349F L Hydraulic Excavator





Engine			Drive		
Engine Model	Cat® C13 A	CERT™	Maximum Travel Speed	4.7 km/h	2.9 mph
Net Power – SAE J1349	311 kW	417 hp	Maximum Drawbar Pull	335 kN	75,300 lbf
			Weights		
			Minimum Weight	48 650 kg	107,200 lb
			Maximum Weight	53 300 kg	117,500 lb

Introduction

The 349F is built to keep your production numbers up and your owning and operating costs down. Not only does the machine's C13 engine meet U.S. EPA Tier 4 Final emission standards, but it does so while giving you all the power, fuel efficiency, and reliability you need to succeed.

Where the real power comes in is through the hydraulic system. You can literally move tons of material all day long with a great deal of speed and precision. When you add in a quiet operator environment that keeps you comfortable and productive, ground-level service points that make your routine maintenance easy, and multiple Cat work tools that help you take on a variety of jobs, you simply won't find a better 49-ton machine.

If productivity, comfort, versatility, and fuel efficiency are what you want, the 349F excavator is what you need.

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Hydraulics

Power to move your material with speed and precision

A Powerful, Efficient Design

When it comes to moving heavy material quickly and efficiently, you need hydraulic horsepower – the type of ground-breaking power the 349F 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 Re-Circulation For Added Efficiency

The 349F regenerates 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.





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.

A Safe, Quiet Cab

The ROPS 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 inside as any of today's top pickup trucks.

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 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

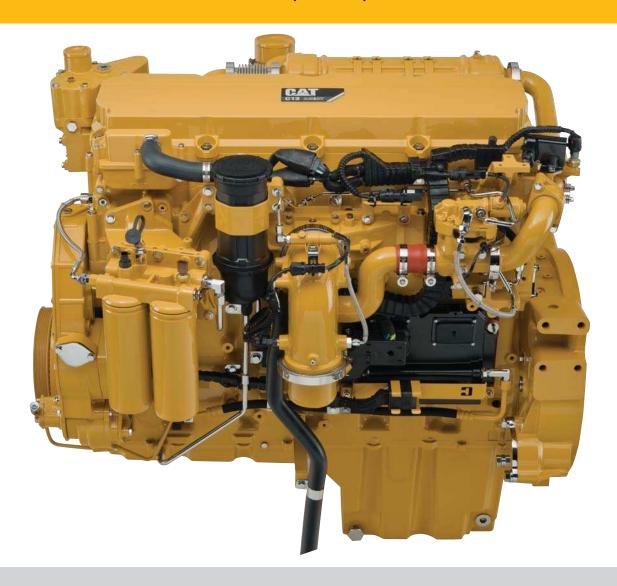
The right and left joystick consoles can be adjusted to improve your comfort and productivity during the course of a day. Also, the right joystick features a button that will reduce engine speed when you are not working to help save fuel. Touch it once and speed reduces; touch it again and speed increases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

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 with handle, 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.

Engine

Powerful and fuel efficient to meet your expectations



Proven Technology

Every U.S. EPA Tier 4 Final 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 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.

More Powerful, Reliable Engine Electronics

The electronics used in Cat Tier 4 Final engines are more powerful and robust than ever. Enhanced features like an over-foam wiring harness increase quality and reliability through the most demanding applications.

Next Generation Fuel Systems

As a key component of Cat Tier 4
Technology, injection timing precisely controls the fuel injection process through a series of carefully timed microbursts.
This injection timing provides more control of combustion for the cleanest, most efficient fuel burn. To maximize your value, Caterpillar engineers specified fuel systems based on the power and performance demands for each engine. The advanced MEUITM-C injector platform delivers increased injection pressures and more precise fuel rates. It also enhances responsiveness while controlling soot.

Innovative Air Management

Cat Tier 4 Final engines feature innovative air management systems that optimize airflow and enhance power, efficiency, and reliability. We apply a range of simple, reliable turbocharging solutions based on engine size and application. This allows us to match turbo performance to rated output for high productivity, excellent fuel efficiency, long life, and low operating costs for you.

Cat NO_x Reduction System

The Cat NO_x Reduction System captures and cools a small quantity of exhaust gas, then routes it back into the combustion chamber where it drives down combustion temperatures and reduces NO_x emissions. The result of more than a decade of Caterpillar engineering research into this technology is the most reliable system of its type.

Aftertreatment Technologies

Caterpillar designed Tier 4 Interim products with Tier 4 Final standards in mind. By planning ahead, we were able to minimize design changes and deliver the reliability and performance you demand. The aftertreatment solution utilized for Tier 4 Final products is the next evolutionary step for Cat engines with ACERT Technology. To meet the additional 80% reduction in NO_x emissions required by U.S. EPA Tier 4 Final emission standards, Caterpillar engineers only needed to add one new system to the already proven aftertreatment solution in use, Selective Catalytic Reduction (SCR).

Diesel Exhaust Fluid (DEF)

Cat engines equipped with an SCR system inject DEF into the exhaust to reduce NO_x emissions. DEF is a precisely mixed solution of 32.5% high purity chemical grade urea and 67.5% de-ionized water. DEF used in Cat SCR systems must meet the requirements outlined in the International Organization for Standardization (ISO) standard 22241-1. ISO 22241-1 requirements are met by many brands of DEF, including those that carry the AdBlue or API certifications.

