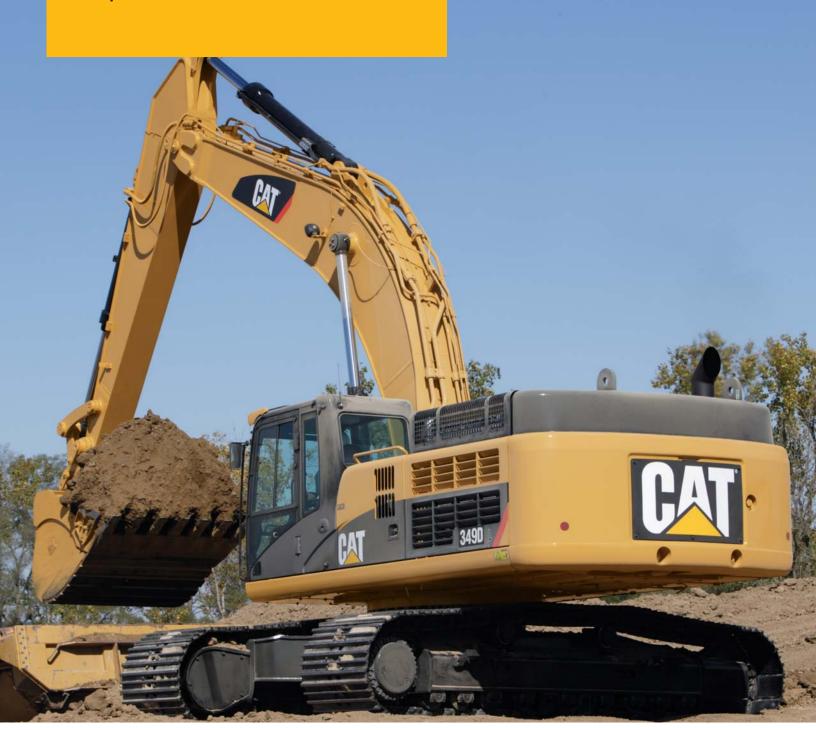
# **349D/349D L** Hydraulic Excavator





Available with Variable or Fixed Gauge Undercarriage For CIS, Sourced from Akashi, Japan

#### Engine

Engine Model	Cat <sup>®</sup> C13 Diesel Engine with ACERT™ Technology
	87
Net Power (ISO 9249) at 1,800 rpm	283 kW/380 hp
Weights	
Operating Weight	44 856 to 51 073 kg
Working Ranges	
Maximum Reach	12.1 m
Maximum Digging Depth	8.1 m

#### **Features**

#### Performance

High level of sustained production, improved performance, reliability and durability increase your productivity and lower your operating costs.

### C13 Engine with ACERT™ Technology

ACERT™ Technology works at the point of combustion to optimize engine performance and provide low exhaust emissions, with exceptional performance capabilities and proven reliability.

### **Operator Station**

Superior cab comfort and visibility provide an excellent working environment. The full-color monitor with graphic display features enhanced functionality to provide a simple, comprehensive machine interface.

#### **Maximum Versatility**

A variety of work tools, including buckets, are available for applications such as demolition, site clean-up, scrap processing, breaking up road surfaces and bedrock through Cat<sup>®</sup> Work Tools.

### **Service and Maintenance**

Fast, easy service has been designed in with long service intervals, advanced filtration, convenient filter access and user-friendly electronic diagnostics for increased productivity and reduced maintenance costs.



### Contents

C13 Engine with ACERT™ Technology	3
Hydraulics	
Operator Station	
Undercarriage	
Booms, Sticks and Linkage	7
Structures	
Applications and Systems Match	
Work Tools	10
Designed for Safety	11
Cleaner for the Environment	
Service and Maintenance	12
Complete Customer Support	
Specifications	
Standard Equipment	25
Optional Equipment	
Notes	

The 349D/349D L offers outstanding performance, excellent control, high stick and bucket forces, impressive lift capacity, simplified service and a comfortable operator station to increase your productivity and lower operating costs.

# **C13 Engine with ACERT<sup>™</sup> Technology**

Built for power, reliability, economy and low emissions.

### Performance

The 349D, equipped with the C13 with ACERT Technology provides 283 kW horsepower.

### Emissions

ACERT Technology is a differentiated technology that reduces emissions at the point of combustion. The technology capitalizes on Caterpillar's proven leadership in three core engine systems: fuel, air and electronics.

# **Fuel System**

The Cat<sup>®</sup> C13 features electronic controls that govern the mechanically actuated unit fuel injection (MEUI) system. MEUI provides the high-pressure required to deliver better fuel economy through finer fuel atomization and more complete combustion.

# ADEM<sup>™</sup> A4 Engine Controller

The ADEM<sup>™</sup> A4 electronic control module manages fuel delivery to get the best performance per liter of fuel used. The engine management system provides flexible fuel mapping, allowing the engine to respond quickly to varying application needs. It tracks engine and machine conditions while keeping the engine operating at peak efficiency.

# Turbocharger

The Cat<sup>®</sup> C13 uses a wastegate turbocharger for improved performance.

- The wastegate valve controls excessive engine boost pressure by allowing exhaust to bypass the exhaust-side turbine.
- The wastegate also reduces turbine wear in high RPM; low load conditions and optimizes air and fuel delivery for peak engine performance.
- The turbocharger increases the density of the air, enabling the engine to produce more power with few effects from altitude.

# Low Sound and Vibration Levels

The engine mounts are rubber-isolating mounts matched with the engine package to provide optimum sound and vibration reduction. Further noise reduction has been achieved through design changes to the isolated top cover, oil pan, multiple injection strategy, insulated timing cover, sculpted crankcase.

# Air Cleaner

The radial seal air filter features a double-layered filter core for more efficient filtration and is located in a compartment behind the cab. A warning is displayed on the monitor when dust accumulates above a preset level.





# **Hydraulics**

Cat<sup>®</sup> hydraulics deliver power and precise control to keep material moving.

### **Pilot System**

The pilot pump is independent from the main pumps and controls the front linkage, swing and travel operations. The pilot control valve operation is proportional to control lever movement, delivering outstanding controllability.

### **Component Layout**

The component location and hydraulic system design provide the highest level of system efficiency. The main pumps, control valve and hydraulic tank are located as close to each other as possible. This design makes it possible to use shorter tubes and lines between components, reducing friction losses and pressure drops.

### Hydraulic Cross-Sensing System

The hydraulic cross sensing system utilizes each of two hydraulic pumps to 100 percent of engine power under all operating conditions. This improves productivity with faster implement speeds and quicker, stronger pivot turns.

### **Boom and Stick Regeneration Circuits**

A hydraulically operated stick regeneration circuit saves energy and improves multi-function performance during the stick-in operation. New on the 349D, the boom regeneration circuit is operated electrically, and this system is managed by the machine ECM. The system improves cycle times and fuel efficiency, increasing your productivity and reducing operating costs.

### **Boom and Swing Priority**

The hydraulic system on the 349D provides automatic priority function for boom-up and swing operations eliminating the need for work mode buttons. When the boom or swing lever is activated, the system automatically assigns priority based on operator demand.

