



Cat[®] 313F

Hydraulic Excavator

The Cat[®] 313F excavator is a reliable and versatile solution for your light to medium duty applications. Featuring a fuel-efficient Cat C4.4 engine, robust frames and components, and a state-of-the-art hydraulic system, the 313F allows you to move material all day with speed and precision.

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

High Performance

- The Cat C4.4 engine can run on biodiesel up to B20 and meets U.S. EPA Tier 4 Final and EU Stage IV emission standards with an aftertreatment system that requires no maintenance or downtime.
- Two power modes – eco and high power – help you manage fuel for the work you need to do.
- Reduce engine speed and minimize fuel consumption during no-load or light-load conditions with automatic engine speed control (AEC).
- Engine idle shutdown allows you to set intervals so you don't waste fuel; it also helps reduce emissions and wear and tear on your excavator.
- Work at altitudes up to 2300 m (7,545 ft) above sea level without de-rating.
- Get the job done with a powerful and efficient hydraulic system. Major components are located close together creating less friction, reducing pressure drops, and increasing power to the ground.
- Save energy and improve fuel efficiency with boom and stick oil regeneration. This feature improves controllability, increases productivity, and reduces operating costs.
- Don't let the temperature stop you from working. The excavator has a standard ambient temperature capability of 52° C (125° F). Standard cold start capability is -18° C (0° F) and an optional cold start package of -25° C (-13° F) is also available.

Reduced Maintenance Costs

- Spend more time working and less time greasing. Front linkage greasing intervals are 500 hours.
- Check and service your machine faster with many ground-level routine service and maintenance points. Grouped filters and wide service doors allow easy access to the radiator, pump, air cleaner, and engine compartments.

- Change your oil without the use of tools with the incorporated engine oil drain valve.
- Three levels of fuel filtration protect the engine from dirty fuel.
- Blowing out debris is easy with wide clearance between the radiator, oil cooler, and air conditioning condenser.
- Extract fluid samples for analysis quickly and easily with S·O·SSM ports.

Reliability and Durability You Can Count On

- Count on your machine to withstand wear throughout the years. Boom, sticks, and other high-stress areas are reinforced with thick multi-plate fabrications, castings, and forgings to ensure quality and reliability.
- Self-lubricating bearings extend service intervals and increase the machine's uptime.
- Elongated bolts secure the large swing bearing to help handle the most swing-intensive work.
- Protect your moving parts with the Grease Lubricated Track (GLT) undercarriage. Keep water, dust, and debris out and grease sealed in while prolonging wear life and reducing travel noise.
- Robust bottom guards protect machine components that may be damaged while swinging.
- Hydraulic snubbers on the boom and stick cylinders reduce end-of-stroke impact prolonging the machine life.
- Maintain track alignment and improve overall performance while traveling or working on slopes with an idler guard and bolt-on center guard.
- The upper frame uses specially designed mountings to support the heavy-duty cab and the lower frame is reinforced to enhance component durability.
- You are supported. The Cat Dealer Network is there to provide assistance when you need it.



Cat® 313F Hydraulic Excavator

Boost Efficiency and Productivity with Integrated Cat Connect Technologies

- 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.
- Boost productivity with optional Cat GRADE Control 2D Depth and Slope. Receive real-time bucket tip elevation guidance for flat and sloping planes.
- Upgrade to optional Cat GRADE Control – Depth and Slope, 3D capability which provides vertical and horizontal positioning at the bucket tip. The 3D design plan indicates precisely where to work and how much to cut or fill.

Unmatched Comfort

- Work comfortably in the spacious, quiet cab with automatic climate control; an adjustable heated seat increases comfort and reduces operator fatigue.
- Control the excavator comfortably with easy to access controls and switches.
- Adjust the joystick consoles and armrests to a comfortable position.
- Navigate quickly on the standard LCD monitor which is programmable in 42 languages.
- Stow your gear with plenty of in-cab storage to the front and rear of the right-side console and behind the seat. A cup holder, document holder, and coat hook are also provided.
- Keep your personal devices conveniently charged using the two standard 12V power ports. Each provide up to 10A of power.

Safety

- Rollover Protection Structure (ROPS)-certified cab provides a safe work environment.
- Enter and exit the cab and walk on the upper structure safely with handrails and anti-skid plating which are meant to reduce slipping and tripping.
- Increase visibility with a standard rearview camera and mirrors. The camera is integrated into the counterweight to protect against damage.
- Stay safe in an emergency situation. The skylight and 70/30 front window function as emergency exits.
- The hydraulic activation lever lock cuts the pilot pressure for the control levers, preventing the operator from starting the engine when in a locked position.
- Shut the engine down quickly and easily in the event of an emergency with a secondary engine shutoff switch.
- Protect yourself from overhead impact with the optional Falling Objects Guarding System (FOGS) and other attachments available from your Cat dealer.

Versatile Solution to Meet Your Needs

- Transition quickly between attachments with optional auxiliary hydraulics.
- Expand your work capabilities with attachments for a variety of applications including breaking rock in quarries, preparing trenches, demolition work, and moving and handling material.
- Cat dealers can install hydraulic kits to properly operate attachments, maximizing machine uptime and profits.