An Emissions Solution That Really Works

The Cat C13 engine meets today's U.S. EPA 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.

Fuel Savers That Add Up

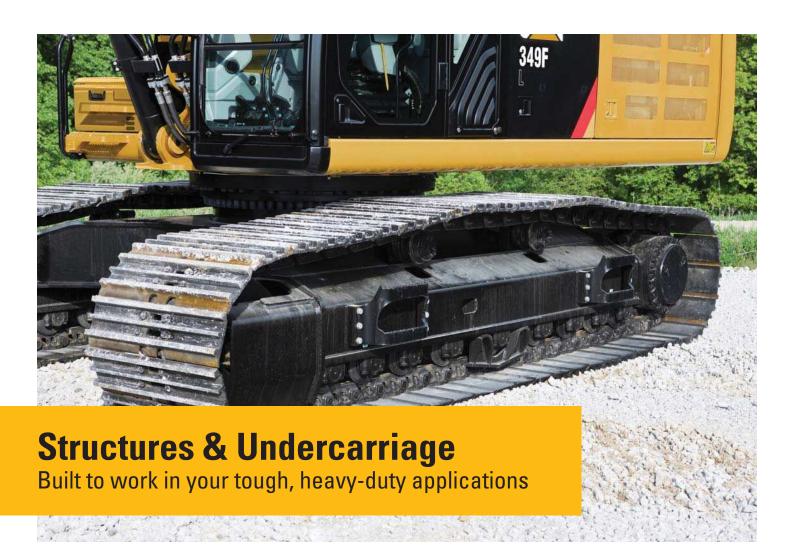
The 349F is fuel efficient, and two built-in features help contribute to that: automatic engine speed control and automatic engine idle shutdown. Automatic engine speed control lowers rpm when the machine doesn't need it for work. Automatic engine idle shutdown turns the engine off when it's been idling for more than a specified amount of time that you can set through the monitor. You also have a choice of three power modes – high power, standard power, and eco mode. Simply change between modes through the console switch panel to meet the work needs in front of you. Collectively, all of these benefits add up to reduced fuel consumption, reduced exhaust and sound emissions, reduced repair and maintenance costs, and increased engine life for you.

A Cool Design For Any Temperature

The 349F features a side-by-side cooling system that allows you to put the machine to work in extremely hot and cold conditions. The system is completely separated from the engine compartment to reduce noise and heat. Plus it features easy-to-clean cores and a variable-speed fan that reverses to blow out unwanted debris that may accumulate during your work day.

Biodiesel Not A Problem

The C13 engine can run on B20 biodiesel fuel that meets ASTM 6751 standards – all to give you more potential fuel-saving flexibility.



Robust Frames

The 349F 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's also reinforced around areas that take on a lot of stress like the boom foot, skirt, and counterweight removal system. 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 349F's 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 4 (GLT4) 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. Cat Positive Pin Retention 2 (PPR2) prevents looseness of the track pin in the track link, reduces stress concentrations, and eliminates pin walking for increased service life. 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

An 8.6 mt (9.0 t) and 9.0 mt (9.9 t) counterweight are available to balance your work needs. 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 or up-close tasks





Booms & Sticks

The 349F is offered with a range of reach and mass boom and stick options. Each is built with internal baffle plates and stress-relieved for added durability, and each undergoes ultrasound inspection to ensure 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 boom nose pin retention method is a captured flag design for enhanced durability.

Booms & Sticks For Many Jobs

Two types of booms and sticks are offered: heavy-duty (HD) reach and mass excavation (ME).

HD reach booms and sticks offer you excellent all-around versatility for general excavation work like multipurpose digging and loading. ME booms and sticks offer you enhanced performance in heavy-duty material like rock. They provide higher digging forces due to special boom and stick geometry, and bucket linkage and cylinders are built for greater durability.

Sticks are matched to the boom. Longer sticks are better for when you need to dig deep or load trucks. Shorter sticks provide greater breakout force and increase your productivity when using hydromechanical work tools.

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

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 & Load

A wide range of buckets dig everything from top soil to harsh, abrasive material. High-capacity buckets load trucks in a minimum number of passes for ultimate productivity.

Mining, Demolition & 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.



Integrated Technologies

Monitor, manage, and enhance your job site operations





CAT CONNECT









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

Equipment Management – increase uptime and reduce operating costs.



Productivity – monitor production and manage job site efficiency.



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

LINK Technologies

LINK technologies like Product LinkTM 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. Easily upgrade to AccuGrade™
when 3D control is required.

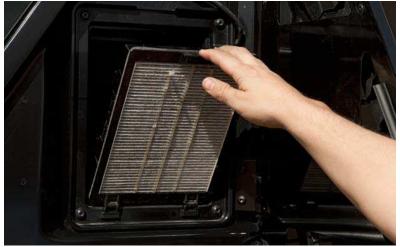


Ground-Level Access

You can reach most routine maintenance items like fuel and oil filters, fluid taps, and grease points from the safety and convenience of ground level. Not only do compartments feature wide service doors designed to help prevent debris entry, but they also securely latch in place to help make your service work simpler.

Serviceability

Designed to make your maintenance quick and easy



A Cool Design

The unique cooling package includes a fuel-saving variablespeed fan and a radiator and AC condenser mounted side by side to help prevent plugging. Wider clearance between the two make blowing off debris easy for you, which can help improve your machine's reliability and performance.