### **Hydraulic Cylinder Snubbers**

Snubbers are located at the rod-end of the boom cylinders and both ends of the stick cylinders to cushion shocks while reducing sound levels and extending component and structure life.

# **Operator Station**

# Designed for simple, easy operation, the 349D allows the operator to focus on production.

The spacious, quiet and comfortable operator station assures high productivity during a long work day.

- Switches, dials and controls are conveniently located within easy reach of the operator.
- The monitor is easy to see and helps maximize visibility.
- The standard air suspension seats adjust to suit the operator's size and weight.
- The pressurized cab provides positive filtered ventilation and fresh or recirculated air can be selected.
- Visibility is maximized with the elimination of window frames for all glass except the rear window. A large, polycarbonate skylight offers excellent upward visibility.

# **Hydraulic Activation Control Lever**

For added safety, the hydraulic activation control lever must be in the operate position to activate the machine control functions.

### Controls

The 349D uses pilot operated control levers positioned so the operator can operate with arms on the armrests. The vertical stroke is longer than the horizontal to reduce operator fatigue.

Joysticks with integrated buttons and sliding switches control all implement and swing functions. The sliding switches modulate control for hydro-mechanical tools and help increase operator comfort and reduce fatigue.

### **Prestart Check and Monitor Display**

Prior to starting the machine, the system checks for low engine oil, hydraulic oil and engine coolant fluid levels and will warn the operator through a color Liquid Crystal Display (LCD) monitor. The LCD monitor displays vital operating and performance information in 27 different languages for operator convenience.

### **Cab Exterior**

The exterior design uses thick steel tubing along the bottom perimeter of the cab, improving the resistance of fatigue and vibration. This design allows the FOGS to be bolted directly to the cab, at the factory or as an attachment later, enabling the machine to meet specifications and job site requirements.

### **Cab Mounts**

The cab shell is attached to the frame with viscous rubber cab mounts, which dampen vibrations and sound levels while enhancing operator comfort.







# **Undercarriage**

Durable undercarriage absorbs stresses and provides excellent stability.

### **Undercarriage Options**

The 349D comes standard with a grease lubricated track called GLT4. The track links are assembled and sealed with grease to decrease internal bushing wear, reduce travel noise, and lower operating costs by extending service life. Track with Positive Pin Retention 2 (PPR2) and heavy duty idlers are available as attachments on the 349D.

The PPR2 prevents loosening of the track pin from the track link and the heavy duty idler is designed for extended life. Both options are ideal for extreme applications such as working on blasted rock or those that require a large amount of travel.

### **Travel Motors**

Two-speed axial piston hydraulic motors provide the 349D drive power and speed selection. When the high-speed position is selected, the machine automatically changes between computer-controlled high and low speeds depending on drawbar-pull requirements.

### **Straight-line Travel Circuit**

The straight-line travel circuit is incorporated into the hydraulic system, which maintains low-speed, straight-line travel, even when operating the front linkage.

### **Final Drive**

The final drives are a three-stage planetary reduction. This design results in a complete drive/brake unit that is compact and delivers excellent performance and reliability.

### **Track Guards**

The idler guard and bolt-on center guard are standard equipment. They help maintain track alignment while traveling or working on slopes. For applications that require additional track protection or alignment, optional full length guards are available.

# **Booms, Sticks and Linkage**

Designed for maximum flexibility to keep productivity and efficiency high on all jobs.

# **Front Linkage Attachments**

Three lengths of booms and five types of sticks are available, offering a range of configurations suitable for a wide variety of application conditions.

# **Boom Construction**

The 349D booms have large cross-sections and internal baffle plates to provide long life durability. Forged steel is used in critical high-load areas such as the boom-foot and boom cylinder connection.

# 6.9 m Reach Boom

The Reach boom is designed to balance reach, digging force bucket capacity, offering a wide range of applications as digging, loading and trenching.

# 6.55 m Mass Excavation Boom

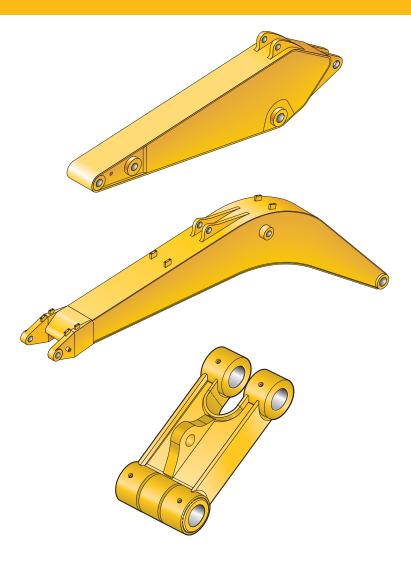
The Mass boom is designed to provide maximum digging forces, bucket capacity and truck loading productivity. The mass boom comes with two stick options for further job site versatility.

# **Stick Construction**

The 349D sticks are made of high-tensile strength steel, use a large box section design, interior baffle plates and an additional bottom guard to provide years of service under the most demanding applications.

# **Power Link**

The 349D power link improves durability, increases machinelifting capability in key lifting positions, and is easier to use compared to the previous lift bar designs.



# **Structures**

The 349D structural components are the backbone of the machine's durability.



### Carbody

The carbody utilizes a columnless design that allows the swing bearing to be directly mounted on the top plate for excellent rigidity and strength.

The advanced carbody design stands up to the toughest applications.

- Modified H-shaped, box-section carbody provides excellent resistance to torsional bending.
- Robot-welded track roller frames with fabricated U-section design.
- Robot welding ensures consistent, high-quality welds throughout the manufacturing process.

### **Upper Frame**

The rugged main frame is designed for maximum durability. Robot welding is used for consistent, high-quality welds. The main channels are box sections connected by a large diameter tube in the boom foot area to improve rigidity and strength. The outer frame utilizes curved side rails for rigidity against bending and torsional loads.

### **Track Roller Frame**

Uses a press-formed, pentagonal section for the track frame that is robot-welded for weld consistency and quality. The track frame has been designed so that the top of the track frame has a steep angle to help prevent accumulation of mud and debris.



# **Applications and Systems Match**

The 349D is designed for matched performance with Cat Articulated Trucks.

### Wide Range of Front End Attachments

The ability to select different front-end attachments provides adaptability for a wide range of job conditions in a variety of applications such as construction, mining, or quarry. Depending on the front-end configuration, and material density, the 349D can be matched with the 730 to 740 articulated trucks. Additionally, systems match offers versatility in job set-up whether top loading or same level truck loading.

### **Optimum Pass Match Design**

Five to six passes under two minutes, matched to the Cat 735, gives you maximum system production at the lowest cost per ton of material moved.

### **Maximum Availability**

New standards for durability and reliability help ensure that your loading system has more uptime, operates efficiently and provides lasting value and high resale.

# Work Tools

The 349D has an extensive selection of buckets and work tools to optimize machine performance.





# Work Tools

Choose from a variety of work tools such as hammers, shears, pulverizers, compactors, multiprocessors, sorting grapples and couplers. Ask your Cat dealer for information on attachments or special configurations.

### **Buckets**

Several type of buckets can be offered to best suit your application.

# Excavation (X)

Digs and loads soft to medium materials such as clay and earth. Features weld on tip adapters, wear resistant steel alloy cutting edge and wear plates, and high grade steel sidebars.

