

# 345D L

Hydraulic Excavator



With Long Fixed Gauge Undercarriage  
For AME, Sourced from Aurora, IL

#### Cat® C13 Diesel Engine with ACERT™ Technology

Net Power (ISO 9249) at 1800 rpm	283 kW/385 hp
Operating Weight	46 750 to 48 250 kg
Maximum Travel Speed	4.7 km/h
Maximum Reach	11.7 m
Maximum Digging Depth	7.6 m

# 345D L Hydraulic Excavator

*High performance and rugged durability combine to maximize your productivity.*

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## C13 Engine with ACERT™ Technology

ACERT™ Technology works at the point of combustion to optimize engine performance and provide low exhaust emissions to meet emission regulations, with exceptional performance capabilities and proven reliability. **pg. 4**

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## Booms, Sticks and Linkage

Built for good performance and long service life, Cat® booms and sticks are box-section structures with thick multiplate fabrications to resist high stress. Two lengths of booms and three types of sticks are available, offering a range of configurations suitable for a wide variety of applications and conditions. **pg. 9**

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## Service and Maintenance

Fast, easy service has been designed in with extended service intervals, advanced filtration, convenient filter access and user-friendly electronic diagnostics for increased productivity and reduced maintenance costs. **pg. 13**

***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 your operating costs.*

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## Hydraulics

The hydraulic system has been designed to provide reliability and outstanding controllability. An optional Tool Control System provides enhanced flexibility. **pg. 5**

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## Buckets, Quick Coupler, Work Tools

A variety of work tools, including buckets, couplers, hammers, crushers, pulverizers, multiprocessors, shears and grapples are available through Cat Work Tools. **pg. 10**

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## SmartBoom™

SmartBoom™ increases productivity through faster cycle times on truck loading and rock scraping applications and maintains optimum hammering frequency for effective, steady productivity. **pg. 5**



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### Operator Station

Provides maximum space, excellent visibility and easy access to all switches. The monitor is a full-color graphical display that allows the operator to understand the machine information easily. Overall, the cab provides a comfortable environment for the operator. **pg. 6**

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### Undercarriage

Cat designed excavator undercarriage is stable, durable and low maintenance. The undercarriage is a long, fixed gauge type for good machine stability and lift capacity. **pg. 8**

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### Structures

Caterpillar design and manufacturing techniques assure outstanding durability and service life from these important components. **pg. 8**

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### Designed for Safety, Cleaner for the Environment

Quiet operation, safe accessibility and increased visibility help keep operators and job sites safe while lower emissions help protect the environment. **pg. 12**

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### Application and System Match

The 345D L is designed for matched performance with Cat articulated trucks. Five to six passes under two minutes, matched to the Cat 735 gives you maximum system production. **pg. 12**



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### 360° Solutions

Your Cat dealer offers a wide range of services – from assistance with configuring your machine to best match your application to customer support agreements to meet your maintenance needs. Repair Option Programs guarantee the cost of repairs up front and help you to avoid unscheduled repairs. **pg. 13**

## C13 Engine with ACERT™ Technology

*Built for power, reliability, economy and low emissions.*



**Performance.** The 345D L, equipped with the C13 with ACERT™ Technology provides 18% more power compared to the 345C L. The building blocks of ACERT Technology are fuel delivery, air management, and electronic control – providing better fuel economy and reduced wear.

**Fuel Consumption.** The ADEM A4 electronic control module manages fuel delivery to get the best performance per liter or gallon 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.

### **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 and sculpted crankcase.

**Emissions.** The 345D equipped with the Caterpillar C13 engine can meet EU Stage IIIA or EU Stage II emissions requirements.

**Fuel System.** The Cat® C13 features electronic controls that govern the mechanically actuated unit fuel injection (MEUI) system. MEUI provides the high-pressure required to help reduce particulate emissions and deliver better fuel economy through finer fuel atomization and more complete combustion.

**Cooling System.** The 345D L layout completely separates the cooling system from the engine compartment. The cooling fan is hydraulically driven with variable speed control based on the

ambient temperature, coolant temperature, and hydraulic oil temperature. This unique feature assists in the management of engine power and improves noise efficiency while providing optimized cooling.

**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.

**Turbocharger.** The Cat C13 engine 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.

### **Power Management Modes.**

The Power Modes are selected from the monitor menu. They allow selecting optimal machine performances for each type of application.

- High Power Mode is recommended for applications where high productivity is essential or for hard digging applications.
- Power Management Mode is for applications requiring similar performance as 345C L, but with better fuel efficiency.
- Economy Mode is for applications where fuel economy is a priority over productivity.

The Power Management Mode and Economy Mode performances are achieved through finely tuned hydraulic horsepower and engine RPM management.

# Hydraulics

*Cat 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.

**Heavy Lift Standard.** The operator can select the heavy lift mode at the push of a button to boost lifting capability and provide improved controllability of heavy loads.