Other Service Benefits

The fuel tank's drain cock 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.

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.

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. 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 and guard 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

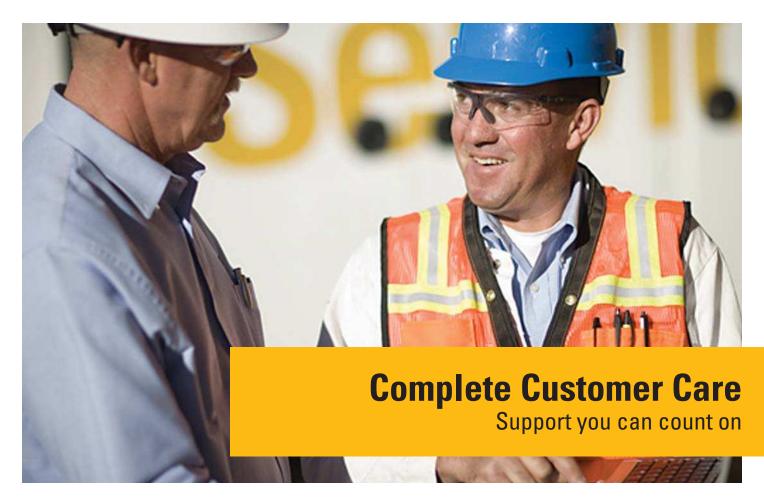
Ample glass gives you excellent visibility out front and to the side, and the standard rearview camera gives you a clear field of view behind the machine through the cab monitor. The available split-configuration windshield features an upper window with handles that make it easy to slide and store above you and a lower window that can be removed and stored on the inside wall of the cab. An available one-piece windshield comes with a safety hammer to break it in case of an emergency. 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. Optional High Intensity Discharge (HID) lights are available for enhanced night-time visibility.







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.

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 dayto-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.

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.



- The C13 ACERT engine meets U.S. EPA Tier 4 Final emission standards, resulting in fewer C0, emissions.
- The 349F has the flexibility of running on either ultra-low-sulfur diesel (ULSD) fuel with 15 ppm of sulfur or less or biodiesel (B20) fuel blended with ULSD.
- An overfill indicator rises when the tank is full to help the operator avoid spilling.
- Quick fill ports with connectors ensure fast, easy, and secure changing of hydraulic oil.
- The machine is built to be rebuilt with major structures and components remanufactured to reduce waste and replacement costs.
- The 349F is an efficient, productive machine that's designed to conserve our natural resources for generations ahead.







Curing Machanian

Engine		
Engine Model	Cat C13 A	CERT
Net Power – SAE J1349	311 kW	417 hp
Gross Power – SAE J1995	322 kW	432 hp
Bore	130 mm	5.12 in
Stroke	157 mm	6.18 in
Displacement	12.5 L	763 in ³

Weights		
Machine Weight*	48 650 kg	107,200 lb

^{*6.9} m (22'8") Reach boom, R3.35TB HD (11'0") HD stick, 9.0 mt (9.9 t) counterweight, Long FIX undercarriage, 3.1 m 3 (4.1 yd 3) bucket, 600 mm (24") DG shoes.

Hydraulic System		
Main System – Maximum Flow (Total)	770 L/min	203 gal/min
Swing System – Maximum Flow	385 L/min	102 gal/min
Maximum Pressure – Equipment	35 000 kPa	5,076 psi
Maximum Pressure – Equipment (Lift mode)	38 000 kPa	5,512 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	27 500 kPa	3,989 psi
Pilot System – Maximum Flow	27 L/min	7.1 gal/min
Pilot System – Maximum Pressure	4120 kPa	598 psi
Boom Cylinder – Bore	170 mm	6.69 in
Boom Cylinder – Stroke	1524 mm	60.00 in
Stick Cylinder – Bore	190 mm	7.48 in
Stick Cylinder – Stroke	1758 mm	69.21 in
TB Family Bucket Cylinder – Bore	160 mm	6.30 in
TB Family Bucket Cylinder – Stroke	1356 mm	53.39 in
UB Family Bucket Cylinder – Bore	170 mm	6.69 in
UB Family Bucket Cylinder – Stroke	1396 mm	54.96 in
Drive		

Drive		
Maximum Travel Speed	4.7 km/h	2.9 mph
Maximum Drawbar Pull	335 kN	75,300 lbf

8.7 rpm	
148.5 kN·m	109,500 lbf-ft
720 L	190 gal
50 L	13.2 gal
38 L	10 gal
10 L	2.6 gal
15 L	4.0 gal
570 L	150.6 gal
407 L	107.5 gal
	148.5 kN·m 720 L 50 L 38 L 10 L 15 L 570 L

Track	
Number of Shoes (each side)	
Long Fix Undercarriage	52
Number of Track Rollers (each side)	
Long Fix Undercarriage	9
Number of Carrier Rollers (each side)	
Long Fix Undercarriage	2

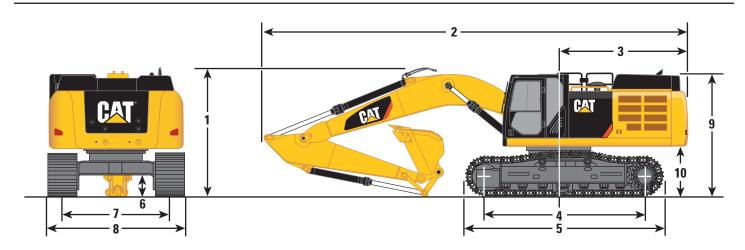
Sound Performance	
Operator Noise (Closed) – ISO 6396	69 dB(A)
Spectator Noise – ISO 6395	106 dB(A)

- 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.