# Mass Excavation (MX)

For digging in low-impact, moderately abrasive materials such as dirt, loam, gravel and clay. Large tip radius optimizes bucket capacity for easy-to-penetrate soils. Lighter structures decrease load time and increase the weight that can be lifted. Pre-drilled sidebars for optional sidecutters. Largest bucket capacities.

# **Extreme Service Excavation (EX)**

Digs and loads compact/abrasive materials like earth/rock, sand/clay, sand/gravel, coal, chalk and low abrasion ores. Features bigger ground engaging tools, plus all wear resistant steel alloy cutting edge, wear plates and sidebars.

# **Cat Ground Engaging Tools (GET)**

Cat<sup>®</sup> K Series<sup>TM</sup> GET is featured on the 349D buckets. The K Series<sup>TM</sup> system uses a vertical retainer, which is easier to remove and install than the old Cat J Series pin. There are a variety of teeth, sidecutters, and sidebar protectors to match operating conditions.

- The teeth are designed to be extremely aggressive and offer excellent penetration.
- The sidecutter design is aggressive in trenching applications, improving efficiency and bucket payload.

# Service Life

Cat® buckets increase service life and reduce repair costs.

- Dual radius design for increased life and reduced wear.
- Robot welding of hinge assembly for increased weld penetration and longer life.
- Incorporates the aggressive and easier to install K Series<sup>™</sup> GET system.
- High strength and heat-treated steel that exceeds T-1 in high wear areas.

# **Designed for Safety**

Cat machines are designed to keep operators and job sites safe.

# Visibility

An optional rear vision camera and work area vision system can be installed improving safety for the operator, as well as other machines and personnel working around the excavator.

# Safe Access

Handrails and anti-slip surfaces are designed for safe access on and off Cat machines. Daily maintenance service checks are easily accessible at ground level. An emergency escape is accessed through the rear window.

# **Safety Alarm**

If an abnormality occurs, the warning information window is displayed on the monitor. If the abnormality is urgent, the master light blinks and an alarm activates, alerting the operator to take immediate action.

# **Cleaner for the Environment**

# Caterpillar has long invested in technology, products and services that reduce the impact of earthmoving equipment on the environment.

# **Emissions**

With ACERT Technology to lower emissions, the C13 engine improves maintenance costs through less engine wear and less oil consumption. This engine can use up to B30 biodiesel to further reduce emissions on the job site.

# **Fuel Management**

A fuel consumption display allows the operator to monitor their fuel consumption. Three Power Management Modes allow the operator to select a mode for optimal performance with lower fuel consumption.

# **Fluids**

Extended service and maintenance intervals increase machine availability and reduce the frequency of fluid handling. Cat HEES<sup>TM</sup> biodegradable hydraulic oil is fully decomposed by soil or water microorganisms for a cleaner job site.

# **Cat Reman Parts**

We recycle used products into "like-new" Cat Reman products that offer the same performance and quality as new parts at a fraction-of-new price. Environmentally reconditioned reman parts are available for this machine.



# **Service and Maintenance**

Simplified service and maintenance save you time and money.





### **Extended Service Intervals**

Extended service and maintenance intervals increase machine availability. The maintenance intervals for engine oil and engine oil filter have been extended to 500 hours.

### **Capsule Filter**

The hydraulic return filters are located in the hydraulic tank. The filter elements are removable without spilling hydraulic oil.

### Pilot Hydraulic System Filter

Pilot hydraulic system filter keeps contaminants from the pilot system and is located in the pump compartment.

### **Radial Seal Main Air Cleaner**

Radial seal main air cleaner with precleaner has a doublelayered filter element for more efficient filtration. No tools are required to change the element.

### **Fuel-Water Separator**

The water separator has a primary fuel filter element and is located in the air cleaner compartment for easy access from the ground.

### **Service Points**

Service points are centrally located with easy access to facilitate routine maintenance.

### **Oil Sample and Pressure Ports**

Oil sample and pressure ports provide easy checking of machine condition and are standard on every machine.

### **Greasing Points**

A concentrated remote greasing block on the boom delivers grease to hard-to-reach locations.



# **Complete Customer Support**

Cat dealer services help you operate longer with lower costs.

### The Right Machine for Your Business

Your Cat dealer will guide you through your machine selection process, helping you choose the right machine for your specific industry and applications.

### The Most Attractive Finance Package from Cat Financial

Cat Financial specialises in equipment financing and has a reputation as a trusted partner. Whatever your business, your Cat dealer and Cat Financial offer a range of flexible, highly competitive financial solutions for new Cat machines, making it faster and easier to obtain the Cat equipment you need.

### The Most Cost-Effective Cat Customer Support Agreement

Cat Customer Support Agreements are the most effective way of running your machine at peak performance and eliminating the risk, cost, disruption and loss of revenue caused by unscheduled downtime.

### The Most Beneficial Cat Warranty

The warranty coverage from your Cat dealer is backed by the worldwide resources of Caterpillar and is specifically designed to provide the highest levels of repair cost protection for Cat machines. This comprehensive coverage will enhance and sustain your entire ownership experience and provide complete peace of mind.

Cat experts are always available to help you make the decisions that are best for your business.

Engine	
Engine Model	Cat C13 with ACERT
	Technology
Net Power at 1,800 rpm	
ISO 9249	283 kW/380 hp
EEC 80/1269	283 kW/380 hp
Bore	130 mm
Stroke	157 mm
Displacement	12.5 L
Cylinders	6

• Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator.

• No engine derating required below 2300 m altitude.

### **Brakes**

Meets the standard ISO 10265:1998.

# Track

Number of Shoes (each side)	
Long Undercarriage	52
(Fixed and Variable Gauge)	
Standard Undercarriage	49
(Fixed Gauge)	
Number of Track Rollers (each	n side)
Long Undercarriage (Fixed	9
and Variable Gauge)	
Standard Undercarriage	8
(Fixed Gauge)	
Number of Carrier Rollers (ea	ch side)
Long Undercarriage	3
(Fixed and Variable Gauge)	
Standard Undercarriage	2
(Fixed Gauge)	

# Cab/FOGS

Cab/FOGS meets ISO 10262.

### Drive

Maximum Travel Speed	4.7 km/h
Maximum Drawbar Pull	338 kN
Maximum Gradeability (based on engine operation)	70%

8.7 rpm 149 kN·m

# Swing Mechanism

Swing Speed	
Swing Torque	

## **Hydraulic System**

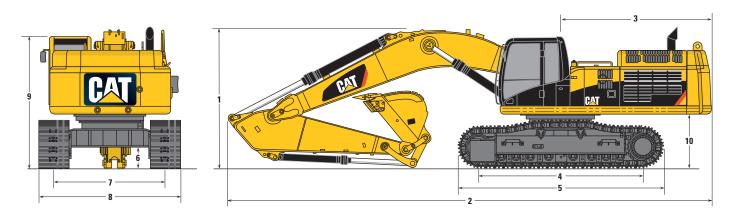
734 L/min
343 bar
343 bar
314 bar
43 L/min
41 bar
160 mm
1575 mm
190 mm
1778 mm
1758 mm
160 mm
1356 mm
170 mm

# **Service Refill Capacities**

Fuel Tank	705 L
Cooling System	35.5 L
Engine Oil	42 L
Swing Drive (each)	10 L
Final Drive (each)	15 L
Hydraulic system (including tank)	570 L
Hydraulic tank	262 L

# Dimensions

All dimensions are approximate.

