

313F L GC

Hydraulic Excavator

2017



Engine

Engine Model	Cat® C3.4B	
Engine Power – ISO 14396 (metric)	55 kW	74 hp
Net Power – ISO 9249 (metric)	52 kW	70 hp

Drive

Maximum Travel Speed	5.5 km/h
Maximum Drawbar Pull	109.9 kN

Weights

Operating Weight	13 200 kg
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The new 313F L GC excavator is built for those who need dependable performance at a low cost per hour.

The machine features an efficient C3.4B engine that's light on fuel – with no need for diesel exhaust fluid to meet U.S. EPA Tier 4 Final and EU Stage IIIB equivalent emission standards. It also has a simple hydraulic system you can count on for everyday excavating tasks.

Built to the same quality standards as other Cat excavators, the 313F L GC will work as hard as competitive brands in its size class. It will dig, load, level, break, handle, and sort like any of them, and it will do all that using less fuel. Plus it's easy to operate, easy to transport, easy to maintain, and best of all is backed by unparalleled product support from Caterpillar and the Cat dealer network.



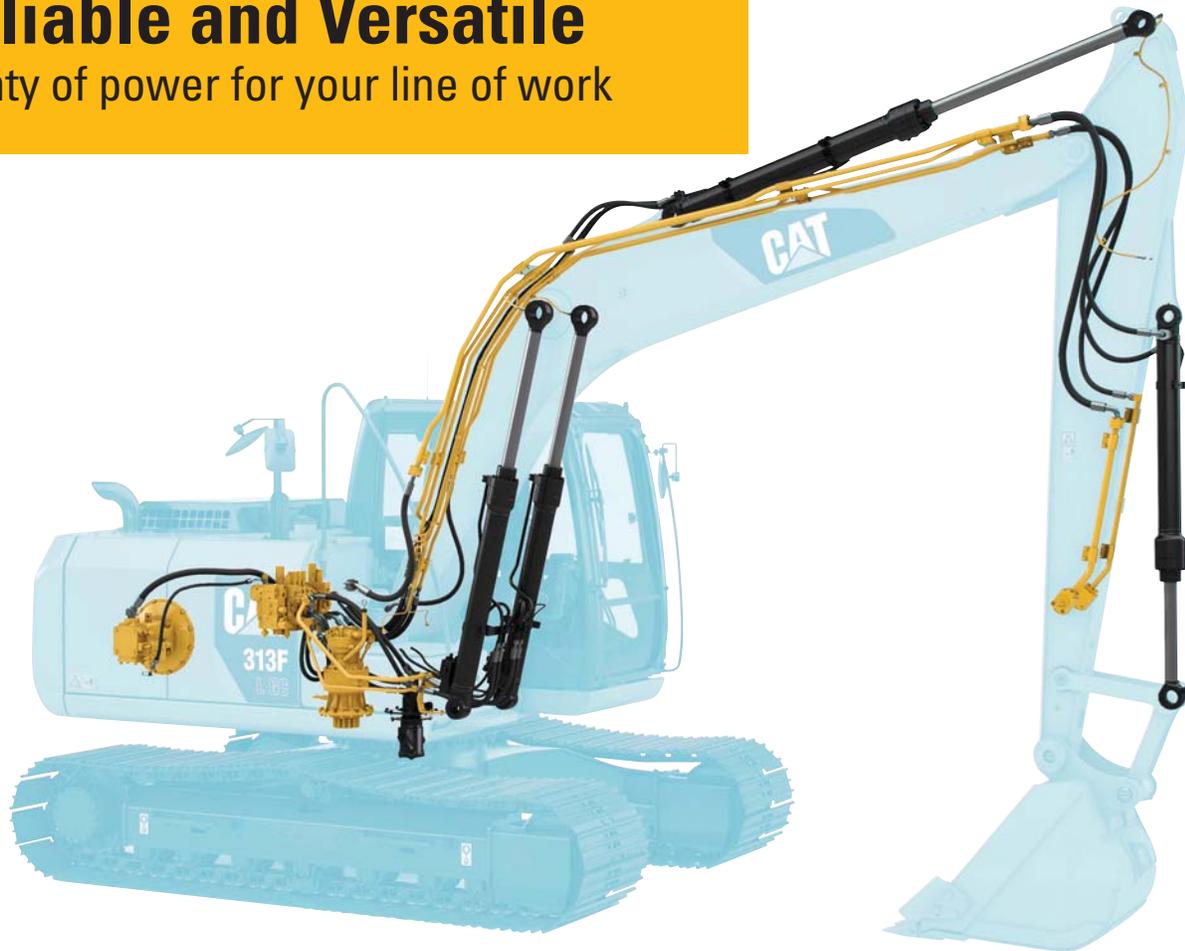
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Reliable and Versatile

