325B L
Hydraulic Excavator

CAT®

Operating weight		
6.15 m (20'2") boom 3.2 m (10'6") stick		
and std. 800 mm (32") track	**28 120 kg**	**62,000 lb**
Travel Speed (maximum)	**5.0 km/h**	**3.1 MPH**
Cat® 3116 TA Diesel Engine (Gross)	**132 kW**	**177 HP**
(Flywheel power)	**125 kW**	**168 HP**

325B L Hydraulic Excavator

Improved performance and rugged durability combine to maximize your productivity.

Operator Station

✔ *Roomy, quiet, automatically climate controlled cab has excellent sightlines to the work area* to help keep operator fatigue low and production up throughout the entire shift. **pg. 4-5**

Serviceability

✔ *Simplified service through more ground level service points, improved filtration and filter access, and electronic diagnostics means increased productivity.* **pg. 6**

Electronic Control System

Maximizes fuel efficiency and performance by maintaining the optimum balance between engine speed and hydraulic demand. **pg. 7**

Improved performance.
Better controllability, higher stick and bucket forces, increased lift capacity, simplified service and a more comfortable operator station increase your productivity and lower your operating costs.

Hydraulics

✔ *New higher pressure Caterpillar® hydraulics provide increased break-out and crowd forces to maximize bucket loads and decrease cycle times*. The Cat Electronic Power Control system allows smooth, efficient operation. **pg. 8**

Engine

The 325B is powered by the Cat 3116 TA engine which complies with worldwide emissions requirements. This engine includes several design features which enhance performance, efficiency and reliability. **pg. 9**

Structures

Caterpillar design and manufacturing techniques assure outstanding durability and service life from these important components. **pg. 10**

Undercarriage

Cat designed excavator undercarriage is stable, durable and low maintenance.

✔ *New smoother track roller frames are easier to clean.* **pg. 11**

Booms, Sticks and Attachments

Two booms and three sticks are available. The reach boom has a larger digging envelope while the mass boom allows larger bucket use with greater digging forces. All booms and sticks are stress relieved. **pg. 12**