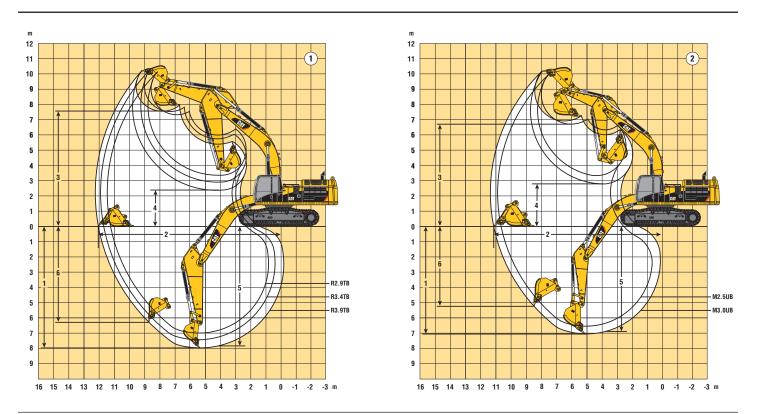


	Heavy	Heavy Duty (HD) Reach Boom			Mass Excavation (ME) Boom	
Boom		6900 mm		6550	) mm	
Stick	<b>2900 mm</b>	3350 mm	3900 mm	2500 mm	3000 mm	
1 Shipping Height						
Fixed Gauge Undercarriage	3670 mm	3550 mm	3700 mm	3970 mm	3990 mm	
Variable Gauge Undercarriage	3730 mm	3520 mm	3540 mm	3990 mm	4010 mm	
2 Shipping Length						
Fixed Gauge Undercarriage	11 880 mm	11 840 mm	11 890 mm	11 640 mm	11 550 mm	
Variable Gauge Undercarriage	11 850 mm	11 520 mm	11 780 mm	11 600 mm	11 520 mm	

Undercarriage	Fixed Gauge	Variable Gauge
<b>3</b> Tail Swing Radius	3770 mm	3770 mm
4 Length to Center of Rollers		
349D	4030 mm	N/A
349D L	4340 mm	4340 mm
5 Track Length		
349D	5040 mm	N/A
349D L	5370 mm	5330 mm
<b>6</b> Ground Clearance	510 mm	760 mm
7 Track Gauge	2740 mm	2390/2890 mm
8 Track Width		
600 mm Shoes	3340 mm	2990/3490 mm
750 mm Shoes	3490 mm	3140/3640 mm
900 mm Shoes	3640 mm	3290/3790 mm
9 Cab Height	3210 mm	3360 mm
<b>10</b> Counterweight Clearance	1320 mm	1470 mm

# **349D/349D L Hydraulic Excavator Specifications**

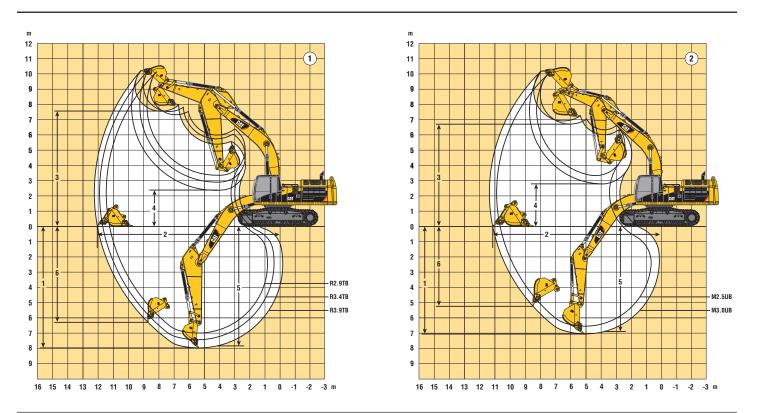
# **Working Ranges**



**Fixed Gauge Undercarriage** 

	1 Heavy Duty (HD) Reach Boom 6900 mm			2 Mass Excavation (ME) Boom 6550 mm	
	R2.9TB	R3.4TB	R3.9TB	M2.5UB	M3.0UB
Stick Length	<b>2900 mm</b>	3350 mm	3900 mm	2500 mm	3000 mm
1 Maximum Digging Depth	7150 mm	7600 mm	8150 mm	6720 mm	7220 mm
2 Maximum Reach at Ground Level	11 240 mm	11 660 mm	12 080 mm	10 710 mm	11 180 mm
<b>3</b> Maximum Loading Height	7290 mm	7470 mm	7450 mm	6620 mm	6810 mm
4 Minimum Loading Height	3250 mm	2800 mm	2250 mm	3160 mm	2660 mm
<b>5</b> Maximum Digging Depth 2440 mm Level Bottom	6990 mm	7460 mm	8020 mm	6550 mm	7070 mm
6 Maximum Vertical Wall Digging Depth	5870 mm	6300 mm	6460 mm	4920 mm	5380 mm
Bucket Capacity	2.1 m <sup>3</sup>	1.9 m <sup>3</sup>	1.6 m <sup>3</sup>	2.4 m <sup>3</sup>	2.2 m <sup>3</sup>
Bucket Digging Force (ISO)	266 kN	266 kN	265 kN	297 kN	297 kN
Stick Digging Force (ISO)	222 kN	202 kN	185 kN	240 kN	211 kN

# **Working Ranges**



Variable Gauge Undercarriage

	1 Heavy Duty (HD) Reach Boom 6900 mm			2 Mass Excavation (ME) Boom 6550 mm	
	R2.9TB	R3.4TB	R3.9TB	M2.5UB	M3.0UB
Stick Length	<b>2900</b> mm	3350 mm	3900 mm	2500 mm	3000 mm
1 Maximum Digging Depth	7050 mm	7500 mm	8010 mm	6570 mm	7070 mm
2 Maximum Reach at Ground Level	11 260 mm	11 680 mm	12 050 mm	10 680 mm	11 150 mm
3 Maximum Loading Height	7400 mm	7570 mm	7600 mm	6770 mm	6960 mm
4 Minimum Loading Height	3360 mm	2910 mm	2400 mm	3300 mm	2800 mm
<b>5</b> Maximum Digging Depth 2440 mm Level Bottom	6890 mm	7350 mm	7870 mm	6400 mm	6920 mm
6 Maximum Vertical Wall Digging Depth	5880 mm	6310 mm	6320 mm	4780 mm	5290 mm
Bucket Capacity	2.1 m <sup>3</sup>	2.1 m <sup>3</sup>	1.9 m <sup>3</sup>	2.6 m <sup>3</sup>	2.4 m <sup>3</sup>
Bucket Digging Force (ISO)	263 kN	263 kN	265 kN	297 kN	295 kN
Stick Digging Force (ISO)	221 kN	201 kN	185 kN	240 kN	211 kN

# 349D/349D L Hydraulic Excavator Specifications

# **Bucket Specifications**

This machine can be equipped with a large variety of boom-stick-bucket combinations in order to meet the needs of various applications. A stick is designed to match only one specific family of buckets.