Standards	
Brakes	ISO 10265
Cab/FOGS	SAE J1356
Cab/ROPS	ISO 12117-2

Dimensions – Std/Long FIX Undercarriage

All dimensions are approximate.

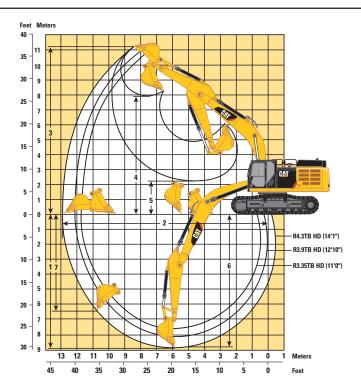


	Long Reach Boom 7.4 m (24'3")	Reach Boom 6.9 m (22'8")	
Stick	R4.3TB HD (14'1")	R3.9TB HD (12'10")	R3.35TB HD (11'0")
	mm (ft)	mm (ft)	mm (ft)
1 Shipping Height to Boom	3690 (12'1")	3670 (12'0")	3730 (12'3")
Shipping Height with Handrail	3370 (11'1")	3370 (11'1")	3370 (11'1")
2 Shipping Length	12 420 (40'9")	11 930 (39'2")	11 920 (39'1")
3 Tail Swing Radius	3760 (12'4")	3760 (12'4")	3760 (12'4")
4 Length to Center of Rollers	4360 (14'4")	4360 (14'4")	4360 (14'4")
5 Track Length	5370 (17'7")	5370 (17'7")	5370 (17'7")
6 Ground Clearance			
Including Shoe Lug Height	480 (1'7")	480 (1'7")	480 (1'7")
Not Including Shoe Lug Height	510 (1'8")	510 (1'8")	510 (1'8")
7 Track Gauge	2740 (9'0")	2740 (9'0")	2740 (9'0")
8 Transport Width			
600 mm (24") Shoes	3340 (10'11")	3340 (10'11")	3340 (10'11")
750 mm (30") Shoes	3490 (11'5")	3490 (11'5")	3490 (11'5")
900 mm (35") Shoes	3640 (11'11")	3640 (11'11")	3640 (11'11")
9 Cab Height	3220 (10'7")	3220 (10'7")	3220 (10'7")
Cab Height with Top Guard	3390 (11'1")	3390 (11'1")	3390 (11'1")
10 Counterweight Clearance*	1280 (4'2")	1280 (4'2")	1280 (4'2")

^{*}Without shoe lug height.

Working Ranges – Long FIX Undercarriage

All dimensions are approximate.



	Long Reach Boom 7.4 m (24'3")		Reach Boom 6.9 m (22'8")	
Stick	R4.3TB HD (14'1")	R3.9TB HD (12'10")	R3.35TB HD (11'0")	
	mm (ft)	mm (ft)	mm (ft)	
1 Maximum Digging Depth	8940 (29'4")	8210 (26'11")	7660 (25'2")	
2 Maximum Reach at Ground Level	12 960 (42'6")	12 150 (39'10")	11 730 (38'6")	
3 Maximum Cutting Height	11 170 (36'8")	10 730 (35'2")	10 820 (35'6")	
4 Maximum Loading Height	7870 (25'10")	7420 (24'4")	7430 (24'5")	
5 Minimum Loading Height	2220 (7'3")	2200 (7'3")	2750 (9'0")	
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	8810 (28'11")	8080 (26'6")	7520 (24'8")	
7 Maximum Vertical Wall Digging Depth	6560 (21'6")	5960 (19'7")	5830 (19'2")	

Operating Weights and Ground Pressures

	900 mm (3 Triple Grouser		750 mm (3 Triple Grouser		600 mm (24") Double Grouser Shoes		
	kg (lb)	kPa (psi)	kg (lb)	kPa (psi)	kg (lb)	kPa (psi)	
Long FIX Undercarriage							
Long Reach Boom – 7.4 m (24'3")							
R4.3TB HD (14'1")	50 700 (111,800)	59 (8.6)	49 900 (110,000)	69 (10.0)	49 300 (108,700)	86 (12.5)	
Reach Boom – 6.9 m (22'8")							
R3.9TB HD (12'10")	50 200 (110,700)	58 (8.4)	49 500 (109,100)	69 (10.0)	48 800 (107,600)	85 (12.3)	
R3.35TB HD (11'0")	50 000 (110,200)	58 (8.4)	49 300 (108,700)	68 (9.9)	48 600 (107,100)	84 (12.2)	

Major Component Weights

	kg	lb
Base Machine (with boom cylinder, without counterweight, front linkage and track)		
Long FIX Undercarriage	24 800	54,700
Counterweight		
9.0 mt (9.9 t)	9000	19,800
Boom (includes lines, pins and stick cylinder)		
Long Reach Boom – 7.4 m (24'3")	5190	11,400
Reach Boom – 6.9 m (22'8")	4630	10,200
Stick (includes lines, pins, bucket linkage and bucket cylinder)		
R4.3TB HD (14'1")	2990	6,600
R3.9TB HD (12'10")	2760	6,100
R3.35TB HD (11'0")	2540	5,600
Track Shoes (Long FIX/per two tracks)		
600 mm (24") double grouser	5240	11,600
750 mm (30") triple grouser	5890	13,000
900 mm (35") triple grouser	6640	14,600
Buckets		
$TB1880GD - 3.10 \text{ m}^3 (4.05 \text{ yd}^3)$	2440	5,400