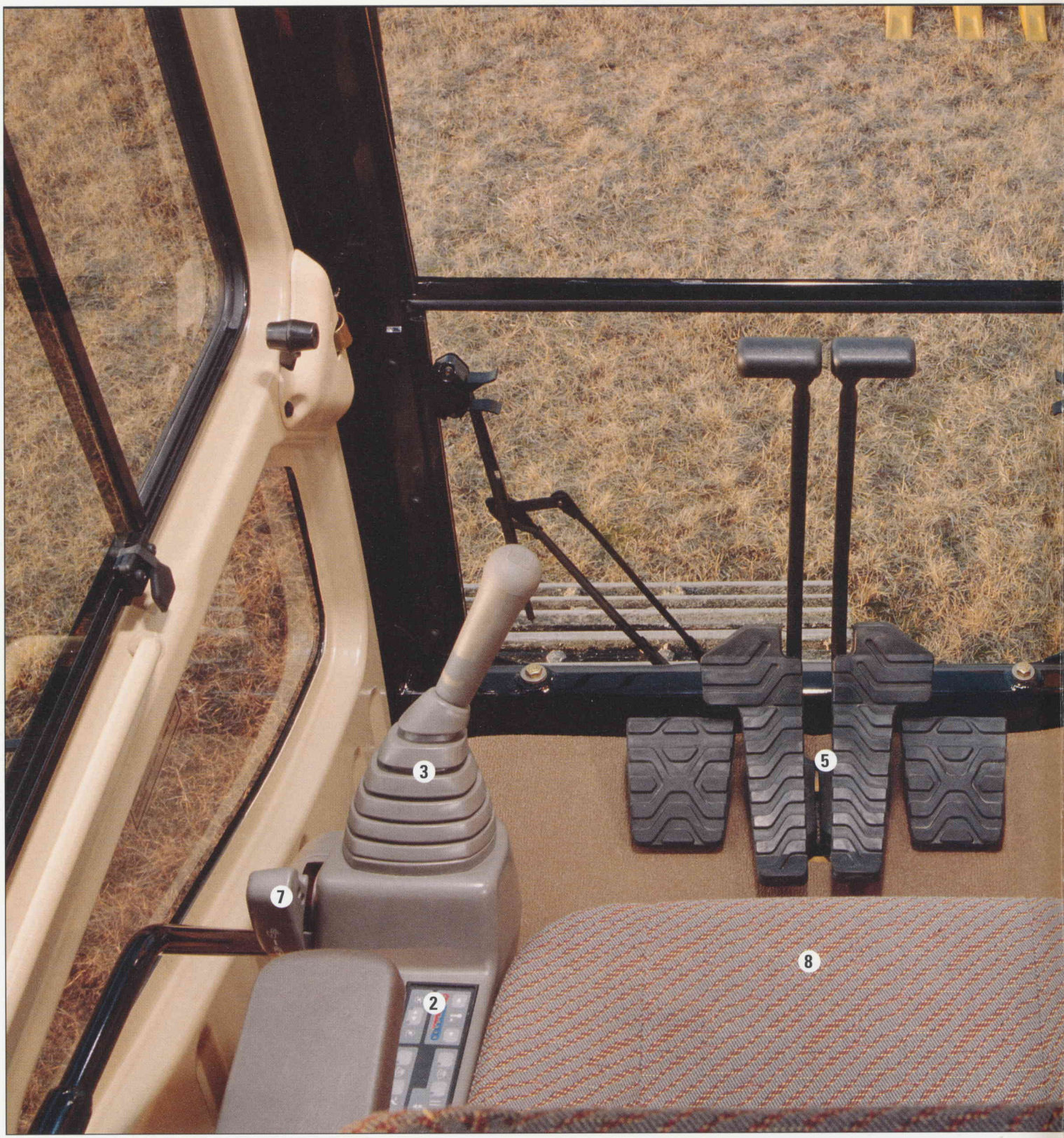
Buckets

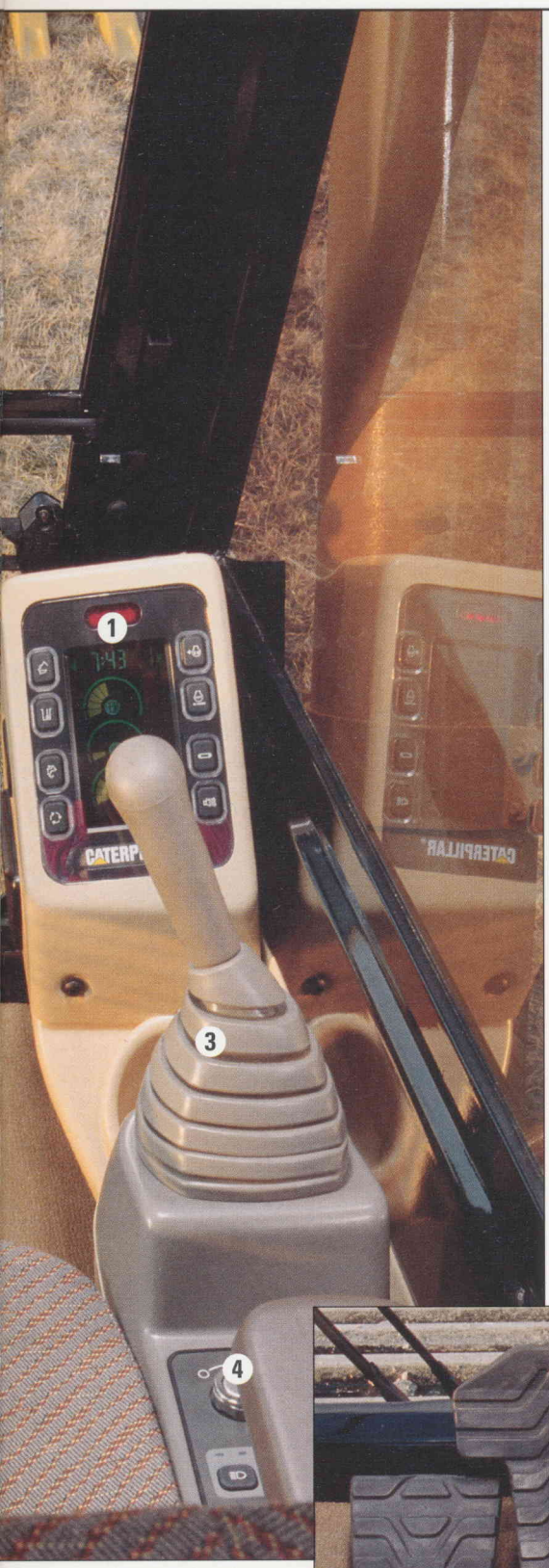
✔ *A wider variety of bucket types, aggressive bucket designs, and larger capacity bucket options take advantage of the 325B's larger digging forces to improve productivity*. **pg. 13**