All bucket matching is calculated with 1800 kg/m<sup>3</sup>.

		Width	Weight*	Capacity (ISO)		Reach Boom 6900 mm	ME Boom 6550 mm		
Standard Undercarriage, Fixed Gauge	Linkage	mm	kg	m <sup>3</sup>	R2.9TB	R3.4TB	R3.9TB	M2.5UB	M3.0UB
	TB	1525	1724	1.9				×	×
Excavation (X)	TB	1630	1706	2.0			×	×	×
	TB	1760	1774	2.2		×	×	×	×
	TB	1604	2120	1.9				×	×
Extreme Excavation (EX)	TB	1664	2164	2.0			×	×	×
	TB	1724	2220	2.1		×	×	×	×
Mass Excavation (ME)	UB	1829	2226	2.6	×	×	×	×	×

		Width	Weight*	Capacity (ISO)		Reach Boom 6900 mm		ME Boom 6550 mm		
Long Undercarriage, Fixed Gauge	Linkage	mm	kg	m <sup>3</sup>	R2.9TB	R3.4TB	R3.9TB	M2.5UB	M3.0UB	
	TB	1525	1724	1.9				×	×	
Excavation (X)	ТВ	1630	1706	2.0			×	×	×	
	ТВ	1760	1774	2.2		×	×	×	×	
	TB	1604	2120	1.9				×	×	
Extreme Excavation (EX)	TB	1664	2164	2.0			×	×	×	
	ТВ	1724	2220	2.1		×	×	×	×	
Mass Excavation (ME)	UB	1829	2226	2.6	×	×	×	×	×	

		Width	Weight*	Capacity (ISO)		Reach Boom 6900 mm	ME Boom 6550 mm		
Long Undercarriage, Variable Gauge	Linkage	mm	kg	m <sup>3</sup>	R2.9TB	R3.4TB	R3.9TB	M2.5UB	M3.0UB
	TB	1525	1724	1.9				×	×
Excavation (X)	TB	1630	1706	2.0				×	×
	TB	1760	1774	2.2				×	×
	TB	1604	2120	1.9				×	×
Extreme Excavation (EX)	TB	1664	2164	2.0				×	×
	TB	1724	2220	2.1				×	×
Mass Excavation (ME)	UB	1829	2226	2.6	×	×	×		×

\* Bucket weight including K Series™ Penetration Plus tips

Approved

Not compatible

×

# **Machine and Major Component Weights**

Actual weights and ground pressures will depend on final machine configuration.

			Heav	y Duty (Hl) 6900	D) Reach I ) mm	Boom		Mass Excavation (ME) Boom 6550 mm					
Stick Type		R2.	9TB	R3.	4TB	R3.	9TB	M2.5UB		M3.	OUB		
Stick Length	mm	29	000	3350		39	000	2500		30	000		
Gauge		FG	VG	FG	VG	FG	VG	FG	VG	FG	VG		
Bucket Weight	kg	1922	1922	1812	1812	1668	1829	2326	2398	2238	2326		
Bucket Capacity	m <sup>3</sup>	2.2	2.2	2.0	2.0	1.6	1.9	2.4	2.6	2.2	2.4		
Bucket Width/Type	mm	1758	1758	1628	1628	1325	1525	1729	1829	1600	1729		
Operating Weight*													
349D with 600 mm Shoes	kg	44 924	N/A	44 856	N/A	45 837	N/A	45 378	N/A	46 067	N/A		
349D with 750 mm Shoes	kg	45 663	N/A	45 595	N/A	45 576	N/A	46 117	N/A	46 806	N/A		
349D L with 600 mm Shoes	kg	45 120	48 298	45 052	49 340	45 033	48 949	45 667	49 699	45 760	50 289		
349D L with 750 mm Shoes	kg	45 871	50 082	45 803	50 124	45 784	49 733	46 418	50 483	46 511	51 073		
349D L with 900 mm Shoes	kg	46 623	N/A	46 555	N/A	46 536	N/A	47 170	N/A	47 263	N/A		
Counterweight	kg	8100	9000	8100	9000	8100	9000	8100	9000	8100	9000		
Stick Weight (with bucket cylinder)	kg	1952	1952	1994	1994	2119	2119	2189	2189	2370	2370		
Boom Weight (with stick cylinder)	kg			45	594				46	502			
Boom Cylinders (pair)	kg			8	04				8	04			
Upper structure**	kg			20	275				20	275			
Undercarriage													
349D with 600 mm Shoes	kg			14	843			14 843					
349D L with 600 mm Shoes	kg	15 039	17 794	15 039	17 794	15 039	17 794	15 039	17 794	15 039	17 794		

