316F L

Hydraulic Excavator

2017

Engine		
Engine Model	Cat® C4.4 ACERT™	
Net Power – SAE J1349	88 kW	117 hp
Engine Power – ISO 14396	91 kW	122 hp

Drive		
Maximum Travel Speed	5.3 km/h	3.3 mph
Maximum Drawbar Pull	156 kN	35,070 lbf
Weight		
Minimum Operating Weight	17 500 kg	38,580 lb
Maximum Operating Weight	18 100 kg	39,900 lb

Introduction

The new Cat 316F L is a perfect choice for customers who value reliable, economical performance. Powered by a fuel-efficient C4.4 ACERT engine that meets U.S. EPA Tier 4 Final emission standards, the machine features a state-of-the-art hydraulic system that enables you to move material all day long with tremendous speed and precision.

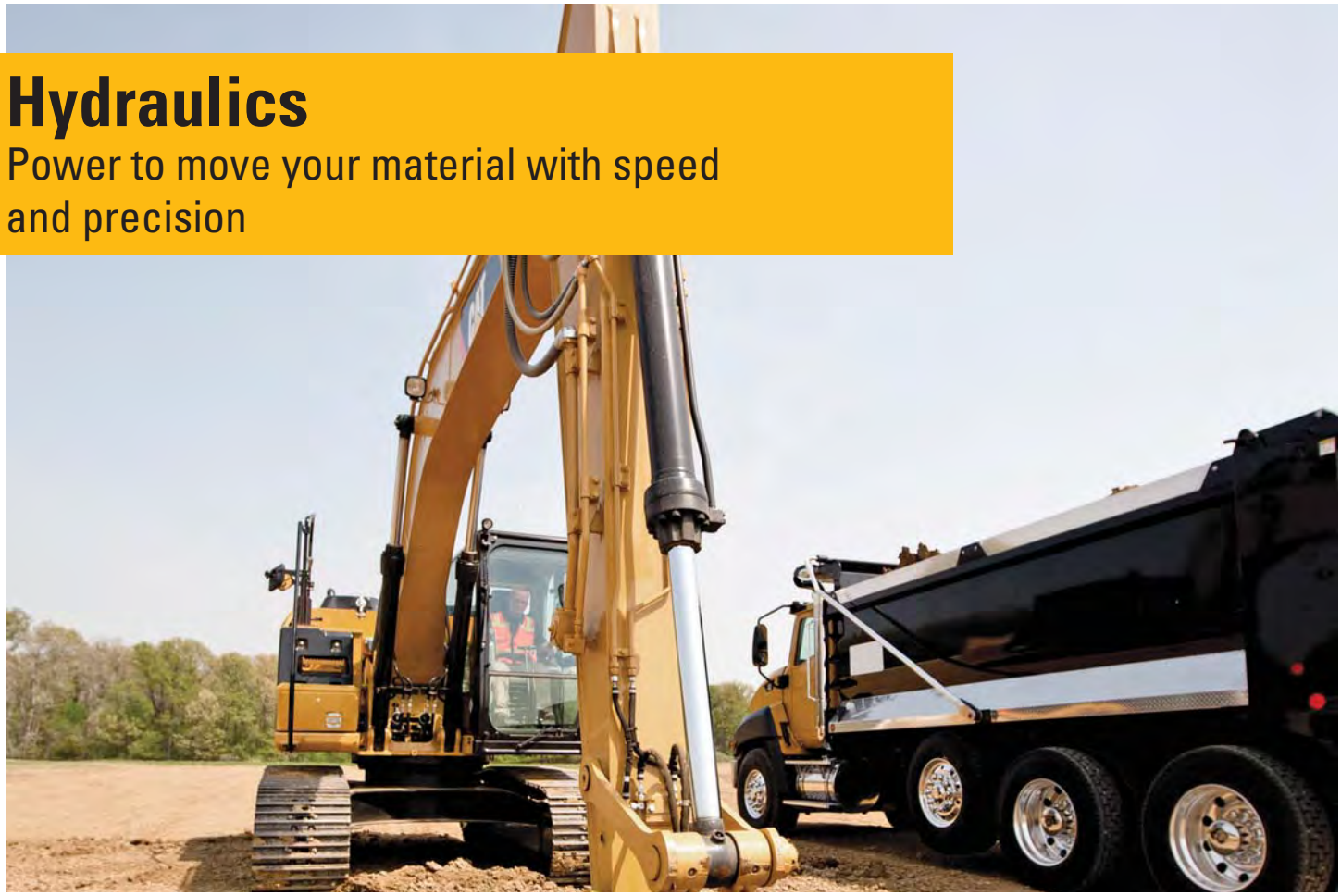
When you add in a quiet operator environment that keeps you comfortable and productive, robust structures that keep you grounded and balanced, easy-to-reach service points that make your routine maintenance fast and simple, and multiple Cat work tools that help you take on a variety of tasks, you just won't find a better, more efficient excavator in its size class – any place, anywhere.

Contents

A Cat bucket and Pro Series thumb make the 316F L a formidable demolition machine.

Hydraulics

Power to move your material with speed and precision



A Powerful, Efficient Design

When it comes to moving material quickly and efficiently, you need hydraulic horsepower – the type of ground-breaking power the 316F L can deliver. Major hydraulic components like pumps and valves are located close together so shorter tubes and lines can be used. This design leads to less friction loss, reduced pressure drops, and more power to the ground for the work you need to get done.

Control Like No Other

Controllability is one of the main attributes of Cat excavators, and one of the key contributors to this is the main control valve. The valve opens slowly when your range of joystick lever movement is small and opens rapidly when movement is high. It puts flow where you need it when you need it, which leads to smoother operation, greater efficiency, and lower fuel consumption.

Auxiliary Hydraulics For Added Versatility

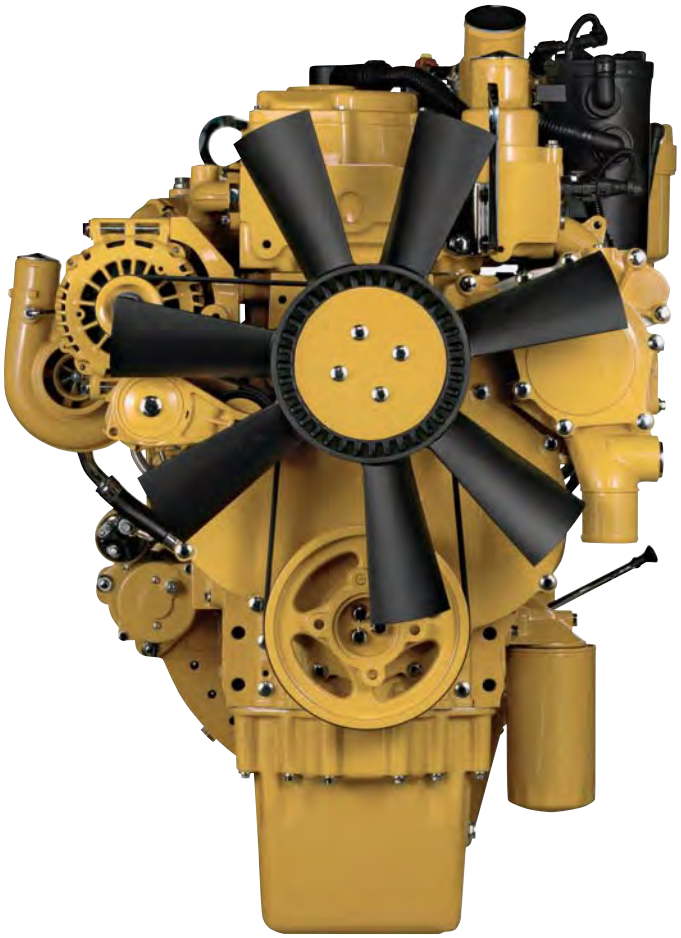
Auxiliary hydraulics give you greater tool versatility so you can take on more work with just one machine, and there are several options from which you can choose. A quick coupler circuit, for example, will allow you to switch from one tool to another in a matter of minutes – all from the comfort and convenience of the cab.