**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 345D L, the boom regeneration circuit is operated electrically, managed by the machine ECM. The system improves cycle times and fuel efficiency, increasing your productivity and reducing operating costs.

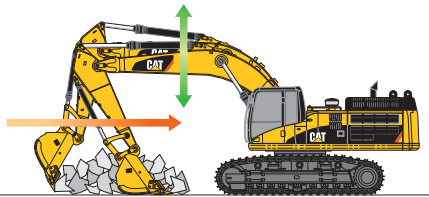
**Boom and Swing Priority.** The hydraulic system on the 345D L provides automatic priority function for boom-up and swing operations eliminating the need for work mode buttons. When the boom or swing lever is activated, the system automatically assigns priority based on operator demand.

**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 life.

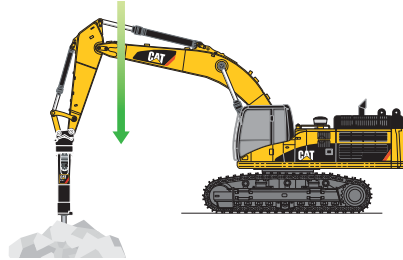
**Auxiliary Hydraulic Valve.** A hydraulically controlled auxiliary valve is standard on the 345D L. Control circuits are available as attachments, allowing operation of high and medium pressure tools such as shears, grapples, hammers, pulverizers, multi-processors and vibratory plate compactors.

# SmartBoom™

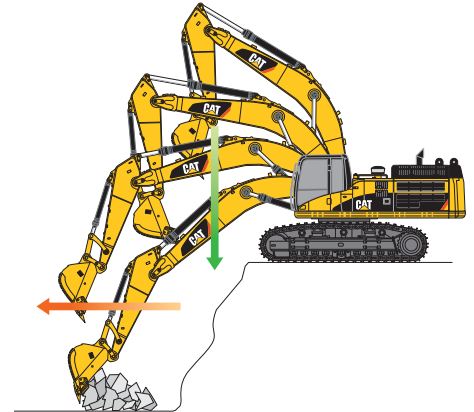
*Reduces stress and vibrations transmitted to the machine.*



**Rock Scraping.** Scraping rock and finishing work is easy and fast. SmartBoom™ simplifies the task by allowing the operator to fully concentrate on stick and bucket manipulation, while the boom is free to move up and down without using implement pump flow.



**Hammer Work.** SmartBoom is operator-friendly and increases productivity in hammering applications. The front parts automatically follow the hammer while penetrating the rock. Blank shots or excessive force on the hammer are avoided resulting in longer life for the hammer and the machine. Similar advantages are applicable when using vibratory plates.



**Truck Loading.** When using SmartBoom, loading trucks from a bench is more productive and more fuel efficient as the return cycle is reduced while the boom down function does not require implement pump flow.

## Operator Station

*Designed for simple, easy operation, the 345D L allows the operator to focus on production.*



**Cab Design.** The workstation is spacious, quiet and comfortable, assuring high productivity during a long work day. The air conditioner and attachment switches are conveniently located on the right-hand wall, and the key switch and throttle dial are on the right-hand console. The monitor is easy to see with excellent visibility.

**Seat.** A high-back, heated, air-suspension seat is now standard on the 345D L. The seat allows a variety of adjustments to suit the operator's size and weight and provides a comfortable working environment. Wide adjustable armrests and a retractable seatbelt are also included.

**Skylight.** An enlarged skylight with sunshade provides excellent visibility and good ventilation.

**Hydraulic Activation Control Lever.** For added safety, this lever must be in the operate position to activate the machine control functions.

**Climate Control.** Positive filtered ventilation with a pressurized cab comes standard on the 345D L. Fresh air or re-circulated air can be selected with a switch on the left console.

**Windows.** All glass is affixed directly to the cab, eliminating window frames and providing excellent visibility. The upper front windshield opens, closes and stores on the roof above the operator with a one-touch action release system.

**Wipers.** Pillar-mounted wipers increase the operator's viewing area and offer continuous and intermittent modes.

**Monitor.** The compact, full color graphical monitor, displays machine maintenance, diagnostic and prognostic information, in twenty-seven different languages. The monitor angle can be adjusted to minimize sun glare.

**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.

**Travel Controls.** The 345D L uses pilot operated control levers, positioned so the operator can operate with arms on the armrests. The vertical stroke is longer than the horizontal stroke, reducing operator fatigue. The control lever grips are shaped to fit into the operator's hands. The horn switch and one-touch low idle switch are positioned on the left and right grip.

## Electronic Control System

*Manages the engine and hydraulics for maximum performance.*



**Console.** The consoles feature a simple, functional design to reduce operator fatigue, ease of switch operation and excellent visibility. Both consoles have attached armrests with height adjustments.

**Standard Cab Equipment.** To enhance operator comfort and productivity, the cab includes a lighter, drink holder, coat hook, service meter, literature holder, magazine rack and storage compartment.