FG Fixed Gauge, VG Variable Gauge, N/A Not Available

\*With counterweight, operator and full fuel

\*\*Without counterweight

# **349D/349D L Hydraulic Excavator Specifications**

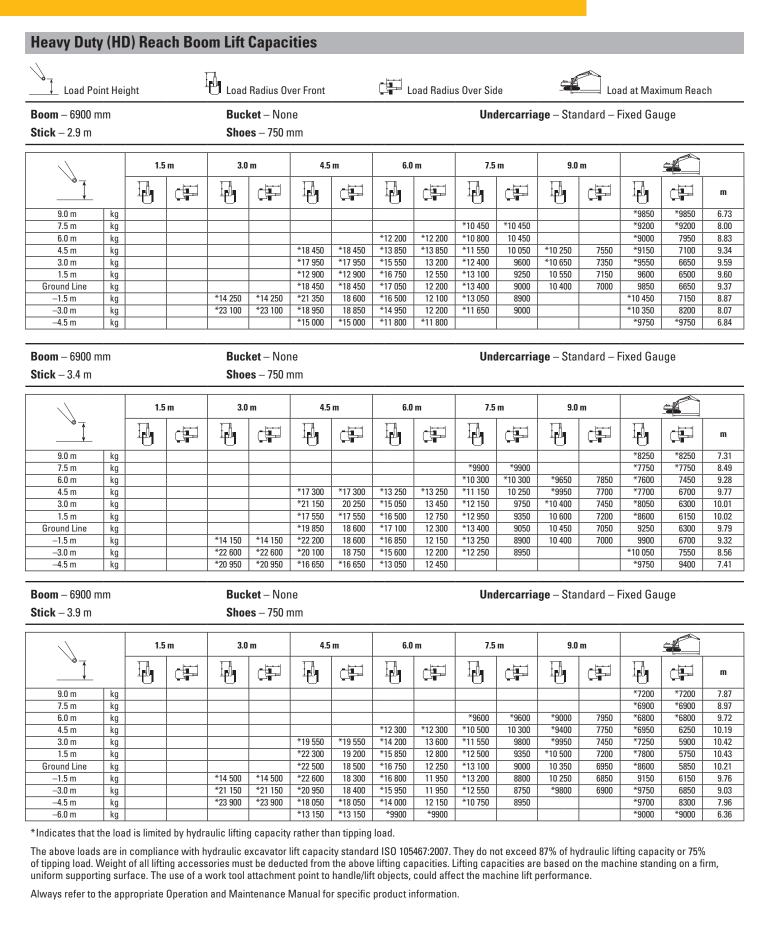
Load Pc	oint Hei	ght	]	Load	Radius Ov	ver Front		Load Radius Over Side										
oom – 6900 r tick – 2.9 m	nm				<b>cet</b> — Nor e <b>s</b> — 750 r			<b>Undercarriage</b> – Long – Variable Gauge										
		1.5	m	3.0	m	4.5 m		6.0 m		7.5 m		9.0 m						
				I.		I.		Ð	C -	Ĩ.		I.		I.	CF-	m		
9.0 m	kg													*9750	*9750	6.88		
7.5 m	kg									*10 450	*10 450			*9150	*9150	8.09		
6.0 m	kg							*12 350	*12 350	*10 850	*10 850			*9000	8700	8.89		
4.5 m 3.0 m	kg					*18 850 *16 450	*18 850 *16 450	*14 000 *15 700	*14 000 14 650	*11 650 *12 500	11 100 10 650	*10 300 *10 700	8400 8200	*9150 *9600	7850 7400	9.38 9.61		
1.5 m	kg kg					*13 200	*13 200	*16 800	14 000	*13 150	10 850	*10 950	8200	*10 250	7400	9.59		
Ground Line	kg					*19 200	*19 200	*17 050	13 650	*13 400	10 000	*10 900	7850	*10 400	7500	9.33		
–1.5 m	kg			*15 350	*15 350	*21 150	21 000	*16 400	13 600	*12 950	10 000			*10 450	8100	8.81		
–3.0 m	kg			*22 750	*22 750	*18 650	*18 650	*14 750	13 750	*11 450	10 100			*10 350	9350	7.97		
-4.5 m	kg					*14 500	*14 500	*11 350	*11 350					*9600	*9600	6.69		
oom – 6900 r tick – 3.4 m	nm				<b>cet</b> — Nor e <b>s</b> — 750 r					Und	lercarria	<b>ge</b> – Lon	g – Varia	ble Gaug	le			
		1.5	m	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m						
						Ð		Ð	¢ <b>F</b>							m		
9.0 m	kg													*8200	*8200	7.45		
7.5 m	kg									*9900	*9900	*0050	0700	*7750	*7750	8.58		
6.0 m 4.5 m	kg kg					*17 650	*17 650	*13 400	*13 400	*10 400 *11 250	*10 400 *11 250	*9650 *10 000	8700 8500	*7600 *7750	*7600 7400	9.34		
4.5 m	kg				<u> </u>	*21 450	*21 450	*15 250	14 900	*12 200	10 800	*10 450	8300	*8100	7400	10.02		
1.5 m	kg					*17 450	*17 450	*16 600	14 200	*13 000	10 400	*10 850	8050	*8700	6900	10.00		
Ground Line	kg					*20 350	*20 350	*17 100	13 800	*13 400	10 150	*10 950	7900	*9650	7050	9.76		
-1.5 m	kg			*14 950	*14 950	*22 050	21 000	*16 750	13 650	*13 200	10 000	*10 550	7850	*10 050	7550	9.26		
-3.0 m -4.5 m	kg kg			*23 550 *20 300	*23 550 *20 300	*19 850 *16 200	*19 850 *16 200	*15 450 *12 700	13 700 *12 700	*12 100	10 050			*10 050 *9650	8600 *9650	8.46		
oom – 6900 r tick – 3.9 m	nm	1.5			<b>xet</b> — Nor es — 750 r m			6.0		Unc 7.5		9.0		ble Gaug				
	-		¢,			H		P	C -	H		H				m		
9.0 m	kg													*7150	*7150	7.99		
7.5 m	kg											*7200	*7200	*6850	*6850	9.06		
6.0 m	kg							×40 /	*10	*9700	*9700	*9050	8800	*6800	*6800	9.77		
4.5 m	kg					*10.000	*10.000	*12 450	*12 450	*10 600	*10 600	*9450	8550	*6950	6950	10.22		
3.0 m 1.5 m	kg kg					*19 900 *22 450	*19 900 21 550	*14 400 *15 950	*14 400 14 250	*11 650 *12 550	10 850 10 400	*10 000 *10 500	8300 8000	*7300 *7850	6550 6450	10.43		
Ground Line	kg			*9150	*9150	*22 750	21 550	*16 800	14 250	*13 100	10 400	*10 800	7800	*8700	6550	10.41		
–1.5 m	kg			*15 100	*15 100	*22 500	20 000	*16 750	13 450	*13 150	9850	*10 650	7700	*9600	6950	9.70		
-3.0 m	kg			*21 900	*21 900	*20 750	*20 750	*15 850	13 450	*12 450	9850			*9750	7800	8.95		
-4.5 m	kg			*23 300	*23 300	*17 700	*17 700	*13 700	13 650	*10 450	10 050			*9700	9500	7.83		
-6.0 m	kg					*12 500	*12 500	*9250	*9250					*8850	*8850	6.16		
ndicates that ne above load	s are in	compliar	nce with h	ydraulic e	xcavator	lift capaci	ty standa	rd ISO 105						ting capao hine stanc				