Boom & Stick Oil Recirculation For Added Efficiency

The 316F L recirculates the flow of oil from the head end of the boom and stick cylinders to the rod end of the boom and stick cylinders during the work cycle to save energy and improve fuel efficiency. It's optimized for any dial speed setting you select, which results in less pressure loss for higher controllability, more productivity, and lower operating costs for you.

Engine

Powerful and fuel efficient to meet your expectations



Proven Technology

The Cat C4.4 ACERT engine meets Tier 4 Final emission standards, and it does so without interrupting your job process. Simply turn the engine on and go to work. It will look for opportunities in your work cycle to regenerate itself, and it will give you plenty of power for the task at hand – all to help keep your owning and operating costs to an absolute minimum.

Like every Cat Tier 4 Final engine, the C4.4 ACERT engine is equipped with a combination of proven electronic, fuel, air, and aftertreatment components. Applying these time-tested technologies lets us meet your high expectations for productivity, fuel efficiency, reliability, and service life.

Following are the results you can expect:

- **Improved fluid efficiency of up to 5%** over Tier 4 Interim products, including Diesel Exhaust Fluid (DEF) consumption.
- **High performance** across a variety of applications.
- **Enhanced reliability** through commonality and simplicity of design.
- **Maximized uptime and reduced cost** with world-class Cat dealer support.
- **Minimized impact** on emission systems – with no operator interaction required.
- **Durability** with long service life.
- **Better fuel economy** with minimized maintenance costs.
- **Same great power** and response.
- Biodiesel compatible up to B20.

Operator Station

Comfort and convenience to keep you productive

Comfortable Seat Options

The seat range includes air suspension, heated, and air cooled options. All seats include a reclining back, upper and lower slide adjustments, and height and tilt angle adjustments to meet your needs for maximum comfort.

A Safe, Quiet Cab

The ROPS cab provides you with a safe working environment when properly seated and belted. 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 inside as today's top pickup trucks.

A Cool & Warm Environment

The automatic climate control system features multiple air outlets with filtered ventilation. Air flows on the floor, behind the seat, and in front of you to make your work in either hot or cold weather much more pleasant and productive.

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. Also, 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.

A Helpful Monitor

The LCD monitor is easy to see and navigate. 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.

Ample Storage & Auxiliary Power

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. Two 12-volt power supply sockets are conveniently located near the key storage areas for charging your electronic devices like an MP3 player, a cell phone, or a tablet.

Structures & Undercarriage

Designed to work in your rugged applications

Robust Frame

The 316F L is a well-built machine designed to give you a very long service life. The upper frame has mountings made specifically to support the heavy-duty cab; it is also reinforced around key areas that take on stress like the boom foot and skirt. Massive bolts are used to attach the track frames to the body, and additional bolts are used to increase the machine's digging force, which leads to more productivity for you.

Durable Undercarriage

The 316F L undercarriage contributes significantly to its outstanding stability and durability. Track shoes, links, rollers, idlers, and final drives are all built with long-lasting, high-tensile-strength steel. Cat Grease Lubricated Track 2 (GLT2) track link protects moving parts by keeping water, debris, and dust out and grease sealed in, which delivers longer wear life and reduced noise when traveling. Optional guide guards help maintain track alignment to improve the machine's overall performance – whether you're traveling on a flat, heavy bed of rock or a steep, wet field of mud.

Counterweight Options

Two counterweight options – standard and heavy – are available. Both are built with thick steel plates and reinforced fabrications to make them less susceptible to damage, and both have curved surfaces that match the machine's sleek, smooth appearance along with integrated housings to help protect the standard rearview camera.

Front Linkage

Options to take on your far-reaching and up-close tasks

Designed For Range

The 316F L is offered with a reach boom and two stick configurations: R3.1 m (10'2") and R2.9 m (9'6"). Also, a thumb-ready stick with brackets to attach a Cat thumb on the machine is an available option. Reach configurations balance digging force and bucket capacity, covering all applications this size of machine was designed to take on such as trenching, loading, and doing demolition work with hydraulic tools.

Made To Last

Each boom and stick is built with internal baffle plates for maximum durability, and each undergoes ultrasound inspection to ensure quality and reliability for the tough work you do.

Talk to your Cat dealer to pick the best front linkage for your specific applications.

Integrated Technologies

Monitor, manage, and enhance your job site operations

Cat Connect

The smart use of technology and services will improve your job site efficiency. In fact, using data from technology-equipped machines give you more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:

LINK Technologies

LINK technologies like Product Link™ wirelessly connect you to your equipment, giving you valuable insight into how your machine or fleet is performing. The system tracks location, hours, fuel usage, productivity, idle time, and diagnostic codes through the online VisionLink® interface so you can make timely, fact-based decisions to maximize efficiency, improve productivity, and lower operating costs.

GRADE Technologies

GRADE technologies like Cat Grade Control Depth and Slope combine digital design data and in-cab guidance to help you work more productively and accurately with less rework. Real-time bucket tip positioning and cut and fill data on the standard cab monitor guide you to grade, saving money on fuel and materials. You can also easily upgrade to AccuGrade™ when 3D control is required.

Attachments

Tools to make you productive and profitable

Get The Most Out Of One Machine

You can easily expand the performance of your machine by utilizing any of the variety of attachments offered by Cat Work Tools.

Change Jobs Quickly

A quick coupler brings the ability to quickly change attachments and switch from job to job. The Cat Pin Grabber coupler is the secure way to decrease downtime and increase job site flexibility and overall productivity.

Dig, Finish, Load & Compact

Multiple buckets dig everything from top soil to harsh, abrasive material. For finishing and grading work, compact and shallow ditch cleaning buckets fit the need. A Cat compactor prepares the area for the next phase of construction.

Break, Demolish & Scrap

A hydraulic hammer equips your machine for breaking rock in quarries and preparing trenches on construction sites. Taking down bridge pillars and heavily reinforced concrete is no problem. Multi-processor, pulverizer, and shear attachments take your machine into structure demolition jobs and process the debris for reuse and recycle.

Move & Handle

Add a thumb and you have the ability to move and handle brush, rocks, and debris. For constant material handling, a grapple is your solution. Choose from three different styles for picking, sorting, and loading trash, demolition debris, or recyclables.

Set Up Your Machine For Profitability

Your Cat dealer can install hydraulic kits to properly operate all Cat Work Tool attachments, maximizing the machine's uptime and your profits. All Cat Work Tool attachments are supported by the same Cat dealer network as your Cat machine.