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

	Long Reach Boom 7.4 m (24'3")	Reach Boom 6.9 m (22'8")			
Stick	R4.3TB HD (14'1")	R3.9TB HD (12'10")	R3.35TB HD (11'0")		
	kN (lbf)	kN (lbf)	kN (lbf)		
TB Linkage					
Heavy Duty					
Bucket Digging Force (SAE)	234 (52,610)	235 (52,830)	235 (52,830)		
Stick Digging Force (SAE)	167 (37,540)	179 (40,240)	195 (43,840)		
Severe Duty					
Bucket Digging Force (SAE)	228 (51,260)	229 (51,480)	229 (51,480)		
Stick Digging Force (SAE)	166 (37,320)	178 (40,020)	193 (43,390)		
Extreme Duty					
Bucket Digging Force (SAE)	228 (51,260)	229 (51,480)	229 (51,480)		
Stick Digging Force (SAE)	166 (37,320)	178 (40,020)	193 (43,390)		

349F L Work Tool Offering Guide*

Boom Type	Long Reach Boom HD	Reach Boom HD				
Stick Size	R4.3 HD (14'1")	R3.9 HD (12'10")	R3.35 HD (11'0")			
Hydraulic Hammer	H160E s H180E s ** ^	H160E s H180E s **	H160E s H180E s			
Multi-Processor	MP30 CC Jaw ** MP30 CR Jaw ** MP30 PP Jaw ** ^ MP30 PS Jaw ** MP30 S Jaw ** MP30 TS Jaw ** ^	MP30 CC Jaw MP30 CR Jaw MP30 PP Jaw ** MP30 PS Jaw MP30 S Jaw MP30 TS Jaw **	MP30 CC Jaw MP30 CR Jaw MP30 PP Jaw MP30 PS Jaw MP30 S Jaw MP30 TS Jaw **			
Pulverizer	P235 **	P235	P235			
Demolition and Sorting Grapple	G330 ^^	G330	G330			
Mobile Scrap and Demolition Shear	S340B *** # S365C ## S385C ##	S340B *** S365C ## S385C ##	S340B ** S365C ## S385C ##			
Orange Peel Grapple						
Rippers	These work	k tools are available for the	he 349F L.			
Center-Lock Pin Grabber Coupler	Consult	your Cat dealer for prope	er match.			
Dedicated Quick Coupler						

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

#Over the front only

##Boom mount

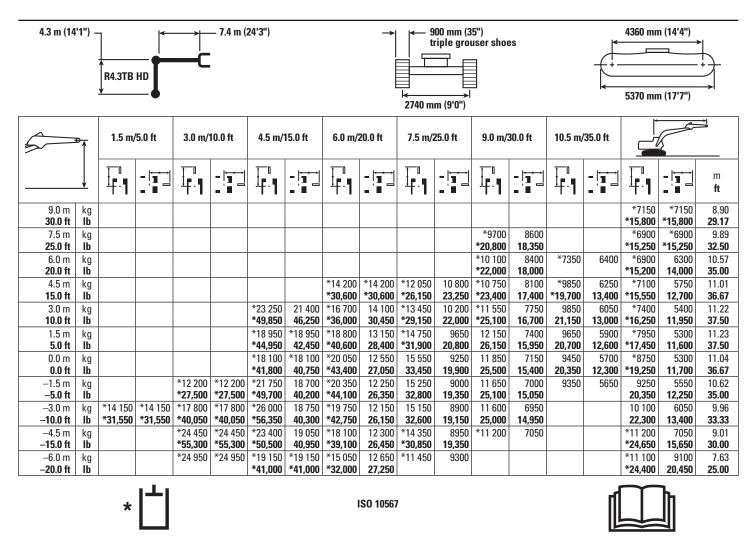
^{**}Pin-on or dedicated coupler

^{***}Pin-on only

[^]Over the front only with dedicated coupler

^{^^} Over the front only with CL coupler

Long Reach Boom (Long FIX Undercarriage) Lift Capacities – Counterweight: 9.0 mt (9.9 t) – Heavy Lift: On



^{*}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 (Long FIX Undercarriage) Lift Capacities – Counterweight: 9.0 mt (9.9 t) – Heavy Lift: On