Plenty of power for your line of work



A Simple, Reliable System

The 313F GC's hydraulic system is extremely reliable and features a load-sensing pump and control valve that calculate required hydraulic flow so you can meet your daily job requirements quickly and efficiently.

A Logical Layout

Like all Cat excavators, hydraulic components on the 313F L GC are located close together in order to minimize the length of hydraulic lines. This logical layout leads to less pressure drops and more machine power for the work you need to do.

Less Components, Less Maintenance

The new and simple hydraulic system helps make the machine easier to maintain. The addition of a pilot manifold in the valve block means there is no need for a pilot pump, filter, or lines. Fewer components equal less maintenance and lower owning and operating costs for you.

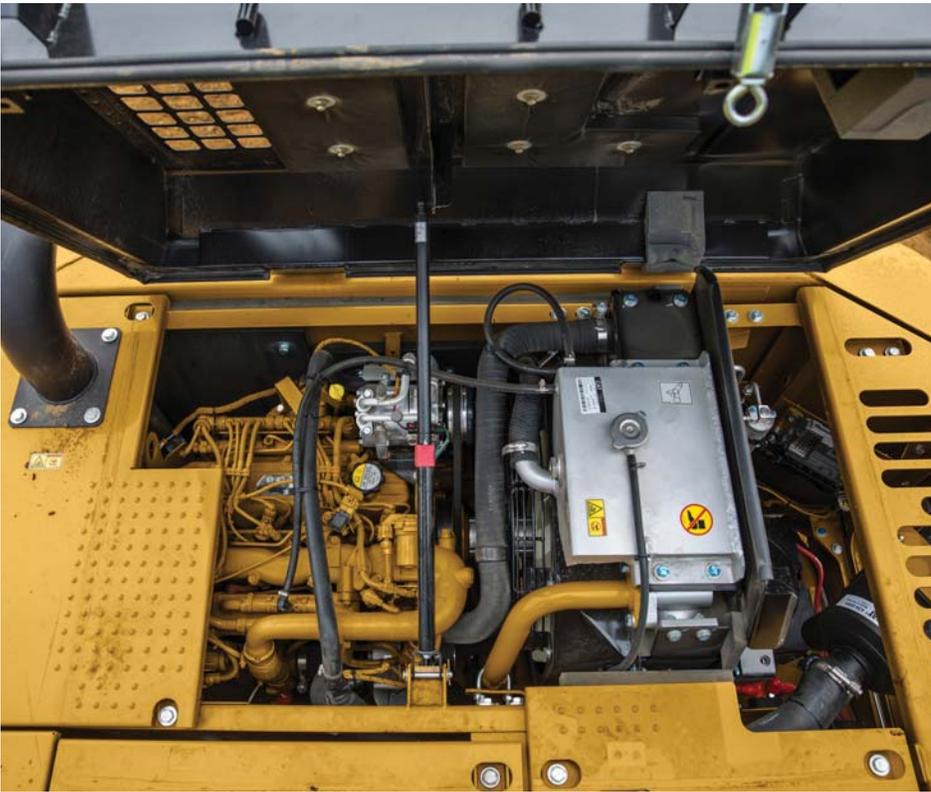
Maximum Versatility

When it comes to doing a variety of work, the machine's optional high-pressure, medium-pressure, and quick coupler circuits give you plenty of capability so you can maximize machine performance with Cat Work Tools out front. They will help you dig, load, and break with confidence.



Fuel Efficient

Engineered to lower your operating costs



A Powerful, Economical Solution

The Cat C3.4B engine meets Tier 4 Final and Stage IIIB equivalent emission standards and provides plenty of power for the work you do without consuming a lot of fuel to do it. The engine is equipped with unique yet simple features like a turbo protector and maintenance-free emissions package that enhance service life – all to help keep your owning and operating costs to an absolute minimum.