Load Pc	int Hei	ght		Load	Radius Ov	ver Front			oad Radiu	is Over Sid	le		Loa	ad at Maxi	mum Read	ch		
oom – 6900 r tick – 2.9 m	nm				<b>xet</b> — Nor e <b>s</b> — 750 r			<b>Undercarriage</b> – Long – Fixed Gauge										
		1.5	i m	3.0	m	4.5	m	6.0 m		7.5 m		9.0 m						
				I.		ł	c 🗐	I.		I.		IA	di i	I I I I I I I I I I I I I I I I I I I		m		
9.0 m	kg													*9850	*9850	6.		
7.5 m	kg									*10 450	*10 450			*9200	*9200	7.		
6.0 m	kg							*12 200	*12 200	*10 750	*10 750			*9000	8400	8.		
4.5 m	kg					*18 450	*18 450	*13 800	*13 800	*11 550	10 600	*10 250	7950	*9150	7500	9		
3.0 m 1.5 m	kg					*18 100 *12 900	*18 100 *12 900	*15 550 *16 750	13 850 13 200	*12 400 *13 100	10 150 9750	*10 650 *10 950	7750	*9550 *10 250	7050 6900	9. 9.		
Ground Line	kg kg					*12 900	*12 900	*16 750	13 200	*13 100	9750	*10 950	7550	*10 250	7050	9.		
–1.5 m	kg			*14 200	*14 200	*21 350	19 600	*16 500	12 050	*13 050	9400		7.00	*10 450	7550	8.		
-3.0 m	kg			*23 150	*23 150	*18 950	*18 950	*15 000	12 900	*11 700	9500			*10 350	8650	8.		
-4.5 m	kg					*15 050	*15 050	*11 850	*11 850					*9750	*9750	6.		
<b>oom</b> – 6900 r t <b>ick</b> – 3.4 m	nm				<b>∢et</b> – Nor e <b>s</b> – 750 r			<b>Undercarriage</b> – Long – Fixed Gauge										
1.5 m			im	3.0 m 4.5 m					m	7.5	m	9.0	m					
	-	IA				I.		H		Ð	C -	Ð		H		n		
9.0 m	kg													*8250	*8250	7.		
7.5 m	kg									*9900	*9900			*7750	*7750	8		
6.0 m	kg					×17.050	×17.050	×10.000	× 40.000	*10 300	*10 300	*9650	8250	*7600	*7600	9		
4.5 m 3.0 m	kg					*17 250 *21 100	*17 250 *21 100	*13 200 *15 050	*13 200	*11 150	10 750 10 300	*9950 *10 400	8100 7850	*7700 *8050	7100 6650	9. 10.		
1.5 m	kg kg					*17 550	*17 550	*16 450	13 400	*12 950	9850	*10 850	7650	*8600	6550	10		
Ground Line	kg					*19 800	19 650	*17 100	13 000	*13 400	9550	*11 000	7450	*9500	6650	9.		
-1.5 m	kg			*14 100	*14 100	*22 200	19 600	*16 850	12 800	*13 250	9450	*10 600	7400	*10 050	7100	9.		
–3.0 m	kg			*22 550	*22 550	*20 150	19 750	*15 600	12 850	*12 250	9450			*10 050	8000	8.		
-4.5 m	kg			*21 000	*21 000	*16 700	*16 700	*13 050	*13 050					*9750	*9750	7.		
oom – 6900 r tick – 3.9 m	nm				xet – Nor es – 750 r					Unc	lercarria	i <b>ge</b> – Lon	g — Fixed	l Gauge				
//		1.5	m	3.0	m	4.5	m	6.0	m	7.5 m		9.0	m					
		IA		Ð		Ð				Ð	C -	Ð		I.	C -	r		
9.0 m	kg													*7200	*7200	7.		
7.5 m	kg									*****	*****	*****		*6900	*6900	8		
6.0 m 4.5 m	kg							*12 250	*12 250	*9600 *10 500	*9600 *10 500	*9000 *9400	8350 8150	*6800 *6950	*6800 6600	9. 10.		
4.5 m 3.0 m	kg kg					*19 500	*19 500	*12 250	*12 250	*10 500	10 350	*9400	7850	*7250	6250	10		
1.5 m	kg				<u> </u>	*22 300	20 200	*15 800	13 450	*12 500	9850	*10 500	7600	*7800	6100	10		
Ground Line	kg					*22 500	19 500	*16 750	12 900	*13 100	9500	*10 800	7400	*8600	6200	10		
-1.5 m	kg			*14 450	*14 450	*22 600	19 300	*16 800	12 650	*13 200	9300	*10 700	7250	*9550	6500	9		
–3.0 m	kg			*21 100	*21 100	*20 950	19 400	*16 000	12 600	*12 550	9250	*9800	7300	*9750	7250	9		
-4.5 m	kg			*23 950	*23 950	*18 100	*18 100	*14 000	12 800	*10 750	9450			*9700	8750	7.		
–6.0 m	kg		1	1		*13 200	*13 200	*9950	*9950	1		1		*9050	*9050	6.		

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.