**Machine Security.** An optional Machine Security System is available from the factory. This system controls when the machine can be operated and utilizes specific keys to prevent unauthorized machine use, a significant theft deterrent.

**Product Link.** Equipment monitoring with access to world-class dealer service. Product Link uses wireless and satellite technology to gather and transmit essential information, related to machine usage, maintenance and location. This information is easily accessible through a secure, web-based application, Equipment Manager.

Depending on your level of subscription, Product Link will:

- Report current equipment parameters (SMU, location, fault codes, etc.)
- Track all elements of machine maintenance and keep machine history
- Predict when a service is needed
- Help you schedule maintenance and order parts more efficiently
- Alert you to potential and immediate problems

**Monitor Display Screen.** The monitor is a full color 400 x 234 pixels Liquid Crystal Display (LCD) graphic display. The Master Caution Lamp blinks ON and OFF when one of these critical conditions occur:

- Engine oil pressure low
  - Coolant temperature high
  - Hydraulic oil temperature high
- Under the normal conditions or the default condition, the monitor display screen is divided into four areas: clock and throttle dial area, gauge area, event display area and multi-information display area.

**Power Management Modes.** The power modes – Economy, Power Management, High Power – are selected from the monitor menu. The selection of individual power modes allows a user to match machine performance to application requirements, enabling the operator to select a mode for optimal performance with lower fuel consumption.

**Fuel Consumption.** The 345D L provides instant fuel consumption on the monitor.

**Clock and Throttle Dial Area.** The clock, throttle dial position and green gas-station icon are displayed in this area.

**Gauge Area.** Three analog gauges, fuel level, hydraulic oil temperature and coolant temperature, are displayed in this area.

**Event Display Area.** Machine information is displayed in this area with the icon and language.

**Multi-information Display Area.** This area is reserved for displaying information that is convenient for the operator. The "CAT" logo is displayed when no information is available to be displayed.



## Undercarriage

*Durable undercarriage absorbs stresses and provides excellent stability.*



**Undercarriage Options.** The 345D L 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 Cast Idlers are available as attachments on the 345D L.

The PPR2 prevents loosening of the track pin from the track link and the Cast 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 345D L 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.

## Structures

*The 345D L 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.

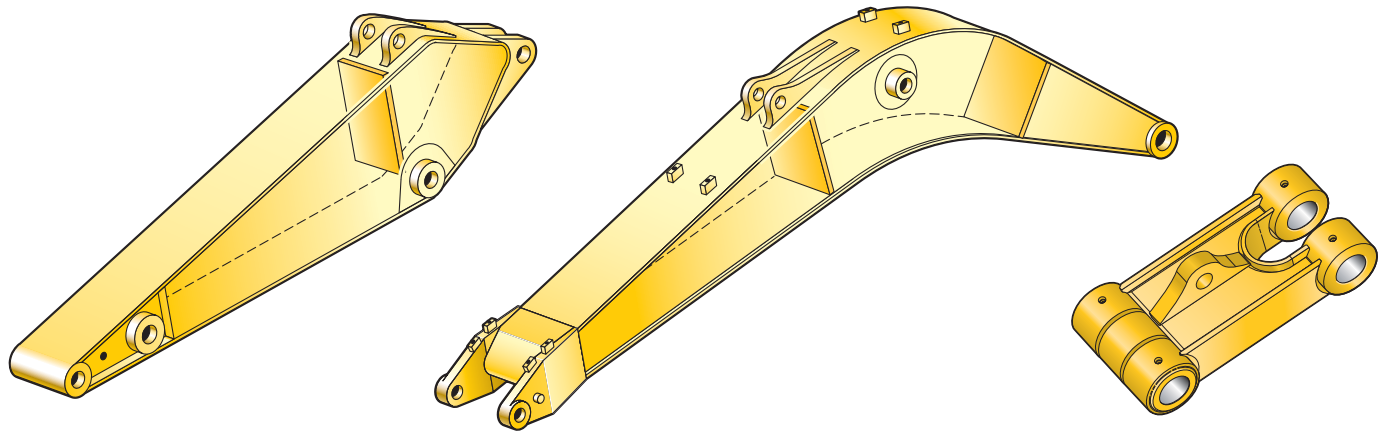
**Upper Frame.** The rugged main frame is designed for maximum durability. Robot welding is used for consistent, high-quality welds. The main channels are box sections connected by a large diameter tube in the boom foot area to improve rigidity and strength. The outer frame utilizes curved side rails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



## Booms, Sticks and Linkage

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



**Front Linkage Attachments.** Select the right combination of front linkage with your Cat dealer to ensure high productivity from the very start of your job. Two types of booms and three sticks are available, offering a range of configurations suitable for a wide variety of applications and offer a large combination of reach and digging forces for optimum versatility. All booms and sticks undergo a stress relieving process for greater durability.