✔ *New feature*

Operator Station

Designed for comfort and ease of operation.





This operator work station is quiet with ergonomic control placement and convenient adjustments, low lever and pedal effort, ergonomic seat design, and highly efficient ventilation. The result is a cab that puts the operator firmly and comfortably in control which can translate into greater productivity.

Excellent viewing area through large, wide windows. A large wrap-over skylight provides upward visibility. The upper front window includes a top mounted wiper. The upper left side door window can slide open. The lower window provides visibility to the tracks and the ground next to the machine. The rear window offers a good view behind and to the left, aided by a lower hood profile.

Greater control convenience. Each of the controls is positioned within easy reach of the operator.

The double wall, pressed cab shell is mounted to the swing frame using butyl rubber mounts for reduced sound and vibrations.

1 Caterpillar Electronic Control System panel includes fuel level, hydraulic oil temperature and engine temperature gauges, machine condition indicators and operator controls in a single console for ease of use (refer to Electronic Control System on page 7).

2 Automatic climate control maintains constant temperature in the cab on air conditioned machines. The operator can switch to standard air conditioning system with fresh or recirculated air.

3 Joysticks control all implements and swing functions with minimal effort. The integrated joystick consoles adjust to operator preference. Joystick consoles are suspended as part of the seat arrangement. Height can be adjusted independently of the seat.

4 Dial throttle with ten settings for simple, precise engine speed adjustment.

5 Hand or foot actuated travel controls allow the operator to move the excavator while working the front-end. Hand levers are easily removable.

6 Optional straight travel pedal provides forward or reverse straight line travel. Steering adjustments can be made by using right or left travel pedals in combination with the straight travel pedal.

7 Hydraulic activation control lever deactivates hydraulic functions and prevents start-up when the operator exits the cab.

8 The fully adjustable Cat suspension seat includes an impressive range of comfort features. In addition to fore/aft height and weight adjustments, it also offers lumbar, arm support/rests and a retractable seat belt.

Serviceability

Simplified service and maintenance features save you time and money.

Faster, easier maintenance means improved uptime and a better value.

More ground level service points for fuel-water separator, engine oil filter, battery, radiator fluid level, window washer fluid level and pilot system filter.

Improved filters and filter locations makes maintenance easier.

- Hydraulic capsule filter moved to outside hydraulic tank. New design avoids spills and contamination during replacement. Indicator in cab signals when the filter needs to be replaced, extending filter service life.
- Radial seal air cleaner has double layered filter core for better filtration. No tools required to change. Operator is alerted to clogs.
- Engine oil filter moved to pump compartment. Filter opening faces up to avoid spills during changes.
- Pilot hydraulic system filter keeps contaminates away from the pilot system. This system includes a Scheduled Oil Sampling port to simplify sampling.
- Swing and travel motor filter removes contaminants, keeping them from returning to the tank.

Design and layout improvements translate to ease of use.

- Optional easy to clean side-by-side radiator and oil cooler improve cooling by minimizing clogging in high debris environments.
- Front linkage pin puller holes promote easier disassembly of front linkage.
- Cotter pin retained track master pin simplifies disassembly and assembly.
- Steeper roller frame design reduces dirt buildup for easier cleaning.

Environmentally improved features solve problems and protect the future.

- Optional hydraulic tank shutoff valve reduces hydraulic spills during repair service.
- Adaptable to biodegradable hydraulic oils to reduce environmental impact.

Water separator removes water from fuel even when under pressure and is located in the radiator compartment.

Remote greasing block on the boom and two grease points for the swing bearing deliver grease to hard to reach locations.