Fuel Savers That Add Up

There are built-in features to help you manage how much fuel you use. One-touch low idle lets you reduce engine speed when the machine isn't working. Engine idle shutdown turns the engine off when it's been idling for more than the time that you set. Both contribute to saving fuel, reducing emissions, and extending your service intervals.

Proven Technology

Every Tier 4 Final and Stage IIIB equivalent engine is equipped with a combination of proven electronic, fuel, air, and aftertreatment components. Applying these technologies lets us meet your high expectations for productivity, fuel efficiency, reliability, and service life. The right technologies fine tuned for the right applications result in:

- **High performance** across a variety of applications
- **Maximized uptime and reduced cost** with world-class support from the Cat dealer network
- **Minimized impact of emission systems** – designed to be transparent to the operator without requiring interaction
- **Durable designs** with long life to overhaul
- **Less fuel consumption** with minimized maintenance costs while providing the same great power and response

Easy to Operate

Comfort and convenience to keep you productive all day long



Safe and Quiet Cab

The cab contributes to your comfort thanks to special viscous mounts and special roof lining and sealing that limit vibration and unnecessary sound. Operators will enjoy the quietness and comfort of the all new cab.

Excellent Ergonomics

The mechanical or air suspension seats includes a reclining back, upper and lower slide adjustments, and height and tilt angle adjustments to meet your needs for maximum comfort.

The automatic climate control system keeps operators comfortable and productive all day long in either hot or cold weather.

Storage spaces are located in the front, rear, and side consoles of the cab. A drink holder accommodates a large mug, and a shelf behind the seat stores large lunch or toolboxes. A power supply socket is available for charging your electronic devices like an MP3 player, a cell phone, or even a tablet.

Controls Just for You

The right and left joystick consoles can be adjusted to improve your comfort and productivity during the course of a day. The right joystick features a button that will reduce engine speed when you are not working to help save fuel. Touch it once and speed reduces; touch it again and speed increases for normal operation.



Easy to Navigate Monitor

The new LCD monitor is easy to see and navigate. Not only can it memorize up to 10 different work tools, it's also programmable in up to 42 languages to meet today's diverse workforce.

The monitor clearly displays critical information you need to operate efficiently and effectively. Plus it projects the image from the standard rearview camera to help you see what's going on around you so you can stay safely focused on the job at hand.

Durable Structures

Designed for your tough applications



Robust Frames

The 313F L GC is a well-built machine that's designed to give you a long service life and excellent resale value. The upper frame includes special mountings made specially to support the heavy-duty ROPS cab; the lower frame is reinforced to enhance component durability so you can count on the machine doing the tough work you need to get done.

Durable Undercarriage

The machine's long undercarriage works extremely well in various work applications and conditions. Plus its track shoes, links, rollers, idlers, and final drives are all built with high-tensile-strength steel for long-term durability.

Great Weight

The rigid 2.45 mt counterweight matches the machine's overall sleek appearance, and it provides plenty of balance for all of your work needs.





Durable Linkages

Ideal for your up-close and far-out work

Built to Last

Cat booms and sticks are built with internal baffle plates for added durability, and all undergo ultrasound inspection to ensure weld quality and reliability. Large box-section structures with thick multi-plate fabrications, castings, and forgings are used in high-stress areas such as the boom nose, boom foot, boom cylinder, and stick foot to improve durability. Also, the front linkage pins' inner bearing surfaces are welded with a self-lubricated bearing to extend service intervals and increase uptime.

Boom and Stick for Any Job

The 313F L GC is offered with a 4.65 m boom and 2.5 m stick. These combinations give you plenty of reach for general excavating applications.

Versatile

Do more jobs with one machine





Get the Most Out of One Machine

The 313F L GC is a versatile machine that packs a lot of performance into a small package. You can easily expand that performance by utilizing a variety of attachments offered by Cat Work Tools.

Change Jobs Quickly

Cat quick coupler brings the ability to quickly change attachments and switch from job to job.

Dig, Finish, or Break

A range of buckets dig everything from top soil to abrasive material. For finishing and grading work, compact and shallow ditch cleaning buckets fit the need.