**Boom Construction.** The 345D L booms have large cross-sections and internal baffle plates to provide long life and durability. Castings and forgings are used in critical high-load areas such as the boom-foot and boom cylinder connection.

**Heavy Duty Reach Boom.** The 6900 mm HD Reach boom is designed to balance reach, digging force and bucket capacity. The HD Reach Boom is ideal for a wide range of applications.

**Mass Excavation Boom.** The 6550 mm 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 345D L sticks are made of high-tensile strength steel, using a large box section design, interior baffle plates and an additional bottom guard to protect against damage. The Quarry stick provides reinforcement bars on the stick.

**Mass Sticks.** Two Mass Quarry sticks are available for higher digging forces and increased bucket capacity. Mass sticks use UB-family bucket linkage and buckets.

- **M2.5UB.** The 2500 mm stick is intended for mass excavation applications with very large buckets with high force requirements.
- **M3.0UB.** The 3000 mm stick provides excellent digging envelope with large bucket capacity and high force levels.

**Reach Stick.** Reach stick use the TB-family bucket linkage and buckets.

- **R3.35TB.** The 3350 mm stick offers the most versatility and is suited to all types of applications and bucket capacities.

**Power Link.** The 345D L power link improves durability, increases machine-lifting capability in key lifting positions, and is easier to use compared to the previous lift bar designs.

**Linkage Pins.** All pins used in front linkages have thick chrome plating, giving them high wear and corrosion resistance. The large diameter pins smoothly distribute the shear and bending loads to help ensure long pin, boom and stick life.

## Work Tools

*The 345D L 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, multi-processors, sorting grapples and couplers. Ask your Cat dealer for information on attachments or special configurations.

**General Purpose Buckets.** General purpose (GP) buckets are best suited for digging in low-impact, moderately abrasive materials such as dirt, loam, gravel and clay.

**Heavy Duty Buckets.** Heavy duty (HD) buckets are designed for a wide range of moderately abrasive applications such as mixed dirt, clay and rock. HD buckets have optimized loading and dumping characteristics and more robust construction than the GP buckets.

**Heavy Duty Rock Buckets.** Heavy duty rock (HDR) buckets are designed for aggressive bucket loading in highly abrasive applications such as shot rock and granite. Features include:

- Thick wear plates to extend the life of the bucket in severe applications.
- Side wear plates that extend further up the side of the bucket for maximum protection in rocky soils.
- Sidebar protectors are available for sidebar protection, or side-cutters can be used to provide increased fill characteristics and bucket wear protection.

### **Caterpillar Ground Engaging Tools**

**(GET).** Caterpillar® K Series™ GET is featured on the 345D L buckets. The K Series™ 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, side cutters, and sidebar protectors to match operating conditions.

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

**Service Life.** Caterpillar® 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™ GET system.
- High strength and heat-treated steel that exceeds T-1 in high wear areas.

**Tool Control System.** This system maximizes work tool productivity by configuring hydraulic flow, pressure and operator controls to match a specific work tool. System versatility enables a wide range of tools to be used. Ten hydraulic pump flow and pressure setting can be preset, on the monitor, eliminating the need to adjust the hydraulics each time a tool is changed. The unique Cat proportional sliding switches provides modulation to the tool and the precision work easy.

# Bucket Specifications

TB Buckets	Width	Weight	Capacity (ISO)	Number of Teeth	HD Reach Boom 6900 mm	
	mm	kg	m <sup>3</sup>		R3.35TB	
General Purpose-Capacity (GP-C)	1372	1850	2.1	5		
	1524	1930	2.4	6		
	1727	2182	2.8	7		
	1880	2308	3.1	7		
Heavy Duty (HD)	1524	2080	2.1	6		
	1727	2291	2.4	7		
	1880	2397	2.7	7		
Heavy Duty Rock (HDR)	1524	2221	2.1	6		
	1676	2451	2.4	7		
	1880	2567	2.7	7		

UB Buckets	Width	Weight	Capacity (ISO)	Number of Teeth	ME Boom 6550 mm	
	mm	kg	m <sup>3</sup>		M2.5UB	M3.0UB
General Purpose (GP)	1981	2762	3.5	6		
Heavy Duty (HD)	1981	2675	3.1	6		
Heavy Duty Rock (HDR)	1524	2544	2.4	4		
	1930	3013	3.1	6		

Assumptions for maximum material density rating:  
 1. Front linkage fully extended at ground line  
 2. Bucket curled  
 3. 100% bucket fill factor



Max. Material Density  
1200 kg/m<sup>3</sup>



Max. Material Density  
1500 kg/m<sup>3</sup>



Max. Material Density  
1800 kg/m<sup>3</sup>

# Work Tools Matching Guide

When choosing between various work tool models that can be installed onto the same machine configuration, consider work tool application, productivity requirements, and durability. Refer to work tool specifications for application recommendations and productivity information.