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
BOOM AND STICKS			HYDRAULIC SYSTEM		
4.65 m (15'3") reach boom		✓	Boom and stick regeneration circuit	✓	
Variable angle boom		✓	Automatic swing brake	✓	
R3.0 m (9'10") stick		✓	Fine swing control		✓
R2.8 m (9'2") stick		✓	High-performance hydraulic return filter	✓	
R2.5 m (8'2") stick		✓	Auxiliary hydraulics		✓
R2.1 m (6'11") stick		✓	Quick coupler line		✓
CAB			Boom lowering control valve		✓
ROPS, standard sound suppression	✓		Stick lowering check valve		✓
Adjustable seat, armrest, and console	✓		Two-way control pattern changer		✓
177 mm (7 in) color LCD monitor	✓		Medium-pressure line		✓
Automatic climate control	✓		High-pressure line		✓
AM/FM radio	✓		SERVICE AND MAINTENANCE		
Travel control pedals with removable hand levers	✓		S-O-S sampling port for engine and hydraulic oil	✓	
CAT CONNECT TECHNOLOGY			SAFETY AND SECURITY		
Cat Product Link	✓		One key security system	✓	
Cat GRADE Control 2D Depth and Slope		✓	Door and cap locks	✓	
Cat AccuGrade™		✓	Lockable external tool/storage box	✓	
ELECTRICAL SYSTEM			Signaling/warning horn	✓	
Two 12V, 10A power supplies	✓		Secondary engine shutoff switch	✓	
Left-side boom light with delay	✓		Emergency boom down	✓	
Right-side boom light		✓	Openable skylight as emergency exit	✓	
Cab light with time delay	✓		Bolt-on FOGS		✓
ENGINE			Rearview camera	✓	
C4.4 Tier 4 Final, Stage IV diesel engine	✓		Mirrors, rearview (frame – right, cab – left)	✓	
Biodiesel capable up to B20	✓		UNDERCARRIAGE AND STRUCTURES		
2300 m (7,500 ft) altitude capability	✓		2.2 mt (4,850 lb) counterweight	✓	
Electric priming pump		✓	Towing eye on base frame	✓	
Automatic engine speed control	✓		Grease lubricated track (GLT1) with resin seal	✓	
Side-by-side cooling system	✓		500 mm (20 in) triple grouser shoes		✓
-18° C (0° F) cold start capability	✓		600 mm (24 in) triple grouser shoes		✓
-25° C (-13° F) cold start capability		✓	700 mm (28 in) triple grouser shoes		✓
Block heater capability	✓		Rubber pad for 500 mm (20 in) triple grouser shoes		✓
Engine idle shutdown function	✓		Center track guiding guard		✓
			Segmented two-piece track guiding guard		✓
			2500 mm (8'2") blade with replaceable cutting edge with lever control		✓
			2600 mm (8'6") blade with replaceable cutting edge with lever control		✓
			2700 mm (8'10") blade with replaceable cutting edge with lever control		✓

Cat® 313F Hydraulic Excavator

Technical Specifications

Engine

Engine Model	C4.4	
Gross Power – SAE J1995	74 kW	100 hp/101 PS
Net Power – SAE J1349	69 kW	92 hp/93 PS
Bore	105 mm	4.13 in
Stroke	127 mm	5.00 in
Displacement	4.4 L	269 in ³

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.9 kg of refrigerant which has a CO₂ equivalent of 1.287 metric tonnes.

Hydraulic System

Main System – Maximum Flow (total)	256 L/min	67 gal/min
Maximum Pressure – Equipment	30 500 kPa	4,424 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	25 000 kPa	3,626 psi
Pilot System – Maximum Flow	22 L/min	5.8 gal/min
Pilot System – Maximum Pressure	4120 kPa	598 psi

Machine Weights

Minimum Operating Weight	13 500 kg	29,770 lb
Maximum Operating Weight	15 000 kg	33,080 lb

Service Refill Capacities

Fuel Tank Capacity	250 L	66.0 gal
DEF Tank Capacity	19.6 L	5.2 gal
Cooling System	11 L	2.9 gal
Engine Oil (with filter)	13.5 L	3.6 gal
Swing Drive	2.4 L	0.6 gal
Final Drive (each)	3 L	0.8 gal
Hydraulic System Oil (including tank)	103 L	27.2 gal
Hydraulic Tank Oil	90.6 L	23.9 gal

Dimensions

Boom	Reach Boom 4.65 m (15'3")	
Stick	R3.0 m (9'10")	
Bucket	GD 0.53 m³ (0.69 yd³)	
Shipping Height	2820 mm	9'3"
Shipping Length	7670 mm	25'2"
Tail Swing Radius	2160 mm	7'1"
Length to Center of Rollers	3040 mm	10'0"
Track Length	3750 mm	12'4"
Ground Clearance	440 mm	1'5"
Track Gauge	1990 mm	6'6"
Transport Width – 700 mm (28") Shoes	2690 mm	8'10"
Cab Height	2770 mm	9'1"
Cab Height with Top Guard	2970 mm	9'9"
Counterweight Clearance	890 mm	2'11"

Working Ranges

Boom	Reach Boom 4.65 m (15'3")	
Stick	R3.0 m (9'10")	
Bucket	GD 0.53 m³ (0.69 yd³)	
Maximum Digging Depth	6040 mm	19'10"
Maximum Reach at Ground Level	8230 mm	27'0"
Maximum Cutting Height	8720 mm	28'7"
Maximum Loading Height	6330 mm	20'9"
Minimum Loading Height	1530 mm	5'0"
Maximum Depth Cut for 2440 mm (8'0") Level Bottom	5860 mm	19'3"
Maximum Vertical Wall Digging Depth	5250 mm	17'2"
Bucket Digging Force (SAE)	85 kN	19,200 lbf
Stick Digging Force (SAE)	57 kN	12,800 lbf
Bucket Digging Force (ISO)	95 kN	21,400 lbf
Stick Digging Force (ISO)	58 kN	13,100 lbf

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

© 2018 Caterpillar
All rights reserved

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

CAT, CATERPILLAR, SAFETY.CAT.COM, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

AEXQ1797-02 (09-2018)
Replaces AEXQ1797-01
(AUZ, EU, NACD)