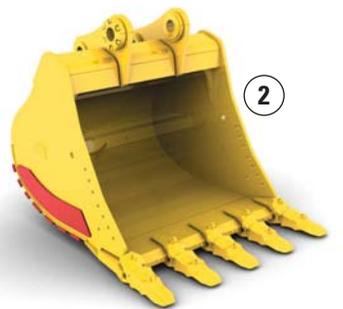
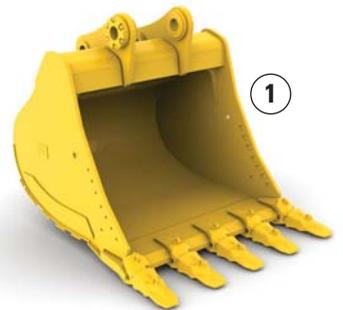
A hydraulic hammer equips the machine for breaking sidewalks, driveways, and pavement.

Set Up Your Machine for Maximum Profitability

Your Cat dealer can install hydraulic kits to properly operate all Cat Work Tool attachments, maximizing the machine's uptime and your profit.

Easy to Move

Not only is the 313F L GC ideal for many everyday utility jobs, but it's also easy to get there because of its small size. Simply load it on a trailer and go to work.



1) General Duty (GD) 2) Heavy Duty (HD)

Simple Technologies

Monitor, manage, and enhance job site operations



Cat Connect makes smart use of technology and services to improve your job site efficiency. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:



EQUIPMENT
MANAGEMENT

Equipment Management – increase uptime and reduce operating costs.



PRODUCTIVITY

Productivity – monitor production and manage job site efficiency.



SAFETY

Safety – enhance job site awareness to keep your people and equipment safe.

LINK Technologies

LINK technologies, like Product Link™, are deeply integrated into your machine and wirelessly communicates key information, including location, hours, fuel usage, idle time and event codes.

Product Link/VisionLink®

Easy access to Product Link data via the online VisionLink user interface can help you see how your machine or fleet is performing. You can use this information to make timely, fact based decisions that can boost job site efficiency and productivity, and lower costs.

Safe Work Environment

Features to help you day in and day out



A Safe and Quiet Cab

The ROPS-certified cab provides you with a safe working environment. It also contributes to your comfort because it's attached to a reinforced frame with special viscous mounts that limit vibration and unnecessary sound. Add in special roof lining and sealing and you have a cab that's as quiet as any of today's highway trucks.

Great Views

Ample glass coupled with the standard parallel wiper system help give you great views out front and to the side, and a low-profile engine gives you excellent visibility out back. The split-configuration windshield features an upper window equipped with handles so you can slide it to store in the ceiling, and a large skylight provides great overhead visibility. The standard rearview camera gives you a clear field of view behind the machine through the cab monitor.

Smart Lighting

The 313F L GC has three working lights capability that provide all the illumination you will need. Plus the cab and boom lights have a time-delay function that can be set to stay on up to five minutes after the engine has been turned off to help you safely exit the machine.

Secure Contacts

The surface of the upper structure and the top of the storage box area are covered with anti-skid plates to help prevent you from slipping during maintenance. Steps on the track frame and storage box along with extended hand and guard rails to the upper deck enable you to securely work on the machine.



Serviceable

Designed to make your maintenance quick and simple

Easy to Maintain

The 313F L GC is a simple, compact, easy-to-maintain machine. You can reach most routine maintenance items like fluid taps and grease points from the safety and convenience of ground level. Wide service doors provide excellent access to the radiator, pump, air cleaner, and engine compartments; doors latch in place to make your service work simpler.

Room to Move

What's behind the doors, and what isn't, contributes to the ease of service. For example, the diesel particulate filter used to capture emissions is compact and maintenance free. Also, the use of an easy-to-reach manual priming pump reduces the number of filters the machine needs. All of this leads to less complexity and lower owning and operating costs for you.

Quick and Convenient Fluids Service

The fuel tank features a remote drain cock located in the pump compartment to make it easy for you to remove water and sediment during routine maintenance. It also has an engine oil drain cock to make oil changes easy without any tools.



Complete Customer Care

Unmatched support makes the difference

Worldwide Parts Availability

Cat dealers utilize a worldwide parts network to maximize your machines' uptime. Plus they can help you save money with Cat remanufactured components.

Financial Options Just for You

Consider financing options and day-to-day operating costs. Look at dealer services that can be included in the machine's cost to yield lower owning and operating costs over time.