			HD Reach Boom 6900 mm		ME Boom 6550 mm	
			3350		2500	3000
Ripper	TR-55					
Multiprocessor	MP30	CC, CR, PP, PS, S, TS				
	MP40	CC, CR	N		N	
		PS, S	N			N
Crusher and Pulverizer	VHC-50					
	VHC-60					
	VHP-50					
Hydraulic Shear	S340					
	S365B*, S385B*					
Mechanical Grapple	G140					
Demolition and Sorting Grapple	G330					
Hydraulic Hammer	H160D S, H180 S					

\* Boom mounted



360° Working Range



Over the front



Not recommended

## Designed for Safety, Cleaner for the Environment

*Cat machines are designed to keep operators and jobsites safe while reducing the impact 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 jobsite.

**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 biodegradable hydraulic oil is fully decomposed by soil or water microorganisms for a cleaner jobsite.

**Visibility.** A 70-30 split windshield with 6mm laminated glass gives broad visibility and in-cab safety. Halogen lights ensure safer work in low light conditions. Optional Work Area Vision System and Rearview camera can be installed for improved visibility and job site safety.

**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.

## Applications and Systems Match

*The 345D L 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 345D L 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.



## 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, engine oil filter and water separator for fuel line have been extended to 500 hours, hydraulic oil to 2000 hours for normal applications with S•O•S<sup>SM</sup> analysis monitoring.

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

**Radial Seal Main Air Cleaner.** The radial seal main air cleaner with pre-cleaner has a double-layered 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 battery 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.

**Electric Priming Pump.** An electric fuel-priming pump replaces the engine-mounted manual fuel-priming pump and the control switch is located in the rear left compartment close to the air filter for easy access.

## 360° Solutions

*Your 360° Solutions package consists of four elements, tailored to your needs.*



### **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

Cat C13 with ACERT Technology

Net Power at 1800 rpm

ISO 9249	283 kW/385 hp
EEC 80/1269	283 kW/385 hp
Bore	130 mm
Stroke	157 mm
Displacement	12.5 liters
Cylinders	6

- The C13 engine can meet Stage IIIA or Stage II emission requirements.
- All engine horsepower (hp) are metric including front page.
- 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

Track width with long undercarriage:

Double grouser, heavy duty  
600 mm and 750 mm

Triple grouser, heavy duty  
600 mm and 750 mm

Number of shoes each side 52

Number of rollers each side 9

Number of carrier rollers each side 3

## Sound

**For EU Regulated countries**

### Operator Sound

- The operator sound level measured according to the procedures specified in ISO 6394:1998 is 76 dB(A), for cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.

### Exterior Sound

- The labeled spectator sound power level measured according to the test procedures and conditions specified in 2000/14/EC is 106 dB(A).

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.

## Cab/FOGS

Cab/FOGS meets ISO 10262.