3.9 m (12*	10") -	R3.9TB H	ID	-C	9 m (22'8")			→		0 mm (35") ple grousd	4360 mm (14'4") 5370 mm (17'7")					
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		9.0 m/30.0 ft				¥ በ
		F-1	- -	F-¶	- -	F-¶	-	F-¶	-	F-¶	- -		-	F-¶	- 1	m ft
9.0 m 30.0 ft	kg Ib									*18,700	*18,700			*7900 *17,500	*7900 *17,500	7.86 25.83
7.5 m	kg									"18,700	"18,700			*7550	*7550	8.97
25.0 ft	lb													*16,600	*16,600	29.17
6.0 m	kg									*11 650	11 350	*11 050	8450	*7450	7400	9.72
20.0 ft	lb									*25,350	24,450	*22,950	18,100	*16,400	16,350	31.67
4.5 m	kg							*14 800	*14 800	*12 800	10 950	*11 550	8200	*7600	6700	10.19
15.0 ft 3.0 m	lb kg					*23 750	22 000	*32,050 *17 300	*32,050 14 450	*27,750 *14 150	23,550 10 450	*25,250 *12 300	17,650 7950	*16,650 *7900	14,750 6300	33.33 10.42
10.0 ft	lb					* 51,000	47,450	*37,400	31,150	*30.650	22,500	* 26,750	17,100	*17,400	13,900	34.17
1.5 m	kg					*25 800	20 450	*19 450	13 600	*15 400	9950	12 400	7650	*8500	6150	10.43
5.0 ft	ΙĎ					*59,100	44,050	*42,050	29,350	*33,350	21,450	26,650	16,500	*18,700	13,550	34.17
0.0 m	kg					*23 800	19 700	*20 700	13 050	15 900	9600	12 150	7450	*9400	6250	10.22
0.0 ft	lb					*55,050	42,450	*44,850	28,150	34,250	20,700	26,150	16,050	*20,700	13,700	34.17
−1.5 m −5.0 ft	kg lb			*15 300 *34,450	*15 300 *34,450	*28 150 *61,050	19 500 41,950	*20 950 *45,350	12 800 27,550	15 700 33,750	9400 20.250	12 050 25,900	7350 15,800	10 750 23,650	6600 14,500	9.77 32.50
-3.0 m	kg			*22 300	*22 300	*26 350	19 600	*20 050	12 750	15 650	9350	12 050	7350	12 000	7300	9.05
-3.0 iii -10.0 ft	lb	*38.550	*38.550	*50.350	*50.350	* 57,100	42,100	* 43,400	27.450	33,650	20,150	12 030	7550	26,500	16.200	30.00
-4.5 m	kg			*30 900	*30 900	*23 050	19 900	*17 800	12 950	*13 750	9500			*12 450	8800	7.98
−15.0 ft	lb			*66,650	*66,650	*49,700	42,850	*38,300	27,850	*29,250	20,550			*27,450	19,600	26.67
−6.0 m	kg					*17 400	*17 400	*13 100	*13 100					*11 950	*11 950	6.38
–20.0 ft	lb					*36,750	*36,750	*27,200	*27,200					*26,150	*26,150	20.83
		*						ISO 10567	7							

^{*}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.

Reach Boom (Long FIX Undercarriage) Lift Capacities – Counterweight: 9.0 mt (9.9 t) – Heavy Lift: On

3.35 m (11	'0") -	R3.35TE	3	— C	9 m (22'8")			→		0 mm (35") ple grousd	4360 mm (14'4") 5370 mm (17'7")					
5	₽	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		9.0 m/30.0 ft				i ⊒
		₽ -¶	-	-F-¶	-	F-¶	-	F-¶	- - - - - - - - - -	F-¶	- -	F-¶	-	F-¶	- -	m ft
9.0 m 30.0 ft	kg lb													*9050 *20.050	*9050 *20.050	7.30 24.17
7.5 m	kg									*11 950	11 500			*8500	*8500	8.48
25.0 ft 6.0 m	lb									*26,250 *12 500	24,650 11 250	*10 750	8350	*18,750 *8350	* 18,750 7950	27.50 9.27
20.0 ft	kg lb									* 27,300	24,200	* 20,250	17,900	*18.350	17,600	30.83
4.5 m	kg					*20 750	*20 750	*16 000	15 150	*13 600	10 850	*12 250	8200	*8450	7150	9.77
15.0 ft	lb					*44,500	*44,500	*34,600	32,700	*29,550	23,400	*26,700	17,600	*18,550	15,800	32.50
3.0 m	kg					*25 750	21 500	*18 400	14 300	*14 850	10 400	12 700	7950	*8800	6750	10.01
10.0 ft 1.5 m	lb kg					*55,300 *18 600	46,450 *18 600	*39,700 *20 250	30,850 13 550	*32,250 *15 950	22,400 10 000	27,300 12 450	17,100 7700	*19,300 *9400	14,850 6600	33.33 10.02
5.0 ft	lb					*44.500	43.700	*43.800	29.250	*34.600	21.500	26.750	16,600	* 20.700	14.550	33.33
0.0 m	kg					*20 950	19 850	*21 150	13 150	16 000	9700	12 250	7550	*10 400	6700	9.80
0.0 ft	lb					*48,650	42,700	*45,800	28,300	34,400	20,850	26,350	16,250	*22,900	14,800	32.50
−1.5 m	kg			*14 900	*14 900	*27 700	19 800	*20 950	12 950	15 850	9550	12 200	7500	11 600	7150	9.33
-5.0 ft	lb			*33,650	*33,650	*60,150	42,600	*45,400	27,900	34,050	20,550	26,250	16,150	25,600	15,750	30.83
−3.0 m −10.0 ft	kg lb			*23 850 *53,850	*23 850 *53,850	*25 350 *55,000	20 000 42,950	*19 650 *42,450	13 000 28,000	*15 450 * 33,250	9550 20,650			*12 800 *28,150	8050 17,850	8.57 28.33
-4.5 m	kg			*27 400	*27 400	*21 400	20 400	*16 700	13 250	33,230	20,030			*12 600	9950	7.43
-15.0 ft	lb			*59,150	*59,150	*46,100	43,850	*35,800	28,600					*27,650	22,250	24.17
		*						ISO 10567	7							

^{*}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.