What's Best for You Today ... and Tomorrow

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



Sustainable

Generations ahead in every way



- The C3.4B engine is fuel efficient and meets Tier 4 Final and Stage IIIB equivalent emission standards.

313F L GC Hydraulic Excavator Specifications

Engine

Engine Model	Cat C3.4B	
Gross Power – SAE J1995 (metric)	55 kW	74 hp
Engine Power – ISO 14396 (metric)	55 kW	74 hp
Net Power – ISO 9249 (metric)	52 kW	70 hp
Bore	99 mm	
Stroke	110 mm	
Displacement	3.4 L	

- The 313F L GC meets Tier 4 Final and Stage IIIB equivalent emission standards.
- No engine power derating required below 2300 m altitude.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- Rating at 1,800 rpm (Travel).

Engine RPM

Operation	1,700 rpm
Travel	1,800 rpm

Track

Number of Shoes (each side)	46 pieces
Number of Track Rollers (each side)	7 pieces
Number of Carrier Rollers (each side)	1 piece

Swing Mechanism

Swing Speed	11.7 rpm
Swing Torque	30.9 kN·m

Drive

Gradeability	30°/70%
Maximum Travel Speed – High	5.5 km/h
Maximum Travel Speed – Low	3.6 km/h
Maximum Drawbar Pull	109.9 kN

Hydraulic System

Main System – Maximum Flow (total)	240 L/min
Maximum Pressure – Equipment	30.5 MPa
Maximum Pressure – Travel	30.5 MPa
Maximum Pressure – Swing	23 MPa
Pilot System – Maximum Pressure	4120 kPa
Boom Cylinder – Bore	110 mm
Boom Cylinder – Stroke	1015 mm
Stick Cylinder – Bore	120 mm
Stick Cylinder – Stroke	1197 mm
Bucket Cylinder – Bore	100 mm
Bucket Cylinder – Stroke	939 mm

Service Refill Capacities

Fuel Tank Capacity	250 L
Cooling System	17.9 L
Engine Oil	8 L
Swing Drive	3 L
Final Drive	3 L
Hydraulic System Oil (including tank)	164 L
Hydraulic Tank Oil	90.6 L

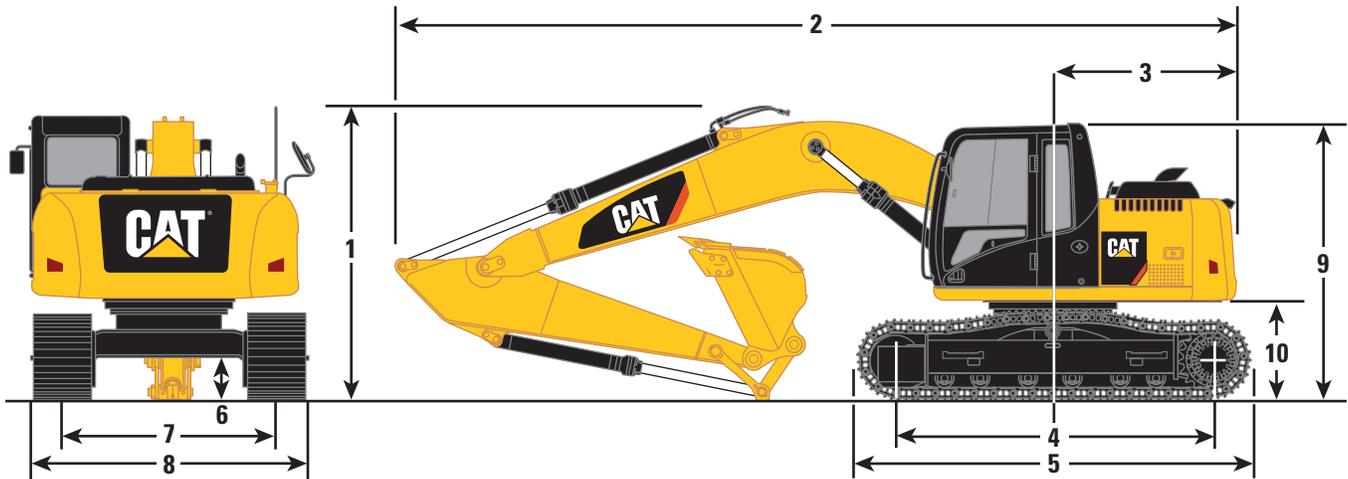
Standards

Brakes	SAE J1026/APR90
Cab/FOGS	SAE J1356/FEB88 ISO 10262

313F L GC Hydraulic Excavator Specifications

Dimensions

All dimensions are approximate.