## Drive

Maximum Travel Speed 4.7 km/h

Maximum Drawbar Pull 338 kN

## Swing Mechanism

Swing Speed 8.9 rpm

Swing Torque 149 kNm

## Hydraulic System

Main System

Maximum flow 734 l/min

Maximum pressure

Normal 350 bar

Heavy lift 380 bar

Travel 350 bar

Swing 314 bar

Pilot System

Maximum flow 43 l/min

Maximum pressure 41 bar

Boom Cylinder

Bore 160 mm

Stroke 1575 mm

Stick Cylinder

Bore 190 mm

Stroke for reach front 1778 mm

Stroke for ME front 1758 mm

TB Family Bucket Cylinder

Bore 160 mm

Stroke 1356 mm

UB Family Bucket Cylinder

Bore 170 mm

Stroke 1396 mm

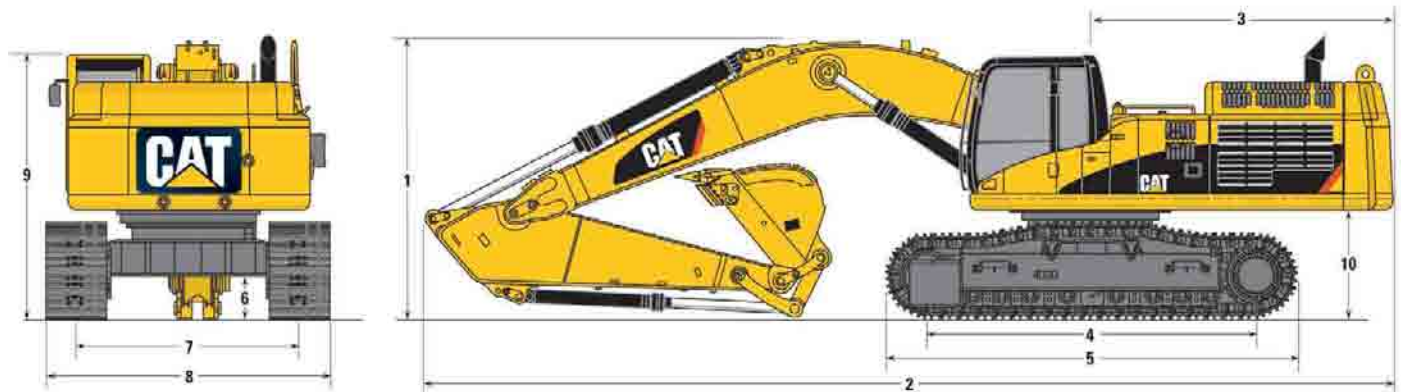
Main normal relief pressure 350 bar

## Service Refill Capacities

	Liters
Fuel Tank	705
Cooling System	35.5
Engine Oil	42
Swing Drive (each)	10
Final Drive (each)	15
Hydraulic system (including tank)	570
Hydraulic tank	243

## Dimensions

All dimensions are approximate.



		HD Reach Boom		ME Boom			mm
Boom	mm	6900	6550				
Stick	mm	3350	2500	3000			
<b>1</b> Shipping height	mm	3690	3960	4020			
<b>2</b> Shipping length	mm	11 940	11 710	11 640			
						<b>3</b> Tail swing radius	3770
						<b>4</b> Length to centers of rollers	4360
						<b>5</b> Track length	5360
						<b>6</b> Ground clearance	510
						<b>7</b> Track gauge	2740
						<b>8</b> Track width	
						with 600 mm shoes	3340
						with 750 mm shoes	3490
						<b>9</b> Cab height	3210
						<b>10</b> Counterweight clearance	1320

## Machine and Major Component Weights

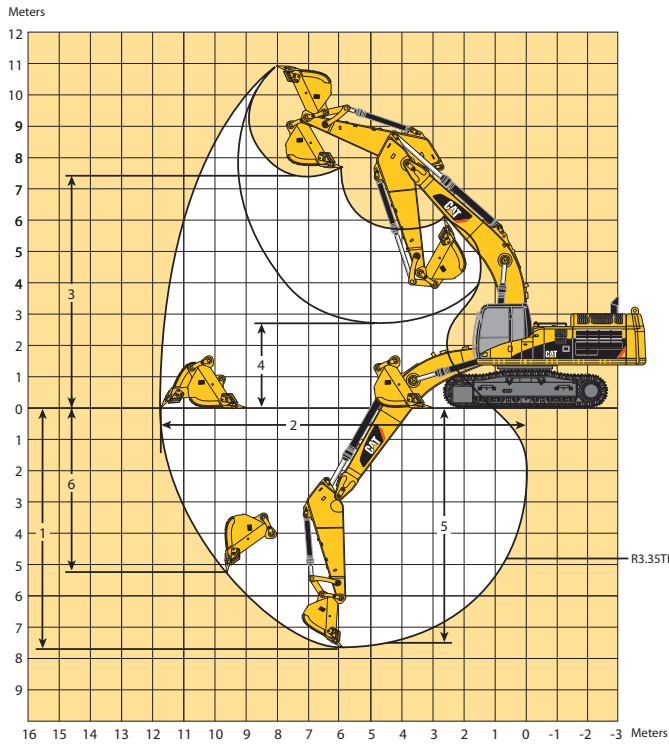
Actual weights and ground pressures will depend on final machine configuration.

		HD Reach boom 6900 mm		ME boom 6550 mm	
		R3.35TB		M2.5UB M3.0UB	
Stick type					
Operating weight*					
with 600 mm shoes	kg	46 750	47 500	47 600	
with 750 mm shoes	kg	47 400	48 150	48 250	
Stick length	mm	3350	2500	3000	
Bucket weight	kg	2586	2894		
Bucket capacity	m <sup>3</sup>	2.4	3.1		
Bucket width/type	mm	1676	1981		
Stick weight (with bucket cylinder)	kg	1990	2170	2350	
Boom weight (with stick cylinder)	kg	4600	4604		
Boom cylinders (pair)	kg	870			
Upper structure**	kg	11 454			
Undercarriage with 600 mm shoes	kg	15 700			
Counterweight	kg	9040			

\* With counterweight, operator and full fuel.

