight		Fill	HD Boom 4.65 m (15'3")
	mm	in	m ³	yd ³	kg	lb	%	R2.5 HD (8'2")
Pin-on								1100 kg (2,430 lb) Counterweight
General Duty (GD)	1050	42	0.65	0.84	493	1,049	100%	●
Severe Duty (SD)	1050	42	0.65	0.84	559	1,195	90%	●
Maximum load pin-on (payload + bucket)							kg	1840
							lb	4,055

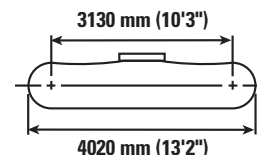
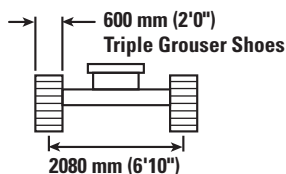
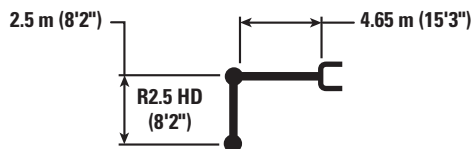
The above loads are in compliance with hydraulic excavator standard EN474-5:2006 + A3:2013, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled. Capacity based on ISO 7451:2007.
Bucket weight with Long tips.

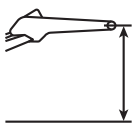











Maximum Material Density:

● 2100 kg/m³ (3,500 lb/yd³)

313D Series 2 Hydraulic Excavator Specifications

313D Series 2 Lift Capacities with Guard – 1100 kg (2,430 lb) Counterweight



		1500 mm/60 in		3000 mm/120 in		4500 mm/180 in		6000 mm/240 in				
												mm in
7500 mm 300 in	kg lb									*2800 *6,350	*2800 *6,350	4120 160
6000 mm 240 in	kg lb					*3300 *7,250	*3300 *7,250			*2350 *5,150	*2350 *5,150	5670 220
4500 mm 180 in	kg lb					*3650 *7,900	*3650 *7,900	*3450 *7,600	2550 5,500	*2200 *4,850	*2200 *4,850	6540 260
3000 mm 120 in	kg lb			*6400 *13,700	*6400 *13,700	*4500 *9,700	3850 8,250	*3750 *8,200	2500 5,300	*2200 *4,850	1950 4,300	6980 280
1500 mm 60 in	kg lb			*7100 *17,100	6450 13,900	*5400 *11,700	3600 7,700	4000 8,550	2350 5,100	*2350 *5,150	1850 4,100	7070 280
0 mm 0 in	kg lb			*7350 *16,900	6200 13,300	*5950 12,850	3400 7,300	3900 8,350	2300 4,900	*2650 *5,800	1900 4,200	6840 270
−1500 mm −60 in	kg lb	*5700 *12,700	*5700 *12,700	*8850 *19,150	6200 13,300	*5900 12,750	3350 7,200	3900 8,350	2300 4,900	*3250 *7,150	2150 4,750	6250 250
−3000 mm −120 in	kg lb			*7400 *15,950	6350 13,600	*5000 *10,700	3450 7,400			*4100 *8,950	2850 6,400	5160 210



ISO 10567



*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Lift capacity stays with $\pm 5\%$ for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

313D Series 2 Standard Equipment

Standard Equipment

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

ENGINE

- Diesel engine – Cat mechanical C4.4 with electric governor and glow plugs
 - 2300 m (7,545 ft) altitude capability
 - 50 amp alternator, air intake heater
- Equivalent to Tier 3 and Stage IIIA
- Power modes
 - Standard mode
 - Economy mode
- Water separator in fuel line with indicator
- 2 filter fuel filtration system
- One touch low idle with AEC
- Remote engine oil filter
- Radial seal air filter, double element
- Two speed travel
- Waved fin radiator with side by side type oil cooler
- Fix type air conditioner condenser
- 52° C (126° F) high ambient cooling

CAB

- Bolt-on FOGS capability
- Openable front windshield with assist device
- Pillar mounted upper windshield wiper and washer
- Front windshield glass split by 70/30
- Cab sliding upper door window
- Rear window emergency exit
- Removable lower windshield
- Openable metal hatch
- Interior lighting
- Standard joystick
- Laminated front upper windshield
- Mechanical suspension high back seat with head rest

- Seat belt, retractable, 50 mm (2")
- Floor mat
- Bi-level air conditioner (auto) with defroster
- Windshield washer
- Coat hook
- Ashtray and lighter
- Beverage holder
- Literature holder
- Radio mounting
- Two stereo speakers
- Antenna flexible type
- Storage compartment suitable for lunch box
- Monitor
 - 42 language displays
 - Full graphic and full color display
 - Warning information
 - Filter/fluid change information
 - Machine condition
 - Error code and tool mode setting information
 - Full time clock on monitor
- Positive filtered ventilation
- Seat integrated control joystick
- Adjustable armrest
- Neutral lever (lock out) for all controls
- Travel control pedals with removable hand levers

ELECTRICAL

- Circuit breakers
- Cat maintenance free battery

FRONT LINKAGE

- HD Boom, 4.65 m (15'3")
- Stick, 2.5 m HD (8'2")

HYDRAULIC

- Hydraulic main pumps
- High performance hydraulic return filter
- Regeneration control for boom and stick
- Boom lowering device for back up
- Boom drift reducing valve
- Stick drift reducing valve
- Reverse swing damping valve
- Automatic swing parking brake

SECURITY

- Cat one key security system
- Signaling/warning horn
- Rearview mirrors (frame – right, cab – left)
- Secondary engine shutoff switch
- Door locks
- Cap locks on fuel and hydraulic tanks
- Lockable external tool/storage box

LIGHTS

- Halogen boom light (left side)
- Exterior lights integrated into storage box

UNDERCARRIAGE

- Grease lubricated track
- Idler section track guiding guard
- Towing eye on base frame
- Standard idler tension spring
- Bottom guard and swivel guard
- 600 mm (2'0") triple grouser shoes
- Three-piece track guiding guard

COUNTERWEIGHT

- 1100 kg (2,430 lb)

Optional Equipment

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

UNDERCARRIAGE

- Drawbar

FRONT LINKAGE

- Bucket linkage

GUARDS

- FOGS (bolt on)
 - Top mount FOGS guard
 - Front mount FOGS guard
- Upper structure guards

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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(LAXB)

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