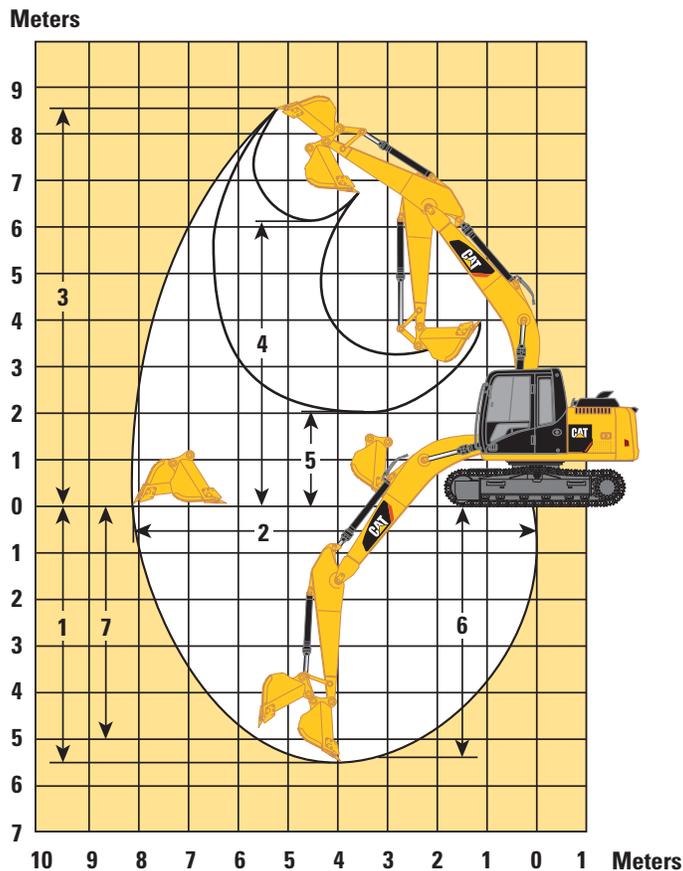


Boom Option	Reach Boom R4.65 m
Stick Options	R2.5 m
1 Shipping Height	2830 mm
2 Shipping Length	7680 mm
3 Tail Swing Radius	2180 mm
4 Length to Center of Rollers	3040 mm
5 Track Length	3750 mm
6 Ground Clearance	440 mm
7 Track Gauge	1990 mm
8 Transport Width	
500 mm Shoes	2490 mm
600 mm Shoes	2590 mm
9 Cab Height	2760 mm
Cab Height with Top Guard	2900 mm
10 Counterweight Clearance	880 mm
Bucket Type	GD
Bucket Tip Radius	1220 mm
Bucket Capacity	0.53 m ³

313F L GC Hydraulic Excavator Specifications

Working Ranges

All dimensions are approximate.



Boom Option	Reach Boom R4.65 m
Stick Options	R2.5 m
1 Maximum Digging Depth	5530 mm
2 Maximum Reach at Ground Line	8170 mm
3 Maximum Cutting Height	8490 mm
4 Maximum Loading Height	6100 mm
5 Minimum Loading Height	2020 mm
6 Maximum Depth Cut for 2440 mm Level Bottom	5330 mm
7 Maximum Vertical Wall Digging Depth	5000 mm
Bucket Digging Force (SAE)	86 kN
Bucket Digging Force (ISO)	95 kN
Stick Digging Force (SAE)	64 kN
Stick Digging Force (ISO)	65 kN
Bucket Type	GD
Bucket Tip Radius	1220 mm
Bucket Capacity	0.53 m ³