GRAB, SORT, LOAD

Pro Series Hydraulic Thumbs

Stiff Link Thumbs

Contractors' Grapples

Trash Grapples

SWAP TOOLS

Pin Grabber Coupler

DIG & PACK

Ditch Cleaning and Tilt Buckets

General Duty Buckets

Heavy Duty Buckets

Severe Duty Buckets

Vibratory Plate Compactors

CUT, CRUSH, BREAK & RIP

Multi-Processors

Scrap & Demolition Shears

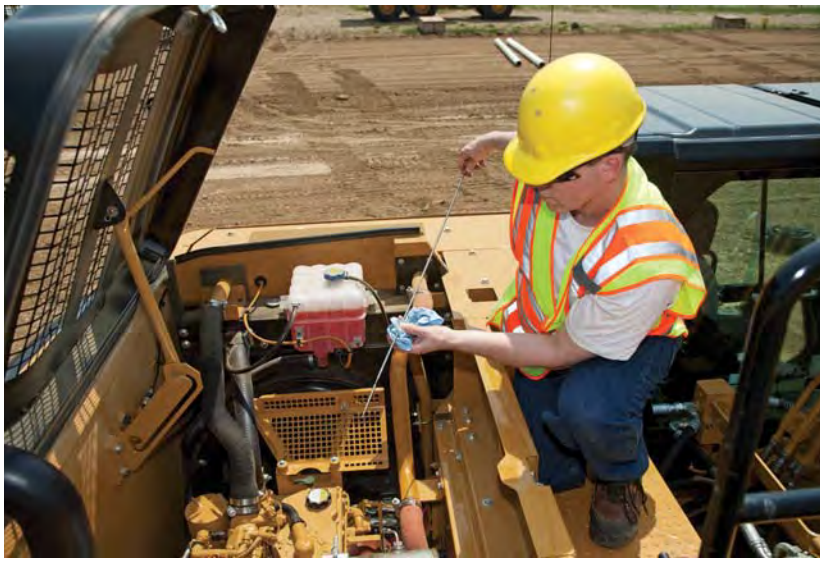
Secondary Pulverizers

Hydraulic Hammers

Rippers

Serviceability

Designed to make your maintenance quick and easy



Safe, Convenient Access

You can reach most routine maintenance items like fluid taps and grease points from the safety and convenience of ground level. You will also find filters banked together for higher service efficiency. Compartments feature wide service doors designed to help prevent debris entry, and they also securely latch in place to help make your service work simpler.

A Smart Design

The high-ambient cooling system features a fuel-saving variable-speed fan and a side-by-side-mounted radiator and oil and air coolers for easy cleaning. Wider clearance between the two makes blowing off debris easy for you, which can help improve your machine's reliability and performance.

A Fresh Idea

When you select ventilation inside the cab, outside air enters through the fresh air filter. The filter is conveniently located on the side of the cab to make it easy to reach and replace, and it is protected by a lockable door that can be opened with the engine key.

More Service Benefits

Filters are banked together to enhance service efficiency. The fuel tank's drain tube makes it easy and simple for you to remove water and sediment during routine maintenance. Plus an integrated fuel level indicator pops up to help you reduce the possibility of fuel tank overfilling.

Safety

Features to help protect you day in and day out

A Safe, Quiet Cab

The ROPS cab provides you with a safe working environment when properly seated and belted. 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 inside as any of today's top pickup trucks.

Secure Contact Points

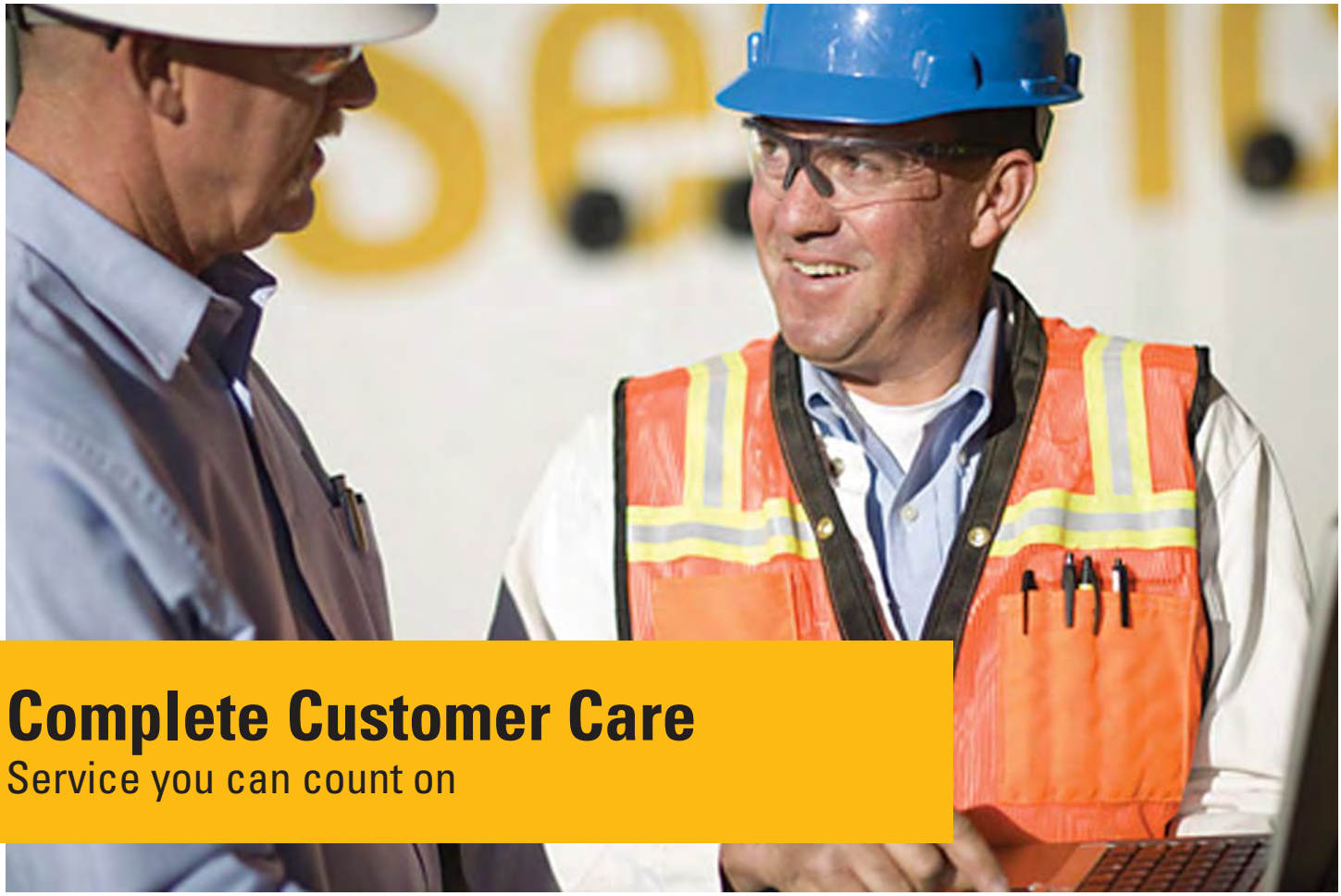
Multiple large steps get you into the cab as well as a leg up to the compartments. Extended hand rails allow you to safely climb to the upper deck. Anti-skid plates reduce your slipping hazards in all types of weather conditions, and they can be removed for cleaning.

Great Views

Ample glass gives you excellent visibility out front and to the side, and the standard rearview camera gives you a clear field of view behind the machine through the cab monitor. The available split-configuration windshield features an upper window with handles that make it easy to slide and store above you and a lower window that can be removed and stored on the inside wall of the cab. The large skylight also serves as an emergency exit and provides you with enhanced overhead visibility.

Smart Lighting

Halogen lights provide plenty of illumination, and the cab and boom lights can be programmed to stay on for up to 90 seconds after the engine has been turned off to help you safely exit the machine.



Complete Customer Care

Service you can count on

Parts Where You Work

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

Advice You Can Trust

What are the job requirements and machine attachments? What production is needed? Your Cat dealer can provide recommendations to help you make the right machine choices.

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.

Support Agreements To Fit Your Needs

Cat dealers offer a variety of customer support agreements and work with you to develop a plan to meet your specific needs. These plans can cover the entire machine, including attachments, to help protect your investment.

Operating Techniques To Boost Your Profits

Improving operating techniques can boost your profits. Your Cat dealer has videos, literature, and other ideas to help you increase productivity. Caterpillar also offers simulators and certified operator training to help maximize the return on your investment.