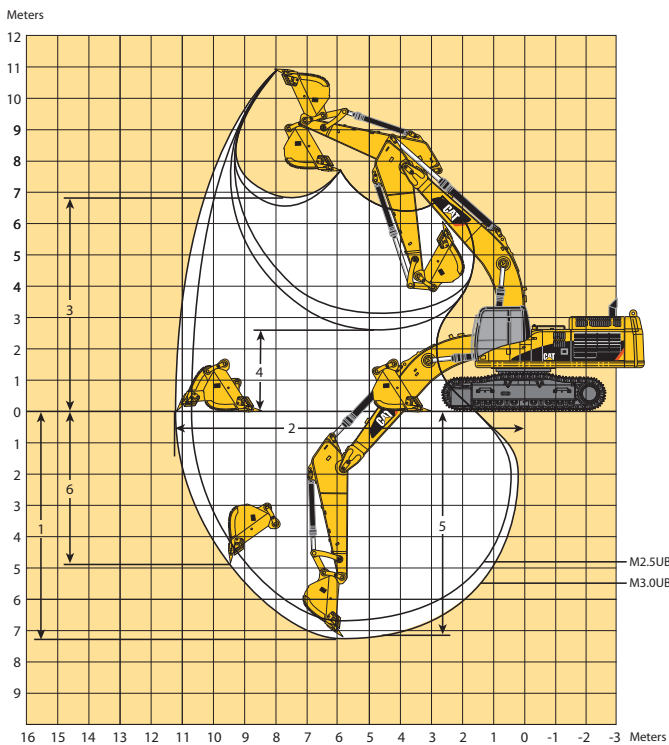
\*\* Without counterweight.

# Working Ranges



## Heavy Duty (HD) Reach boom configuration (6900 mm)

		<b>R3.35TB</b>
Stick Length	mm	3335
<b>1</b> Maximum Digging Depth	mm	7650
<b>2</b> Maximum Reach at Ground Level	mm	11 710
<b>3</b> Maximum Loading Height	mm	7420
<b>4</b> Minimum Loading Height	mm	2750
<b>5</b> Maximum Digging Depth 2440 mm Level Bottom	mm	7500
<b>6</b> Maximum Vertical Wall Digging Depth	mm	5210
Bucket Capacity	m <sup>3</sup>	1.8
Bucket digging Force (ISO)	kN	268
Stick digging Force (ISO)	kN	199



## Mass Excavation (ME) boom configuration (6550 mm)

		<b>M2.5UB</b>	<b>M3.0UB</b>
Stick Length	mm	2500	3000
<b>1</b> Maximum Digging Depth	mm	6700	7200
<b>2</b> Maximum Reach at Ground Level	mm	10 700	11 160
<b>3</b> Maximum Loading Height	mm	6640	6830
<b>4</b> Minimum Loading Height	mm	3170	2670
<b>5</b> Maximum Digging Depth 2440 mm Level Bottom	mm	6530	7050
<b>6</b> Maximum Vertical Wall Digging Depth	mm	4220	4660
Bucket Capacity	m <sup>3</sup>	3.11	3.11
Bucket radius at Cutting edge	mm	1936	1936
Bucket digging Force (ISO)	kN	240	240
Stick digging Force (ISO)	kN	233	206



# Lift Capacities

All weights are in kg. With Heavy Lift on. Counterweight 9040 kg.















## HD Reach Boom 6900 mm

**Stick**  
3350 mm

**Shoes**  
600 mm

**Bucket Capacity**  
2.4 m<sup>3</sup>

**Bucket Weight**  
2275 kg

	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m				m
													
9.0 m							*7030	*7030			*4240	*4240	9.48
7.5 m									*5860	*5860	*4070	*4070	10.47
6.0 m							*9240	9240	*8520	6400	*4060	*4060	11.11
4.5 m					*12 280	*12 280	*10 260	8860	*9030	6240	*4170	3740	11.47
3.0 m			*20 330	19 150	*14 430	12 140	*11 440	8360	9320	5990	*4400	3540	11.59
1.5 m			*22 560	17 420	*16 230	11 260	12 320	7880	9040	5720	*4780	3520	11.48
0 m			*21 040	16 630	*17 160	10 670	11 920	7520	8810	5510	*5340	3700	11.12
-1.5 m	*13 110	*13 110	*23 160	16 430	16 840	10 390	11 690	7310	8690	5400	*6200	4140	10.50
-3.0 m	*20 240	*20 240	*21 920	16 570	*16 430	10 370	11 650	7270	8720	5430	*7550	5020	9.55
-4.5 m	*21 980	*21 980	*18 820	16 990	*14 310	10 590	*10 670	7460					
-6.0 m			*13 550	*13 550	*9890	*9890							















## Mass Boom 6550 mm

**Stick**  
2500 mm

**Shoes**  
600 mm

**Bucket Capacity**  
3.1 m<sup>3</sup>

**Bucket Weight**  
2715 kg

	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m				m
													
9.0 m											*6190	*6190	7.96
7.5 m							*9580	8360			*5850	*5850	9.21
6.0 m							*10 080	8420			*5800	4790	9.98
4.5 m			*17 800	*17 800	*13 240	12 310	*10 890	8150			*5940	4180	10.41
3.0 m			*21 720	17 930	*15 120	11 410	*11 850	7740	8670	5340	*6260	3900	10.55
1.5 m			*19 180	16 490	*16 510	10 640	11 780	7340	8490	5170	6570	3890	10.41
0 m			*23 380	16 060	16 690	10 180	11 470	7060	8360	5050	7020	4190	9.99
-1.5 m	*16 060	*16 060	*22 010	16 130	*16 460	10 050	11 360	6960			8100	4920	9.25
-3.0 m	*24 750	*24 750	*19 330	16 500	*14 670	10 190	*10 650	7100					
-4.5 m			*14 630	*14 630	*10 620	*10 620							