313F L GC Hydraulic Excavator Specifications

Operating Weights and Ground Pressures

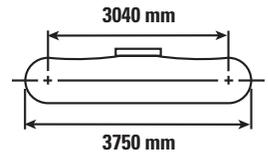
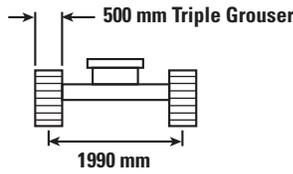
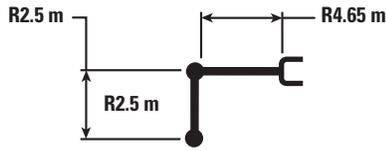
Boom	Stick	Bucket	600 mm Triple Grouser Shoes		500 mm Triple Grouser Shoes	
R4.65 m	R2.5 m	0.53 m ³	13 200 kg	32.8 kPa	13 200 kg	39.4 kPa

Major Component Weights

Base Machine (with boom cylinder, without counterweight, front linkage and track)	4420 kg
Long Undercarriage	2650 kg
Counterweight	2450 kg
Boom (includes lines, pins and stick cylinder)	
Reach Boom (R4.65 m)	1030 kg
Stick (includes lines, pins, bucket cylinder and bucket linkage)	
R2.5 m	570 kg
Track Shoes (Long/per two track)	
500 mm Triple Grouser	1570 kg
600 mm Triple Grouser	1630 kg
Bucket	
GD 0.53 m ³	460 kg

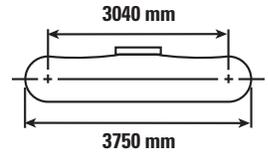
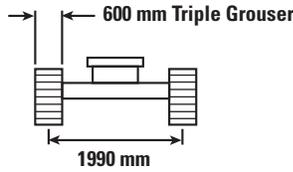
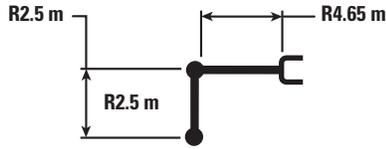
313F L GC Hydraulic Excavator Specifications

Reach Boom Lift Capacities – Counterweight: 2.45 mt – without Bucket



Attachment	1500 mm		3000 mm		4500 mm		6000 mm				mm	
												
6000 mm	kg				*3350	*3350			*2450	*2450	5380	
4500 mm	kg				*3550	*3550	*3500	2450	*2250	2200	6370	
3000 mm	kg			*5850	*5850	*4350	3650	3650	2350	*2250	1900	6900
1500 mm	kg			*8450	6100	*5300	3400	3550	2300	*2350	1800	7080
0 mm	kg			*6900	5800	5300	3250	3450	2200	*2600	1800	6930
-1500 mm	kg	*4850	*4850	*9200	5750	5200	3200	3400	2150	*3100	2000	6430
-3000 mm	kg	*8750	*8750	*8050	5850	5250	3200			3950	2500	5480

Reach Boom Lift Capacities – Counterweight: 2.45 mt – without Bucket



Attachment	1500 mm		3000 mm		4500 mm		6000 mm				mm	
												
6000 mm	kg				*3350	*3350			*2450	*2450	5380	
4500 mm	kg				*3550	*3550	*3500	2450	*2250	2250	6370	
3000 mm	kg			*5850	*5850	*4350	3700	3700	2400	*2250	1950	6900
1500 mm	kg			*8450	6200	*5300	3450	3600	2300	*2350	1800	7080
0 mm	kg			*6900	5900	5400	3300	3500	2250	*2600	1850	6930
-1500 mm	kg	*4850	*4850	*9200	5900	5300	3250	3500	2200	*3100	2050	6430
-3000 mm	kg	*8750	*8750	*8050	5950	5350	3250			4000	2550	5480



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 ±5% for all available track shoes.

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

313F L GC Hydraulic Excavator Specifications

313F L GC Work Tool Offering Guide*

Boom Type	Reach Boom
Stick Size	R2.5 m
Hydraulic Hammer	H95Es H110Es H115Es
PIN Grabber Coupler	These work tools are available for the 313F L GC. Consult your Cat dealer for proper match.

*Offerings not available in all areas. Maximum weight limitation for ROPS certification is 14 700 kg. Matches are dependent on excavator configurations. Consult your Cat dealer to determine what is offered in your area and for proper work tool match.

Bucket Specifications and Compatibility

	Width	Capacity	Weight	Fill	Reach Boom
	mm	m ³	kg	%	R2.5 m
With Pin Grabber Coupler					
General Duty (GD)	450	0.20	235	100	●
	500	0.24	285	100	●
	600	0.31	308	100	●
	750	0.41	355	100	●
	900	0.53	404	100	●
	1050	0.65	452	100	⊙
	1200	0.76	492	100	⊖
Maximum load pin-on (payload + bucket)				kg	1610

The above loads are in compliance with hydraulic excavator standard EN474, 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.