Sustainability

Generations ahead in every way

- The C4.4 ACERT engine meets Tier 4 Final emission standards.
- The engine can run on either ultra-low-sulfur diesel fuel (ULSD that is 15 ppm U.S., 10 ppm EU of sulfur or less) or up to B20 biodiesel (blended with ULSD) that meets ASTM 6751 standards.
- An overfill indicator rises when the fuel tank is full to help service technicians avoid spilling.
- The QuickEvac™ option ensures fast, easy, and secure changing of engine and hydraulic oil.
- The machine is built to be rebuilt with major structures and components capable of being remanufactured to reduce waste and replacement costs.
- An efficient engine oil filter eliminates the need for painted metal cans and aluminum top plates. The cartridge-style spin-on housing enables the internal filter to be separated and replaced; the used internal element can be incinerated to help reduce waste.
- The 316F L is an efficient, productive machine that's designed to conserve our natural resources for generations ahead.

316F L Hydraulic Excavator Specifications

Engine

Engine Model	Cat C4.4 ACERT	
Net Power – SAE J1349	88 kW	117 hp
Engine Power – ISO 14396	91 kW	122 hp
Bore	105 mm	4.13 in
Stroke	127 mm	5.00 in
Displacement	4.4 L	269 in^3

Weights

Minimum Operating Weight*	17 500 kg	38,580 lb
Maximum Operating Weight**	18 100 kg	39,900 lb

*5.1 m (16'9") boom, 2.9 m (9'6") stick, 2.8 mt (3.08 t) counterweight, 0.76 m^3 (1.00 yd^3) GD bucket, and 600 mm (24") shoes.
**5.1 m (16'9") boom, 3.1 m (10'2") stick, 3.05 mt (3.36 t) counterweight, 0.76 m^3 (1.00 yd^3) GD bucket, 700 mm (28") shoes.

Hydraulic System

Main System – Maximum Flow (Total)	300 L/min	79 gal
Maximum Pressure – Equipment	35 000 kPa	5,076 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	25 000 kPa	3,626 psi
Pilot System – Maximum Flow	25 L/min	6.6 gal/min
Pilot System – Maximum Pressure	4120 kPa	598 psi
Boom Cylinder – Bore	110 mm	4 in
Boom Cylinder – Stroke	1193 mm	47 in
Stick Cylinder – Bore	120 mm	5 in
Stick Cylinder – Stroke	1331 mm	52 in
Bucket Cylinder – Bore	110 mm	4 in
Bucket Cylinder – Stroke	1039 mm	41 in

Drive

Maximum Travel Speed	5.3 km/h	3.3 mph
Maximum Drawbar Pull	156 kN	35,070 lbf

Swing Mechanism

Swing Speed	8.9 rpm	
Swing Torque	49.6 kN·m	36,580 lb-ft

Service Refill Capacities

Fuel Tank Capacity	290 L	76.61 gal
Cooling System	26 L	6.9 gal
Engine Oil (with filter)	13.5 L	3.57 gal
Swing Drive	8 L	2.1 gal
Final Drive (each)	8 L	2.1 gal
Hydraulic System (including tank)	190 L	50.19 gal
Hydraulic Tank	106 L	28.00 gal
DEF Tank Capacity	20.5 L	5.4 gal

Track

Number of Shoes (each side)	44 pieces
Number of Track Rollers (each side)	7 pieces
Number of Carrier Rollers (each side)	2 pieces

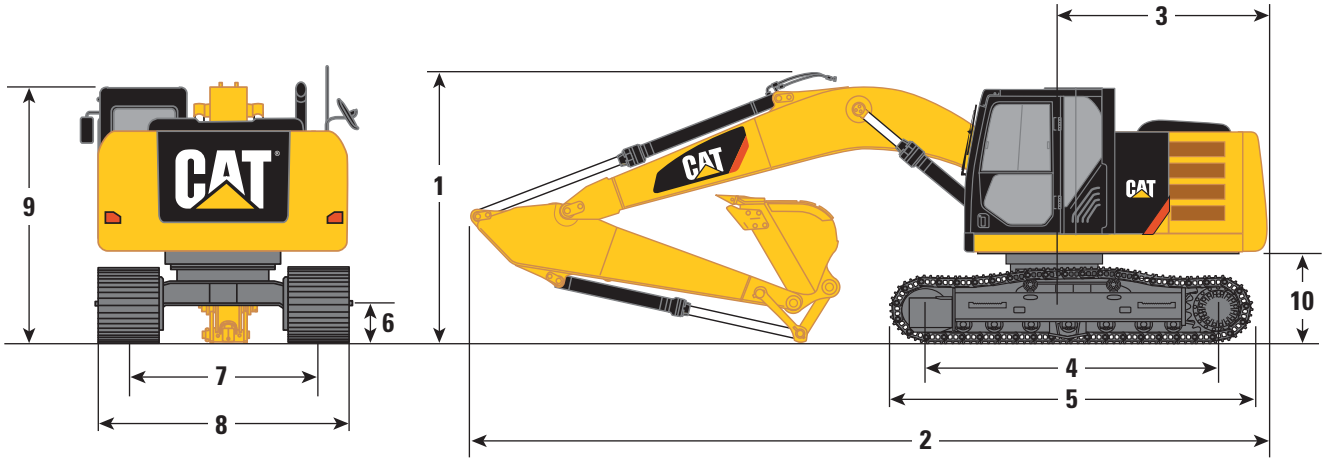
Sound Performance

Operator – ISO 6396	71 dB(A)
Spectator – ISO 6395	102 dB(A)

- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 OCT98, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environment.

Dimensions

All dimensions are approximate.



		Reach Booms 5.1 m (16'9")	
	Stick	**R3.1 (10'2")**	**R2.9 (9'6")**
		mm (ft)	**mm (ft)**
1	Shipping Height*	3190 (10'5")	3100 (10'2")
	Shipping Height at Boom Top	3190 (10'5")	3100 (10'2")
	Shipping Height with Hand Rail	2930 (9'7")	2930 (9'7")
	Shipping Height with Top Guard	3100 (10'2")	3100 (10'2")
2	Shipping Length	8570 (28'1")	8570 (28'1")
3	Tail Swing Radius	2500 (8'2")	2500 (8'2")
4	Length to Center of Rollers	3170 (10'5")	3170 (10'5")
5	Track Length	3970 (13'0")	3970 (13'0")
6	Ground Clearance	440 (1'5")	440 (1'5")
7	Track Gauge	1990 (6'6")	1990 (6'6")
8	Transport Width		
	600 mm (24") Shoes	2590 (8'6")	2590 (8'6")
	700 mm (28") Shoes	2690 (8'10")	2690 (8'10")
9	Cab Height	2890 (9'6")	2890 (9'6")
	Cab Height with Top Guard	3100 (10'2")	3100 (10'2")
10	Counterweight Clearance**	1010 (3'4")	1010 (3'4")