Bucket Specifications and Compatibility

		Wi	dth	Сара	acity	We	ight	Fill	Long Reach Boom	React	Reach Boom	
	Linkage	mm	in	m³	yd³	kg	lb	%	R4.3 HD (14'1")	R3.9 HD (12'10")	R3.35 HD (11'0")	
Without Quick Coupler	1		l									
General Duty (GDC)	ТВ	750	30	0.95	1.24	1311	2,889	100%	•		•	
	TB	900	36	1.23	1.60	1441	3,176	100%	•	•	•	
	TB	1050	42	1.51	1.98	1525	3,361	100%	•	•	•	
	TB	1200	48	1.80	2.36	1676	3,694	100%	•	•	•	
	TB	1350	54	2.10	2.74	1792	3,950	100%	•	•	•	
	TB	1500	60	2.39	3.13	1943	4,282	100%	Θ	•	•	
	TB	1700	68	2.78	3.64	2128	4,690	100%	0	Θ	Θ	
	TB	1850	74	3.08	4.04	2254	4,968	100%	0	0	Θ	
General Duty XL (GDXL)	ТВ	2043	80	3.82	5.00	2373	5,230	100%	\Diamond	\Diamond	0	
Heavy Duty (HD)	TB	900	36	1.08	1.41	1594	3,513	100%	•	•	•	
	TB	1050	42	1.34	1.75	1684	3,712	100%	•	•	•	
	TB	1200	48	1.60	2.09	1834	4,043	100%	•	•	•	
	ТВ	1350	54	1.87	2.44	1974	4,350	100%	•	•	•	
	ТВ	1500	60	2.14	2.80	2125	4,684	100%	•	•	•	
	TB	1650	66	2.41	3.15	2286	5,039	100%	Θ	Θ	•	
	ТВ	1800	71	2.69	3.52	2423	5,340	100%	0	0	Θ	
Severe Duty (SD)	TB	760	30	0.88	1.15	1446	3,187	90%	•	•	•	
	TB	900	36	1.08	1.41	1677	3,696	90%	•	•	•	
	ТВ	1050	42	1.34	1.75	1779	3,921	90%	•	•	•	
	TB	1200	48	1.60	2.09	1952	4,302	90%	•	•	•	
	TB	1400	55	1.87	2.44	2180	4,805	90%	•	•	•	
	ТВ	1550	61	2.14	2.80	2381	5,248	90%	•	•	•	
	ТВ	1700	67	2.41	3.16	2524	5,563	90%	Θ	Θ	•	
	ТВ	1850	74	2.69	3.52	2726	6,008	90%	0	Θ	Θ	
Extreme Duty (XD)	ТВ	1250	49	1.60	2.09	2224	4,902	90%	•	•	•	
	ТВ	1400	55	1.87	2.44	2366	5,215	90%	•	•	•	
	1	1	ı	Maximu	m load pin-	on (payload	+ bucket)	kg	5880	6210	6730	
								lb	12,960	13,687	14,833	

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.

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- 1800 kg/m³ (3,000 lb/yd³)
- → 1500 kg/m³ (2,500 lb/yd³)
- O 1200 kg/m³ (2,000 lb/yd³)
- 900 kg/m³ (1,500 lb/yd³)

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.

Bucket Specifications and Compatibility

		Wi	dth	Сара	acity	We	ight	Fill	Long Reach Boom	Reach	Reach Boom	
	Linkage	mm	in	m³	yd³	kg	lb	%	R4.3 HD (14'1")	R3.9 HD (12'10")	R3.35 HD (11'0")	
With Quick Coupler	1											
General Duty (GDC)	ТВ	750	30	0.95	1.24	1311	2,889	100%	•		•	
	TB	900	36	1.23	1.60	1441	3,176	100%	•	•	•	
	TB	1050	42	1.51	1.98	1525	3,361	100%	•	•	•	
	TB	1200	48	1.80	2.36	1676	3,694	100%	•	•	•	
	ТВ	1350	54	2.10	2.74	1792	3,950	100%	θ	Θ	•	
	TB	1500	60	2.39	3.13	1943	4,282	100%	0	Θ	Θ	
	TB	1700	68	2.78	3.64	2128	4,690	100%	\Diamond	0	0	
	ТВ	1850	74	3.08	4.04	2254	4,968	100%	\Diamond	\Diamond	0	
General Duty XL (GDXL)	ТВ	2043	80	3.82	5.00	2373	5,230	100%	Х	Х	\Diamond	
Heavy Duty (HD)	ТВ	900	36	1.08	1.41	1594	3,513	100%	•	•	•	
	ТВ	1050	42	1.34	1.75	1684	3,712	100%	•	•	•	
	ТВ	1200	48	1.60	2.09	1834	4,043	100%	•	•	•	
	ТВ	1350	54	1.87	2.44	1974	4,350	100%	Θ	•	•	
	ТВ	1500	60	2.14	2.80	2125	4,684	100%	0	Θ	•	
	ТВ	1650	66	2.41	3.15	2286	5,039	100%	0	0	Θ	
	ТВ	1800	71	2.69	3.52	2423	5,340	100%	\Diamond	\Diamond	0	
Severe Duty (SD)	ТВ	760	30	0.88	1.15	1446	3,187	90%	•	•	•	
	ТВ	900	36	1.08	1.41	1677	3,696	90%	•	•	•	
	ТВ	1050	42	1.34	1.75	1779	3,921	90%	•	•	•	
	ТВ	1200	48	1.60	2.09	1952	4,302	90%	•	•	•	
	ТВ	1400	55	1.87	2.44	2180	4,805	90%	Θ	•	•	
	ТВ	1550	61	2.14	2.80	2381	5,248	90%	0	Θ	•	
	ТВ	1700	67	2.41	3.16	2524	5,563	90%	0	0	θ	
	ТВ	1850	74	2.69	3.52	2726	6,008	90%	\Diamond	\Diamond	0	
Extreme Duty (XD)	ТВ	1250	49	1.60	2.09	2224	4,902	90%	•	•	•	
•	ТВ	1400	55	1.87	2.44	2366	5,215	90%	Θ	•	•	
	1	1	Ma	ıximum load	l with coup	ler (payload	+ bucket)	kg	5047	5377	5897	
					·			lb	11,124	11,851	12,997	