Bucket weight with long tips.

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

Maximum Material Density

- 2100 kg/m³ or greater
- ⊙ 1800 kg/m³ or greater
- ⊖ 1500 kg/m³ or less

Standard Equipment

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

CAB

- Windshield, 70-30 split, sliding radial wiper and washer
- Mirrors
- Pressurized operator station with positive filtration
- Laminated glass front upper window and tempered other windows
- Sliding upper door window (left-hand cab door)
- Removable lower windshield with in cab storage bracket
- Openable skylight
- Interior:
 - Coat hook
 - Beverage holder
 - Literature holder
 - Interior lighting
 - AM/FM radio mounting (DIN size)
 - Two 12V stereo speakers
 - Storage shelf suitable for lunch or toolbox
 - Power Supply (10A, 12V)
 - Thumb wheel modulation joystick for use with combined auxiliary control
 - Air conditioner, heater and defroster with climate control
- Seat:
 - Adjustable high-back, seat with air suspension
 - Seatbelt, 51 mm
 - Adjustable armrest
 - Height adjustable joystick consoles
 - Neutral lever (lock out) for all controls
 - Travel control pedals with removable hand levers
 - Capability of installing two additional pedals
 - Two speed travel
 - Floor mat, washable

- Monitor:
 - Clock
 - Video ready
 - Color LCD display with warning, filter/fluid change, and working hour information
 - Language display (full graphic and full color display)
 - Machine condition, error code and tool mode setting information
 - Start-up level check for engine oil, engine coolant and hydraulic oil
 - Warning, filter/fluid change and working hour information
- Fuel consumption meter

ELECTRICAL

- 50 amp alternator
- Circuit breaker
- Battery, standard, –18° C
- Electric refueling pump

ENGINE

- C3.4B diesel engine
- Tier 4 Final and Stage IIIB equivalent emission package
- 2300 m altitude capability with no derate
- Automatic engine speed control
- Water separator in fuel line including water level sensor and indicator
- High power modes
- Radial seal air filter
- Manual priming pump
- Side-by-side cooling system
- Primary filter with water separator and water separator indicator switch
- Secondary fuel filter

HYDRAULIC SYSTEM

- Reverse swing dampening valve
- Automatic swing parking brake
- High-performance hydraulic return filter
- Regeneration circuit for boom and stick
- Capability of installing HP stackable, medium and QC valves
- Capability of installing additional auxiliary pumps and circuits
- Boom and stick lowering control devices

LIGHTS

- Halogen boom light (left side)
- Time delay function for boom light and cab light
- Exterior lights integrated into storage box

UNDERCARRIAGE/UPPERFRAME

- Grease Lubricated Track GLT2, resin seal
- Towing eye on base frame
- Bottom guard

COUNTERWEIGHT

- 2.45 mt

SAFETY AND SECURITY

- Cat one key security system
- Door locks
- Cap locks on fuel and hydraulic tanks
- Lockable external tool/storage box
- Signaling/warning horn
- Secondary engine shutoff switch
- Mirrors
- Rearview camera-ready
- Rear window for emergency exit
- Capability to connect a beacon

Optional Equipment

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

HYDRAULIC SYSTEM

- HP hydraulic lines for boom and stick
- QC hydraulic lines for boom and stick
- PIN Grabber coupler

CAB

- Rain protector
- AM/FM Radio with MP3 auxiliary audio port

TRACK

- 500 mm triple grouser shoes
- 600 mm triple grouser shoes

GUARDS

- FOGS (Falling Object Guard System) including overhead and windshield guards
- Track guiding guard, center
- Swivel guard

FRONT LINKAGE

- Reach boom 4.65 m (with BLCV/SLCV)
 - R2.5 m stick
 - Bucket linkage (with lifting eye)
 - PIN Grabber coupler

LIGHTS

- Cab working lights, halogen, with time delay
- Boom working light, halogen, right

SAFETY AND SECURITY

- FOGS, bolt-on
- Security system fitted (MSS)

INTEGRATED TECHNOLOGIES

- Product Link

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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