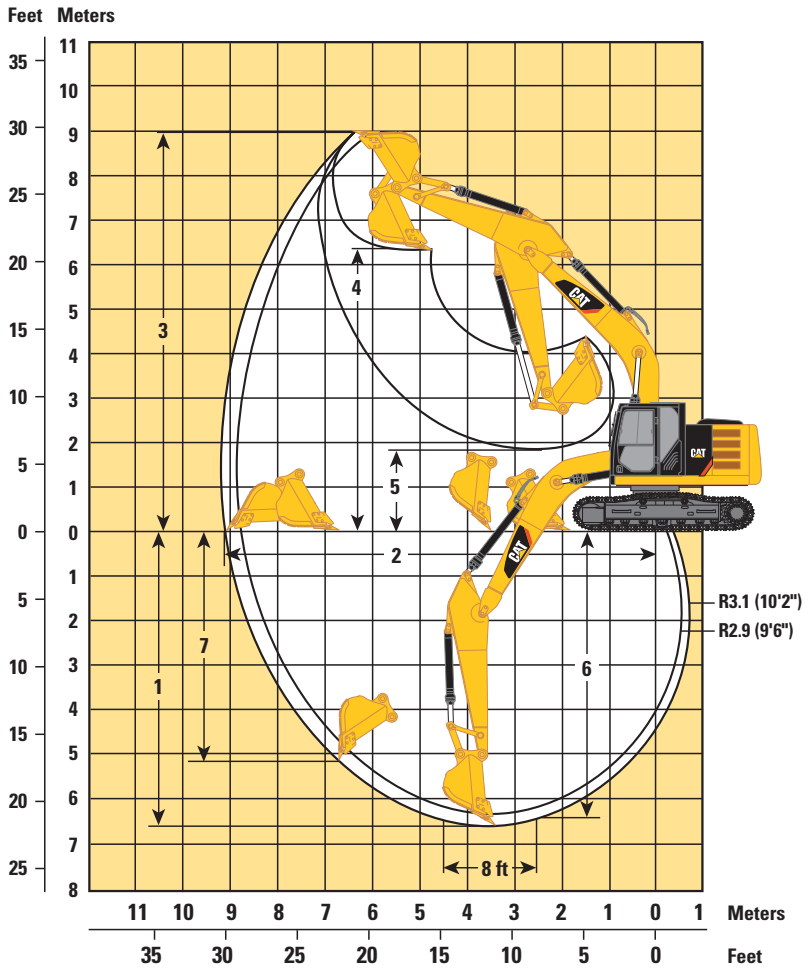
All dimensions were calculated with a 0.76 m^3 (1.00 yd^3), 900 mm (41 in) bucket.

*Including shoe lug height.

**Without shoe lug height.

Working Ranges

All dimensions are approximate.



Stick	Reach Booms 5.1 m (16'9") R3.1 (10'2") mm (ft)	R2.9 (9'6") mm (ft)
1 Maximum Digging Depth	6590 (21'7")	6390 (21'0")
2 Maximum Reach at Ground Level	9160 (30'1")	8990 (29'6")
3 Maximum Cutting Height	8970 (29'4")	8880 (29'2")
4 Maximum Loading Height	6370 (20'9")	6270 (20'7")
5 Minimum Loading Height	1800 (5'10")	2000 (6'7")
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6400 (21'0")	6160 (20'3")
7 Maximum Vertical Wall Digging Depth	5136 (16'8")	4940 (16'2")

All dimensions were calculated with a 0.76 m^3 (1.00 yd^3), 900 mm (41 in) bucket.

Operating Weight and Ground Pressure

	700 mm (28") Triple Grouser Shoes		600 mm (24") Triple Grouser Shoes	
	kg (lb)	kPa (psi)	kg (lb)	kPa (psi)
Reach Boom – 5.1 m (16'9")				
R3.1 (10'2")	17 800 (39,249)	36.2 (5.20)	17 500 (38,580)	41.5 (6.02)
R2.9 (9'6")	17 800 (39,249)	36.2 (5.20)	17 500 (38,580)	41.5 (6.02)
Heavy Counterweight – 3.1 mt (3.4 t)				
R3.1 (10'2")	18 100 (39,900)	36.8 (5.33)	17 800 (39,249)	42.2 (6.12)

Major Component Weights

	kg	lb
Base Machine (with boom cylinder, without counterweight, front linkage and track)	5820	12,833
Long Undercarriage	3770	8,310
Counterweight 2.8 mt (3.1 t)	2800	6,170
Heavy Counterweight 3.05 mt (3.36 t)	3050	6,730
Boom (includes lines, pins and stick cylinder)		
Reach Boom – 5.1 m (16'9")	1300	2,867
Reach Boom – 5.1 m (16'9") for CGC	1310	2,888
Stick (includes lines, pins, bucket cylinder, and bucket linkage)		
R3.1 (10'2")	890	1,962
R2.9 (9'6")	860	1,896
Track Shoe (Long/per two tracks)		
600 mm (24") Triple Grouser	2420	5,340
700 mm (28") Triple Grouser	2650	5,840

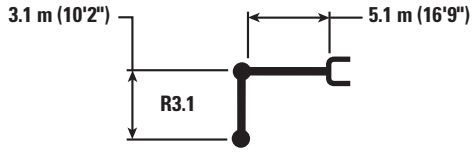
All weights are rounded up to nearest 10 kg and lb except for buckets. Kg and lb were rounded up separately so some of the kg and lb do not match.

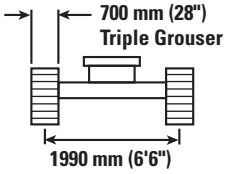
Base machine includes 75 kg (165 lb) operator weight, 90% fuel weight, and undercarriage with center guard.

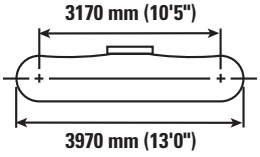
Bucket and Stick Forces

	Reach Booms 5.1 m (16'9")	
Stick	**R3.1 (10'2")**	**R2.9 (9'6")**
	kN (lbf)	**kN (lbf)**
General Duty		
Bucket Digging Force (SAE)	98 (22,000)	98 (22,000)
Stick Digging Force (SAE)	69 (15,500)	73 (16,400)
Severe Duty		
Bucket Digging Force (SAE)	97 (21,775)	97 (21,775)
Stick Digging Force (SAE)	69 (15,500)	73 (16,388)

Reach Boom Lift Capacities – Counterweight: 2.8 mt (3.1 t) – without Bucket







		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft
7.5 m **25.0 ft**	kg **lb**											*2700 ***6,050**	*2700 ***6,050**	5.49 **17.57**
6.0 m **20.0 ft**	kg **lb**							*3650 ***7,850**	3450 **7,400**			*2450 ***5,350**	*2450 ***5,350**	6.76 **21.96**
4.5 m **15.0 ft**	kg **lb**							*3850 ***8,450**	3400 **7,250**	*2450	2350	*2350 ***5,150**	2300 **5,100**	7.52 **24.58**
3.0 m **10.0 ft**	kg **lb**			*7450 ***15,850**	*7450 ***15,850**	*5300 ***11,400**	4950 **10,700**	*4450 ***9,650**	3250 **6,950**	3650 ***7,500**	2300 **4,850**	*2400 ***5,250**	2050 **4,550**	7.93 **25.98**
1.5 m **5.0 ft**	kg **lb**			*7550 ***18,100**	*7550 **17,700**	*6700 ***14,450**	4600 **9,900**	5000 **10,750**	3050 **6,550**	3600 **7,700**	2200 **4,700**	*2550 ***5,550**	2000 **4,350**	8.03 **26.36**
0.0 m **0.0 ft**	kg **lb**			*6650 ***15,300**	*6650 ***15,300**	7500 **16,100**	4350 **9,300**	4850 **10,400**	2900 **6,250**	3500 **7,550**	2150 **4,600**	*2800 ***6,150**	2000 **4,400**	7.85 **25.77**
–1.5 m **–5.0 ft**	kg **lb**	*5050 ***11,250**	*5050 ***11,250**	*9300 ***21,150**	7700 **16,550**	7350 **15,800**	4200 **9,050**	4750 **10,250**	2850 **6,100**			*3350 ***7,350**	2150 **4,750**	7.36 **24.12**
–3.0 m **–10.0 ft**	kg **lb**	*8400 ***18,850**	*8400 ***18,850**	*11 350 ***24,500**	7800 **16,750**	7350 **15,800**	4200 **9,050**	4800 **10,300**	2850 **6,150**			4300 **9,500**	2600 **5,700**	6.49 **21.18**
–4.5 m **–15.0 ft**	kg **lb**			*9000 ***19,200**	8050 **17,300**	*6100 ***12,850**	4350 **9,450**					*5150 ***11,400**	3750 **8,500**	5.04 **16.24**

* ISO 10567

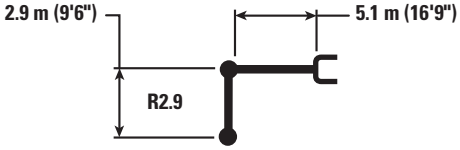
*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories 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.