## Mass Boom 6550 mm

**Stick**  
3000 mm

**Shoes**  
600 mm

**Bucket Capacity**  
3.1 m<sup>3</sup>

**Bucket Weight**  
2715 kg

	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m				m
													
9.0 m											*4690	*4690	8.59
7.5 m							*8920	8610			*4420	*4420	9.74
6.0 m							*9330	8550			*4370	4290	10.47
4.5 m					*12 320	*12 320	*10 220	8220	8900	5540	*4480	3740	10.87
3.0 m			*20 340	18 540	*14 330	11 560	*11 290	7770	8700	5350	*4740	3480	11
1.5 m			*23 030	16 840	*15 970	10 720	11 780	7330	8460	5140	*5180	3460	10.87
0 m			*23 620	16 110	16 680	10 160	11 410	6990	8280	4970	*5860	3700	10.48
-1.5 m	*15 360	*15 360	*22 700	15 980	16 350	9920	11 230	6830	8220	4920	*6940	4280	9.78
-3.0 m	*24 870	*24 870	*20 490	16 210	*15 280	9970	11 270	6870					
-4.5 m	*21 800	*21 800	*16 510	*16 510	*12 220	10 320							



Load Point Height



Load Radius Over Front



Load Radius Over Side



Load at Maximum Reach

\* Limited by hydraulic rather than tipping load.

The above loads are in compliance with hydraulic excavator lift capacity ratings standard ISO/DIS 10567, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting capacities.

## Standard Equipment

Standard equipment may vary. Consult your Caterpillar dealer for specifics.

### Electrical

- Alternator – 75 amp
- Cat batteries
- Lights, cab interior
- Lights, cab mounted
- Signal/warning horn
- Starting, cold weather (two additional batteries)
- Travel alarm

### Engine

- Auto Lube ready
- Automatic engine speed control
- Automatic swing parking brake
- Auxiliary hydraulic valve
- Cat® C13 with ACERT™ Technology
- Fuel Filter
- Fine swing control
- Heavy lift mode
- High ambient cooling, 52°C capability
- Muffler
- S•O•S<sup>SM</sup> sampling for Engine and Hydraulic systems
- Two speed auto-shift travel
- Variable speed cooling fan
- Water level indicator
- Water separator in fuel line

### Operator Station

- Adjustable armrest
- Air conditioner, with auto climate control and defroster
- Ashtray with lighter
- Beverage/cup holder
- Bolt-on FOGS capability
- Coat hook
- Electrical provision for seat heater
- Floor mat
- Instrument panel and gauges
- Laminated front windshield 70/30 split
- Literature compartment
- Mirrors (Frame-right, Cab-left)
- Neutral lever for all controls
- Positive filtered ventilation
- Rear window, emergency exit
- Seat, suspension, heated, with high back and head rest
- Seat belt, retractable
- Sliding upper door window
- Skylight (polycarbonate), openable
- Storage compartment suitable for a lunch box, with cover
- Sunshade for windshield and skylight
- Travel control pedals with removable hand levers
- Windshield wipers and washers

### Undercarriage

- Long, fixed gauge
- Guards
  - Heavy Duty Track Motor Guards
  - Swivel Guard
- Track
  - Grease lubricated track
  - Hydraulic track adjusters
  - Idler and center section track guiding guards
  - Track type sealed undercarriage

### Other Standard Equipment

- Caterpillar one key security system
- Counterweight 9040 kg with lifting hook

## Optional Equipment

Optional equipment may vary. Consult your Caterpillar dealer for specifics.

### Engine

Precleaner  
Terminal, jump start

### Front Linkage

Booms  
  HD Reach 6900 mm  
  Mass excavation 6550 mm  
Buckets (see pages 11, 12)  
  Bucket linkage  
    TB family for TB sticks  
    UB family for UB sticks  
  Bucket tips and sidecutters  
  Edge protectors  
Check valves  
  Boom lowering  
  Stick lowering  
Sticks  
  R3.35TB 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  
Tool selection (via monitor 10 tools)

### Operator Station

Joystick, four buttons  
Radio ready mounting at rear location,  
  24V-12V, speakers  
Straight travel pedal  
Sun Screen

### Undercarriage

Fixed gauge  
Idler, Cast  
Track, GLT4  
  600 mm double grouser shoes  
  750 mm triple grouser shoes  
Track, PPR2  
  600 mm double grouser shoes  
  750 mm triple grouser shoes

### Other Optional Equipment

Converter, 7A-12V (2)  
Fan, hydraulic, reversing  
High intensity discharge lights  
Product Link PL321SR  
Rear View Camera  
Security System, Machine (MSS)  
WAVS Camera ready

# 345D L Hydraulic Excavator

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

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

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