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

# 349D/349D L Hydraulic Excavator Specifications

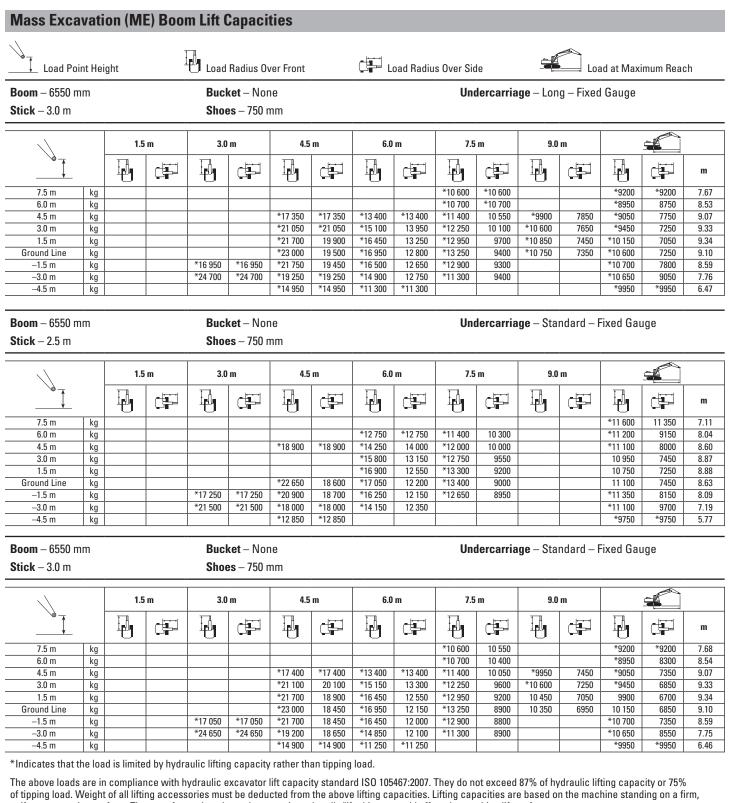


Load Po	int Hei	ght	]	Load	Radius Ov	ver Front		C L	oad Radiu	s Over Sid	le		Loa	ad at Maxi	mum Read	ch		
<b>Boom</b> – 6550 n	nm			Bucl	<b>ket</b> – Nor	ne		<b>Undercarriage</b> – Long – Variable Gauge										
<b>Stick</b> – 2.5 m				Shoe	<b>es</b> – 750 r	nm												
		1.5	m	3.0	m	4.5 m		6.0 m		7.5 m		9.0 m						
				ł		I.	(F	I.			(F		(F			m		
7.5 m	kg													*11 550	*11 550	7.2		
6.0 m	kg							*12 900	*12 900	*11 450	11 400			*11 200	10 000	8.1		
4.5 m	kg					*19 250	*19 250	*14 400	*14 400	*12 050	11 050			*11 100	8850	8.6		
3.0 m 1.5 m	kg							*15 950 *16 950	14 600 14 000	*12 800 *13 350	10 650 10 300			*11 100 *11 200	8250 8150	8.8 8.8		
Ground Line	kg kg					*22 500	21 050	*17 050	13 700	*13 350	10 300			*11 300	8400	0.0 8.5		
-1.5 m	kg			*18 700	*18 700	*20 700	*20 700	*16 100	13 650	*12 550	10 000			*11 350	9250	8.0		
-3.0 m	kg			*21 000	*21 000	*17 600	*17 600	*13 850	*13 850					*11 000	*11 000	7.0		
-4.5 m	kg													*10 500	*10 500	5.2		
<b>Boom</b> – 6550 n	 nm			Bucl	<b>ket</b> – Nor	ne				Und	lercarria	ge – Lon	g — Varia	ble Gaug	le			
Stick – 3.0 m				Shoe	<b>es</b> – 750 r	nm												
		1.5	m	3.0 m			m	6.0	m	7.5	m	9.0 m						
			c 🗐	Ð	¢ <b>F</b>	Į.	¢ F		¢ 🖬		¢ F		¢		d <b>i</b>	m		
9.0 m	kg													*9850	*9850	6.5		
7.5 m	kg									*10 550	*10 550			*9150	*9150	7.7		
6.0 m	kg									*10 750	*10 750			*8950	*8950	8.6		
4.5 m	kg					*17 800	*17 800	*13 600	*13 600	*11 500	11 100	*10 300	8300	*9050	8150	9.1		
3.0 m	kg					*21 400 *21 550	*21 400 21 250	*15 300	14 700	*12 350	10 650	*10 600 *10 850	8100	*9500 *10 250	7650 7500	9.3		
1.5 m Ground Line	kg					*22 950	21 250	*16 550 *16 950	14 000 13 600	*13 000 *13 250	10 250 10 000	*10 850	7900 7750	*10 250	7500	9.3 9.0		
–1.5 m	kg kg			*18 000	*18 000	*21 550	20 300	*16 350	13 500	*12 800	9900	10 / 00	7750	*10 700	8350	8.5		
	kg			*24 150	*24 150	*18 900	*18 900	*14 650	13 600	*11 000	10 050			*10 600	9800	7.6		
-4.5 m	kg					*14 300	*14 300	*10 700	*10 700					*9800	*9800	6.3		
	nm			Bucl	<b>ket</b> – Nor	ne				Unc	lercarria	<b>ge</b> – Lon	g – Fixed	l Gauge				
<b>Boom</b> – 6550 n				Shoe	<b>es</b> – 750 r	nm												
				3.0 m		4.5 m		6.0 m		7.5 m		9.0 m						
Boom – 6550 n Stick – 2.5 m		1.5	m	3.0	m	4.5	m	6.0	m	7.5	m	9.0	m					
		1.5	m	3.0	m	4.5	m	6.0	m	7.5	m	9.0	m			m		
Stick – 2.5 m	kg							I.						*11 600	*11 600	<b>m</b> 7.1		
<b>Stick</b> – 2.5 m	kg							*12 750	*12 750	*11 400	10 800			*11 600 *11 200	*11 600 9650	7.1		
<b>Stick</b> – 2.5 m	kg kg							*12 750 *14 200	*12 750 *14 200	*11 400	10 800 10 500			*11 600 *11 200 *11 100	*11 600 9650 8450	7.1 8.0 8.6		
5tick - 2.5 m  7.5 m 6.0 m 4.5 m 3.0 m	kg kg kg							*12 750 *14 200 *15 800	*12 750 *14 200 13 850	*11 400 *12 000 *12 700	10 800 10 500 10 100			*11 600 *11 200 *11 100 *11 100	*11 600 9650 8450 7850	7.1 8.0 8.6 8.8		
2.5 m 7.5 m 6.0 m 4.5 m 3.0 m 1.5 m	kg kg kg kg					*18 850	*18 850	*12 750 *14 200 *15 800 *16 900	*12 750 *14 200 13 850 13 200	*11 400 *12 000 *12 700 *13 300	10 800 10 500 10 100 9750			*11 600 *11 200 *11 100 *11 100 *11 200	*11 600 9650 8450 7850 7700	7.1 8.0 8.6 8.8 8.8		
Stick – 2.5 m   7.5 m 6.0 m   4.5 m 3.0 m   1.5 m Ground Line	kg kg kg kg kg					*18 850	*18 850	*12 750 *14 200 *15 800 *16 900 *17 050	*12 750 *14 200 13 850 13 200 12 900	*11 400 *12 000 *12 700 *13 300 *13 400	10 800 10 500 10 100 9750 9500			*11 600 *11 200 *11 100 *11 100 *11 200 *11 300	*11 600 9650 8450 7850 7700 7900	7.1 8.0 8.6 8.8 8.8 8.8		
Stick - 2.5 m  7.5 m 6.0 m 4.5 m 3.0 m 1.5 m	kg kg kg kg					*18 850	*18 850	*12 750 *14 200 *15 800 *16 900	*12 750 *14 200 13 850 13 200	*11 400 *12 000 *12 700 *13 300	10 800 10 500 10 100 9750			*11 600 *11 200 *11 100 *11 100 *11 200	*11 600 9650 8450 7850 7700	7.1 8.0 8.6 8.8 8.8		

The above loads are in compliance with hydraulic excavator lift capacity standard ISO 105467:2007. 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.

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

# 349D/349D L Hydraulic Excavator Specifications



uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

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

# 349D/349D L Standard Equipment

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

#### **Power Train**

52° C cooling capability Cat extended life coolant Automatic engine speed control Cat C13 diesel engine 2300 m altitude capability 24-volt electric starting Variable speed fan Power management system Economy mode Radial seal air filter with double element Electric priming pump Secondary engine shut-off switch Water separator in fuel line

#### Undercarriage

Idler and center section track guiding guards Towing eye on base frame Grease lubricated track

### Electrical

75 Amp alternator Horn, signal/warning Light, storage box mounted (Halogen, one)

#### **Operator Environment**

Cab Bi-level automatic climate control with defroster Ashtrav with lighter Beverage holder Bolt-on FOGS capability Coat hook Interior lighting Literature holder Openable skylight Pillar mounted upper windshield wiper and washer Radio mounting (meets DIN size) Rear window, emergency exit Sliding upper door window Storage compartment suitable for lunch box Utility space for magazines Monitor Time clock on monitor Full graphic and full color display with language display Machine condition, error code and tool mode setting information Start-up level check for engine oil, engine coolant and hydraulic oil Warning, filter/fluid change and working hour information Neutral lever for all controls Pedal Capability to install two additional pedals Travel control with removable hand levers Seat Adjustable armrest Electric provision for seat heater

#### Guards

Bottom guard, includes swivel guard

#### **Other Standard Equipment**

Automatic swing parking brake Cat data link with E/T use capability Cat one key security system Counterweight with lifting hook, without removal device Door locks and cap locks High performance hydraulic return filter Mirrors, rearview (frame-right, cab-left) Product Link ready Regeneration circuit for boom and stick Reverse swing damping valve Boom drift reducing valve Stick drift reducing valve Two speed auto-shift travel Stell firewall between engine and pump compartment

# 349D/349D L Optional Equipment

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

#### Engine

Precleaner Starting kit, cold weather, -32° C Terminal, jump start

### **Front Linkage**

Booms HD Reach 6900 mm Mass excavation 6550 mm Buckets (see pages 11 and 19) Bucket linkage TB family for TB sticks UB family for UB sticks Bucket tips and sidecutters Edge protectors Sticks R2.9TB Reach R3.4TB Reach R3.9TB Reach M2.5UB Mass M3.0UB Mass

#### Guards

Falling Object, for cab Front Windshield Track guiding, full length

#### **Hydraulics**

Auxiliary boom lines Auxiliary stick lines Control, single action Circuit, cooling Control, combined Control, medium pressure Pedal, tool modulation Quick coupler universal circuit Tool selection (via monitor 10 tools)

### **Operator Station**

Joysticks Four button joystick for standard machine or single action auxiliary control Radio, AM/FM radio mounted in right hand console Radio ready mounting at rear location including 24V to 12V converter Seat Adjustable high-back seat with mechanical suspension Sun Screen

#### Undercarriage

Fixed Gauge or Variable Gauge Idler, heavy duty Track, GLT4 Track, PPR2

#### **Other Optional Equipment**

Converters, 7 amp-12V (one or two) Product Link Rearview Camera Security System, Machine (MSS) WAVS Camera ready

# 349D/349D L Hydraulic Excavator

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