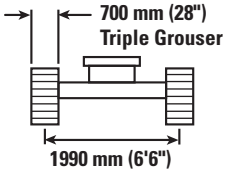
Lift capacity stays with ±5% for all available track shoes.

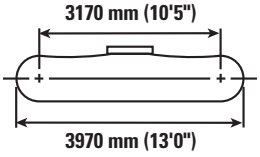
Always refer to the appropriate Operation and Maintenance Manual for specific product information.

316F L Hydraulic Excavator Specifications

Reach Boom Lift Capacities – Counterweight: 2.8 mt (3.1 t) – without Bucket







		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft
7.5 m **25.0 ft**	kg **lb**											*2950 ***6,500**	*2950 ***6,500**	5.08 **16.21**
6.0 m **20.0 ft**	kg **lb**							*3650 ***7,350**	3450 **7,350**			*2650 ***5,800**	*2650 ***5,800**	6.43 **20.89**
4.5 m **15.0 ft**	kg **lb**							*4050 ***8,850**	3350 **7,250**			*2550 ***5,650**	2500 **5,450**	7.23 **23.63**
3.0 m **10.0 ft**	kg **lb**			*8000 ***17,000**	*8000 ***17,000**	*5500 ***11,900**	4950 **10,600**	*4600 ***10,000**	3200 **6,900**	*3300 ***6,050**	2300 **4,850**	*2650 ***5,800**	2200 **4,850**	7.66 **25.09**
1.5 m **5.0 ft**	kg **lb**			*7100 ***17,000**	*7100 ***17,000**	*6900 ***14,900**	4550 **9,850**	5000 **10,750**	3050 **6,550**	3600 **7,700**	2200 **4,750**	*2850 ***6,250**	2100 **4,600**	7.77 **25.48**
0.0 m **0.0 ft**	kg **lb**			*7050 ***16,150**	*7050 ***16,150**	7500 **16,050**	4300 **9,300**	4850 **10,450**	2950 **6,300**	3500	2150	*3200 ***7,050**	2100 **4,650**	7.58 **24.87**
–1.5 m **–5.0 ft**	kg **lb**	*5700 ***12,750**	*5700 ***12,750**	*10 100 ***22,900**	7750 **16,600**	7350 **15,800**	4200 **9,100**	4800 **10,300**	2850 **6,150**			3800 **8,400**	2300 **5,100**	7.07 **23.16**
–3.0 m **–10.0 ft**	kg **lb**	*9300 ***20,850**	*9300 ***20,850**	*11 100 ***23,950**	7850 **16,800**	7400 **15,900**	4250 **9,150**	4800 **10,350**	2900 **6,250**			4650 **10,300**	2800 **6,200**	6.16 **20.07**
–4.5 m **–15.0 ft**	kg **lb**			*8550 ***18,150**	8100 **17,450**	*5700	4450					*5550 ***12,150**	4300 **9,800**	4.60 **14.75**

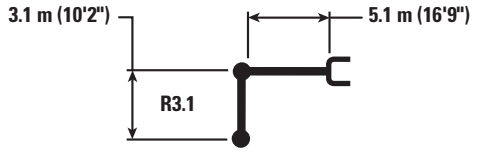
ISO 10567

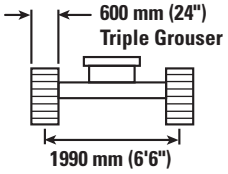
*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories 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.

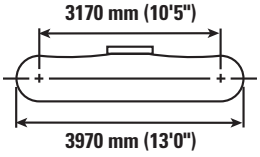
Lift capacity stays with ±5% for all available track shoes.

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

Reach Boom Lift Capacities – Counterweight: 2.8 mt (3.1 t) – without Bucket







		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft
7.5 m **25.0 ft**	kg **lb**											*2700 ***6,050**	*2700 ***6,050**	5.49 **17.57**
6.0 m **20.0 ft**	kg **lb**							*3650 ***7,850**	3400 **7,300**			*2450 ***5,350**	*2450 ***5,350**	6.76 **21.96**
4.5 m **15.0 ft**	kg **lb**							*3850 ***8,450**	3350 **7,150**	*2450	2300	*2350 ***5,150**	2300 **5,050**	7.52 **24.58**
3.0 m **10.0 ft**	kg **lb**			*7450 ***15,850**	*7450 ***15,850**	*5300 ***11,400**	4900 **10,550**	*4450 ***9,650**	3200 **6,850**	3600 ***7,500**	2250 **4,800**	*2400 ***5,250**	2050 **4,500**	7.93 **25.98**
1.5 m **5.0 ft**	kg **lb**			*7550 ***18,100**	*7550 **17,500**	*6700 ***14,450**	4550 **9,750**	4950 **10,600**	3000 **6,500**	3550 **7,550**	2150 **4,650**	*2550 ***5,550**	1950 **4,250**	8.03 **26.36**
0.0 m **0.0 ft**	kg **lb**			*6650 ***15,300**	*6650 ***15,300**	7400 **15,850**	4250 **9,200**	4800 **10,250**	2900 **6,200**	3450 **7,450**	2100 **4,500**	*2800 ***6,150**	1950 **4,300**	7.85 **25.77**
–1.5 m **–5.0 ft**	kg **lb**	*5050 ***11,250**	*5050 ***11,250**	*9300 ***21,150**	7600 **16,300**	7250 **15,550**	4150 **8,950**	4700 **10,100**	2800 **6,000**			*3350 ***7,350**	2150 **4,700**	7.36 **24.12**
–3.0 m **–10.0 ft**	kg **lb**	*8400 ***18,850**	*8400 ***18,850**	*11 350 ***24,500**	7700 **16,500**	7250 **15,600**	4150 **8,950**	4700 **10,150**	2800 **6,050**			4250 **9,350**	2550 **5,650**	6.49 **21.18**
–4.5 m **–15.0 ft**	kg **lb**			*9000 ***19,200**	7950 **17,100**	*6100 ***12,850**	4300 **9,300**					*5150 ***11,400**	3700 **8,400**	5.04 **16.24**

* ISO 10567

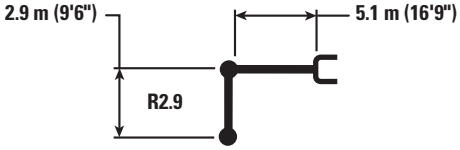
*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories 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.

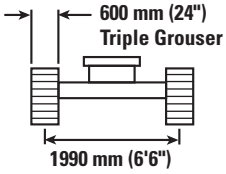
Lift capacity stays with ±5% for all available track shoes.

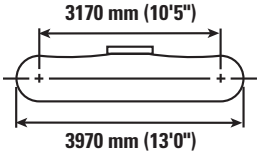
Always refer to the appropriate Operation and Maintenance Manual for specific product information.