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.

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- 1800 kg/m³ (3,000 lb/yd³)
- → 1500 kg/m³ (2,500 lb/yd³)
 - O 1200 kg/m³ (2,000 lb/yd³)
 - 900 kg/m³ (1,500 lb/yd³)
- 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.

349F L Standard Equipment

Standard Equipment

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

ENGINE

- Cat C13 ACERT diesel engine
- · Biodiesel capable
- Meets U.S. EPA Tier 4 Final emission standards
- 2300 m (7,500 ft) altitude capability
- Electric priming pump
- Automatic engine speed control
- Standard, 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 switch
- Fuel differential indicator switch in fuel line
- 2×6 micron main filters
- 1×10 micron primary fuel line filter

HYDRAULIC SYSTEM

- · Regeneration circuit for boom and stick
- Reverse swing dampening valve
- · Automatic swing parking brake
- High-performance hydraulic return filter
- Capability of installing HP stackable valve and medium and QC valve
- Capability of installing additional auxiliary pump (up to 80 L/min [21 gal/min]) and circuit
- Capability of installing boom lowering control device and stick lowering check valve
- · Capability of installing Cat Bio hydraulic oil

CAB

- Pressurized operator station with positive filtration
- · Mirror package
- Sliding upper door window (left-hand cab door)
- · Glass-breaking safety hammer
- Removable lower windshield within cab storage bracket
- Coat hook
- · Beverage holder
- · Literature holder
- · Radio with MP3 auxiliary audio port
- Two stereo speakers
- Storage shelf suitable for lunch or toolbox
- Color LCD display with warning, 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
- · Capability of installing two additional pedals
- Two power outlets, 10 amp (total)
- Laminated glass front upper window and tempered other windows

UNDERCARRIAGE

- Grease Lubricated Track GLT4
- Towing eye on base frame
- · Heavy-duty track rollers
- Track motor guards

ELECTRICAL

- 80 amp alternator
- · Circuit breaker
- Capability to electrically connect a beacon

LIGHTS

- · Boom light
- · Cab lights with time delay
- 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

349F L Optional Equipment

Optional Equipment

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

ENGINE

- Electric refueling pump with auto shut off
- Starting kit, cold weather, –32° C (–26° F)
- Jump start receptacle
- · Quick drains, engine and hydraulic oil

HYDRAULIC SYSTEM

- Control pattern quick-changer, two way
- · Additional circuit
- · Boom and stick lines
- High-pressure line
- Medium-pressure line
- Cat quick coupler line high- and medium-pressure capable
- Quick coupler for high pressure
- · Tool control system

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
- Sunscreen
- Windshield wiper, lower with washer
- AM/FM radio
- Air pre-filter
- Travel alarm
- · Left foot switch
- Left pedal
- · Straight travel pedal

UNDERCARRIAGE

- Long FIX undercarriage:
- -600 mm (24") double grouser shoes
- -750 mm (28") triple grouser shoes
- -900 mm (35") triple grouser shoes
- -600 mm (24") double grouser shoes, PPR2
- -750 mm (28") triple grouser shoes, PPR2
- -900 mm (35") triple grouser shoes, PPR2
- · Guard, full length
- Guard, heavy-duty bottom
- · Center track guiding guard
- Segmented (3 piece) track guiding guard
- Fabricating idler
- Casting idler

COUNTERWEIGHT

- 8.6 mt (9.4 t) with counterweight removal device
- 9.0 mt (9.9 t)

FRONT LINKAGE

- · Bucket linkage
- -TB family without lifting eye
- · Long Reach boom
- -7.4 m (24'3") boom
- -R4.3TB (14'1") stick
- · Reach boom
 - -6.9 m (22'8") boom
- -R3.9TB (12'10") stick
- -R3.35TB (11'0") stick

LIGHTS

- Working lights, cab mounted with time delay
- HID lights, cab mounted with time delay
- Halogen boom lights
- HID boom lights

SECURITY

- FOGS, bolt-on
- · Guard, cab front, mesh
- · Guard, vandalism
- Cat MSS (anti-theft device)

TECHNOLOGY

- Cat Grade Control Depth and Slope
- Product Link

Notes

Notes

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

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AEHQ7157-01 (12-2015) Replaces AEHQ7157 (North America)



Courtesy of Machine.Market