316F L Hydraulic Excavator Specifications

Reach Boom Lift Capacities – Counterweight: 2.8 mt (3.1 t) – without Bucket







		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft
7.5 m **25.0 ft**	kg **lb**											*2950 ***6,500**	*2950 ***6,500**	5.08 **16.21**
6.0 m **20.0 ft**	kg **lb**							*3650 ***7,350**	3400 **7,250**			*2650 ***5,800**	*2650 ***5,800**	6.43 **20.89**
4.5 m **15.0 ft**	kg **lb**							*4050 ***8,850**	3350 **7,150**			*2550 ***5,650**	2450 **5,400**	7.23 **23.63**
3.0 m **10.0 ft**	kg **lb**			*8000 ***17,000**	*8000 ***17,000**	*5500 ***11,900**	4900 **10,500**	*4600 ***10,000**	3200 **6,850**	*3300 ***6,050**	2250 **4,800**	*2650 ***5,800**	2150 **4,800**	7.66 **25.09**
1.5 m **5.0 ft**	kg **lb**			*7100 ***17,000**	*7100 ***17,000**	*6900 ***14,900**	4500 **9,700**	4950 **10,600**	3000 **6,500**	3550 **7,600**	2200 **4,650**	*2850 ***6,250**	2050 **4,550**	7.77 **25.48**
0.0 m **0.0 ft**	kg **lb**			*7050 ***16,150**	*7050 ***16,150**	7400 **15,850**	4250 **9,150**	4800 **10,300**	2900 **6,200**	3500	2100	*3200 ***7,050**	2100 **4,600**	7.58 **24.87**
–1.5 m **–5.0 ft**	kg **lb**	*5700 ***12,750**	*5700 ***12,750**	*10 100 ***22,900**	7650 **16,350**	7250 **15,600**	4150 **8,950**	4700 **10,150**	2800 **6,050**			3750 **8,250**	2300 **5,000**	7.07 **23.16**
–3.0 m **–10.0 ft**	kg **lb**	*9300 ***20,850**	*9300 ***20,850**	*11 100 ***23,950**	7750 **16,600**	7300 **15,650**	4200 **9,000**	4750 **10,250**	2850 **6,150**			4600 **10,200**	2750 **6,100**	6.16 **20.07**
–4.5 m **–15.0 ft**	kg **lb**			*8550 ***18,150**	8000 **17,250**	*5700	4400					*5550 ***12,150**	4250 **9,650**	4.60 **14.75**

* ISO 10567

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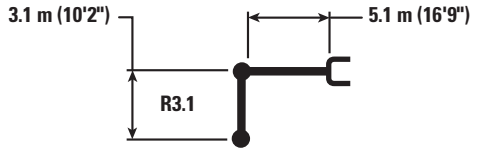
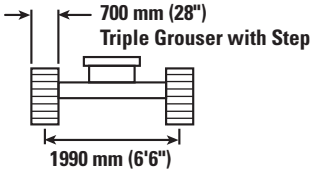
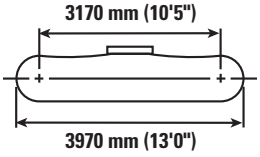
Lift capacity stays with ±5% for all available track shoes.

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

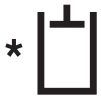
Reach Boom Lift Capacities – Counterweight: 3.05 mt (3.36 t) – without Bucket







		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft
7.5 m **25.0 ft**	kg **lb**											*2650 ***5,900**	*2650 ***5,900**	5.37 **17.43**
6.0 m **20.0 ft**	kg **lb**							*3600 ***7,500**	3600 ***7,500**			*2400 ***5,300**	*2400 ***5,300**	6.66 **21.58**
4.5 m **15.0 ft**	kg **lb**							*3900 ***8,500**	3500 **7,550**			*2350 ***5,200**	*2350 ***5,200**	7.43 **24.90**
3.0 m **10.0 ft**	kg **lb**			*7450 ***15,900**	*7450 ***15,900**	*5300 ***11,450**	5150 **11,100**	*4450 ***9,700**	3350 **7,250**	*3550 ***6,950**	2400 **5,100**	*2400 ***5,300**	2200 **4,850**	7.85 **25.73**
1.5 m **5.0 ft**	kg **lb**			*8400 ***20,100**	*8400 **18,450**	*6750 ***14,550**	4800 **10,300**	*5150 **11,150**	3200 **6,850**	3700 **8,000**	2300 **4,950**	*2600 ***5,700**	2100 **4,650**	7.95 **26.56**
0.0 m **0.0 ft**	kg **lb**			*7250 ***16,650**	*7250 ***16,650**	*7750 **16,700**	4550 **9,750**	5050 **10,800**	3050 **6,550**	3650 **7,850**	2250 **4,800**	*2950 ***6,450**	2150 **4,700**	7.77 **25.73**
–1.5 m **–5.0 ft**	kg **lb**	*5450 ***12,200**	*5450 ***12,200**	*9800 ***22,250**	8050 **17,300**	7650 **16,400**	4400 **9,500**	4950 **10,650**	3000 **6,400**			*3550 ***7,850**	2300 **5,100**	7.28 **24.07**
–3.0 m **–10.0 ft**	kg **lb**	*8700 ***19,550**	*8700 ***19,550**	*11400 ***24,600**	8150 **17,500**	7650 **16,450**	4400 **9,500**	4950 **10,700**	3000 **6,450**			4550 **10,100**	2750 **6,150**	6.39 **20.75**
–4.5 m **–15.0 ft**	kg **lb**			*9050 ***19,350**	8400 **18,050**	*6150 ***12,950**	4550 **9,850**					*5450 ***12,000**	4050 **9,200**	4.91 **15.77**



ISO 10567

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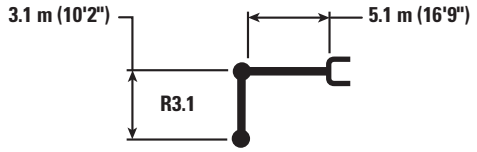
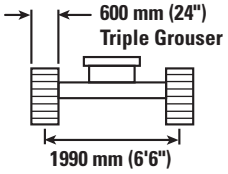
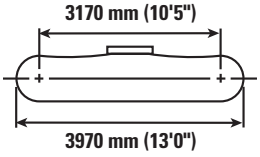
Lift capacity stays with ±5% for all available track shoes.

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

Reach Boom Lift Capacities – Counterweight: 3.05 mt (3.36 t) – without Bucket







		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft
7.5 m **25.0 ft**	kg **lb**											*2650 ***5,900**	*2650 ***5,900**	5.37 **17.43**
6.0 m **20.0 ft**	kg **lb**							*3600 ***7,500**	3550 ***7,500**			*2400 ***5,300**	*2400 ***5,300**	6.66 **21.58**
4.5 m **15.0 ft**	kg **lb**							*3900 ***8,500**	3450 **7,450**			*2350 ***5,200**	*2350 ***5,200**	7.43 **24.90**
3.0 m **10.0 ft**	kg **lb**			*7450 ***15,900**	*7450 ***15,900**	*5300 ***11,450**	5100 **10,950**	*4450 ***9,700**	3300 **7,150**	*3550 ***6,950**	2350 **5,050**	*2400 ***5,300**	2200 **4,800**	7.85 **25.73**
1.5 m **5.0 ft**	kg **lb**			*8400 ***20,100**	*8400 **18,200**	*6750 ***14,550**	4750 **10,200**	5150 **11,000**	3150 **6,800**	3700 **7,900**	2300 **4,900**	*2600 ***5,700**	2100 **4,550**	7.95 **26.56**
0.0 m **0.0 ft**	kg **lb**			*7250 ***16,650**	*7250 ***16,650**	7700 **16,500**	4450 **9,600**	4950 **10,700**	3000 **6,500**	3600 **7,750**	2200 **4,750**	*2950 ***6,450**	2100 **4,650**	7.77 **25.73**
–1.5 m **–5.0 ft**	kg **lb**	*5450 ***12,200**	*5450 ***12,200**	*9800 ***22,250**	7950 **17,100**	7550 **16,200**	4350 **9,350**	4900 **10,500**	2950 **6,350**			*3550 ***7,850**	2300 **5,000**	7.28 **24.07**
–3.0 m **–10.0 ft**	kg **lb**	*8700 ***19,550**	*8700 ***19,550**	*11400 ***24,600**	8050 **17,250**	7550 **16,200**	4350 **9,400**	4900 **10,550**	2950 **6,400**			4500 **10,000**	2750 **6,050**	6.39 **20.75**
–4.5 m **–15.0 ft**	kg **lb**			*9050 ***19,350**	8300 **17,850**	*6150 ***12,950**	4500 **9,750**					*5450 ***12,000**	4000 **9,100**	4.91 **15.77**

* ISO 10567

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Lift capacity stays with ±5% for all available track shoes.

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

Work Tool Offering Guide*

Boom Type	Reach Boom	
Stick Size	**R3.1 (10'2")**	**R2.9 (9'6")**
Hydraulic Hammer	H110Es H115Es H120Es	H110Es H115Es H120Es
Pulverizer	P215	P215
Mobile Scrap and Demolition Shear	S325B**	S325B**
Compactor (Vibratory Plate)	CVP75	CVP75
Contractors' Grapple	G115B	G115B
Demolition & Sorting Grapple	G310B	G310B
Trash Grapple	These work tools are available for the 316F L. Consult your Cat dealer for proper match.	
Thumbs		
Pin Grabber Coupler		

*Matches are dependent on excavator configurations. Consult your Cat dealer for proper work tool match.

**Boom-mount.

316F L Hydraulic Excavator Specifications

Bucket Specifications and Compatibility

	Width		Capacity		Weight		Fill	Reach Booms		
	mm	in	m^3	yd^3	kg	lb	%	R2.9 (9'6")	R3.1 (10'2")	R3.1 (10'2") Thumb*
Without Quick Coupler										
General Duty (GD)	600	24	0.35	0.46	445	980	100%	●	●	●
	750	30	0.49	0.64	502	1,106	100%	●	●	●
	900	36	0.62	0.81	548	1,208	100%	●	●	●
	1050	42	0.76	1.00	595	1,312	100%	⦿	⦿	⊖
	1200	48	0.91	1.19	672	1,480	100%	⊖	X	○
Severe Duty (SD)	600	24	0.35	0.46	496	1,093	90%	●	●	●
	750	30	0.49	0.64	564	1,243	90%	●	●	●
	900	36	0.62	0.81	644	1,420	90%	●	●	●
	1050	42	0.76	1.00	689	1,519	90%	●	⦿	⦿
	1200	48	0.91	1.19	762	1,678	90%	⊖	X	○
Maximum load pin-on (payload + bucket)							kg	2095	1945	1875
							lb	4,617	4,287	4,133
With Center Lock Quick Coupler										
General Duty (GD)	600	24	0.35	0.46	445	980	100%	●	●	●
	750	30	0.49	0.64	502	1,106	100%	●	●	●
	900	36	0.62	0.81	548	1,208	100%	⦿	⊖	⊖
	1050	42	0.76	1.00	595	1,312	100%	⊖	○	○
	1200	48	0.91	1.19	672	1,480	100%	◇	◇	◇
Severe Duty (SD)	600	24	0.35	0.46	496	1,093	90%	●	●	●
	750	30	0.49	0.64	564	1,243	90%	●	●	●
	900	36	0.62	0.81	644	1,420	90%	⦿	⊖	⊖
	1050	42	0.76	1.00	689	1,519	90%	⊖	○	○
	1200	48	0.91	1.19	762	1,678	90%	○	◇	◇
Maximum load with coupler (payload + bucket)							kg	1705	1555	1485
							lb	3,758	3,427	3,273

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 General Duty tips.

*Densities with 3.1 m (10'2") thumb stick does not consider thumb weight.

Maximum Material Density:

- ● 2100 kg/m^3 (3,500 lb/yd^3)
- ⦿ 1800 kg/m^3 (3,000 lb/yd^3)
- ⊖ 1500 kg/m^3 (2,500 lb/yd^3)
- ○ 1200 kg/m^3 (2,000 lb/yd^3)
- ◇ 900 kg/m^3 (1,500 lb/yd^3)
- X Not recommended

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.

Standard Equipment

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

ENGINE
- C4.4 ACERT diesel engine
- Up to B20 biodiesel capable
- Meets Tier 4 Final emission standards
- 2300 m (7,500 ft) altitude capability
- Electric priming pump
- Automatic engine speed control
- Economy and high power modes
- Two-speed travel
- Side-by-side cooling system
- Radial seal air filter
- Primary filter with water separator and water separator indicator
- Secondary filter
- Screen filter in fuel line
- Cold weather battery –25° C (–13° F)
- Jump start receptacle

HYDRAULIC SYSTEM
- Regeneration circuit for boom and stick
- Reverse swing dampening valve
- Automatic swing parking brake
- High-performance hydraulic return filter
- Fine swing control

CAB
- Pressurized operator station with positive filtration
- Sliding upper door window
- Glass-breaking safety hammer
- Removable lower windshield with in cab storage bracket
- Coat hook
- Beverage holder
- Literature holder
- AM/FM radio
- Radio with MP3 auxiliary audio port
- Two 12V stereo speakers
- Storage shelf suitable for lunch or toolbox
- Color LCD display with indicators, filter/fluid change, and working hour information
- Adjustable armrest
- Height adjustable joystick consoles
- Neutral lever (lock out) for all controls
- Travel control pedals with removable hand levers
- Two power outlets, 10 amp (total)
- Travel alarm
- Laminated glass front upper window and tempered other windows
- Sunscreen

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

ELECTRICAL
- 80 amp alternator
- Circuit breaker

LIGHTS
- Halogen boom light
- Time delay function for boom light and cab light
- Exterior lights integrated into storage box

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
- Openable skylight for emergency exit
- Rearview camera

TECHNOLOGY
- Product Link

Optional Equipment

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

ENGINE
- Quick drains, engine and hydraulic oil

HYDRAULIC SYSTEM
- Control pattern quick-changer, two way
- Auxiliary hydraulics
- Boom and stick lines
- High-pressure line
- Medium-pressure line
- Cat quick coupler line – high-pressure capable
- Boom lowering and stick lowering control device
- Cat Bio hydraulic oil

CAB
- Cab hatch emergency exit
- Seat, high-back air suspension with heater and cooling
- Seat, high-back air suspension with heater
- Seat, high-back mechanical suspension
- Windshield wiper, lower with washer
- Air pre-filter
- Left foot switch
- Left pedal
- Straight travel pedal
- Rain protector
- Cab mirror
- Ashtray

UNDERCARRIAGE
- 600 mm (24") triple grouser shoes
- 700 mm (28") triple grouser shoes
- Full-length track guiding guard
- Guard, heavy-duty bottom
- Center track guiding guard
- Segmented (2 piece) track guiding guard

COUNTERWEIGHT
- 2.8 mt (3.1 t)
- 3.05 mt (3.36 t)

FRONT LINKAGE
- Quick coupler
- Bucket linkage, without lifting eye
- 5.1 m (16'9") reach boom
- 2.9 m (9'6") stick
- 3.1 m (10'2") stick
- 3.1 m (10'2") thumb-ready stick

LIGHTS
- Working lights, cab mounted with time delay
- HID lights, cab mounted with time delay
- Halogen boom lights (right side)

SECURITY
- FOGS, bolt-on
- Side steel bumper
- Hand rail
- Guard, cab front, mesh
- Guard, vandalism
- Rearview camera

TECHNOLOGY
- Cat Grade Control Depth and Slope

Notes

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

AEHQ7937
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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.