Electronic Power Unit Control has diagnostic capabilities for Cat dealer's use.

- Dealer service technicians can quickly and easily diagnose and adjust machine components, maximizing uptime.

Electronic Control System

The Electronic Control System manages the engine and hydraulics for maximum performance.

Electronic Power Unit Control System controls state-of-the-art hydraulics and engine performance for maximized productivity, increased fuel efficiency, and lower emission and sound levels.

Automatic Engine Speed Control reduces engine speed to 1300 rpm during light-load or no-load applications. Button on right control lever engages low idle function reducing engine speed to 950 rpm. Press again to return to previous setting.

Electronic Engine Underspeed Control balances engine and hydraulic output for maximum performance and fuel efficiency.

- It adjusts hydraulic pump output to maintain engine rpm in optimum range.
- 100 percent of engine power is available for the hydraulic system.

Operator control panel allows optimization of performance in all applications. The high contrast back-lit liquid crystal display includes:

1 Power Mode Selector changes engine power and speed at the touch of a button.

- **Economy Mode** sets engine power at 90 percent and is used during normal and utility operations to reduce fuel consumption and sound levels.
- **Power Up Mode** sets engine power at 100 percent for high production truck loading, trenching, and high-speed travel.

Work Mode Selector matches hydraulic characteristics to the application.

2 Boom Priority Mode gives priority flow to the boom for deep trenching and truck loading, where there is significant boom movement relative to swing.

3 Swing Priority Mode gives swing flow priority and is especially suited to sidewall digging.

4 Fine Control Mode optimizes hydraulic pump output for applications like slope finishing or precision lifting which require smoother control.

5 User Mode allows the operator to choose from two submodes:

- **Tamping Mode** adjusts boom speed and force to keep machine motion at a minimum when compacting material with the bucket.
- **Customer Mode** allows a set of hydraulic performance attributes to be selected, recorded, and recalled for later use.

Machine monitoring system uses a progression of indicators, action lamps, and alarms to inform the operator of machine conditions.

Service Mode of the Electronic Power Unit Control delivers fast, detailed diagnosis of machine conditions improving uptime (refer to Serviceability).

Hydraulics

Caterpillar hydraulics deliver power and control to keep material moving at high volume.

Dramatically increased control responsiveness aids operation and improves cycle time.

- Control movements better matched to hydraulic action for improved operator performance.
- Improved swing damping restrains drift and improves positioning during finishing and lifting applications reducing operator fatigue.

Sixteen percent larger boom cylinders and full-time nine percent increase in hydraulic relief pressure increases boom, stick, and bucket forces for better productivity, eighteen percent average higher lift capacity and wider range of workable material.

Hydraulic cross-sensing system improves productivity with faster implement speeds and quicker, stronger pivot turns.

- 100 percent of engine horsepower deliverable as hydraulic power.
- Full power to a single motor for strong, fast turns. Balanced power to two pumps for straight travel.

Boom regeneration circuit diverts oil within the cylinder to lower the boom, pumps have all pressure and flow available for other circuits.

Fine swing control cushions swing start and stop for better implement control.

Pump flow decreases when controls are in neutral for reduced fuel consumption and sound.

Auxiliary hydraulic valve is standard on the 325B for use with optional hydraulic circuits.

Auxiliary hydraulic flow control system option provides up to four programmable flow presets to precisely match hydraulic tool requirements (i.e., hammers, shears, processors, brush cutters, etc.).

Hydraulic cylinder snubbers at rod-end of boom cylinders and both ends of stick cylinders cushion shocks, reduce sound and increase cylinder life.

Cat's XT hose and reusable couplings meet the critical flexibility and strength demands of the 325B.

- O-ring face seal couplings provide positive sealing for reliable, leak-free connections.
- Hydraulic tank located closer to pumps for increased hydraulic efficiency.

Cat 3116TA Engine

The six cylinder turbo-charged and aftercooled engine is built for power, reliability, economy and low emissions.

Automatic Engine Control with convenient one-touch command. Three-stage control maximizes fuel efficiency and reduces sound levels.

- When placed in the "OFF" mode, if a no-load condition or light-load condition continues more than three seconds, the automatic engine control reduces engine speed by 100 rpm.
- When placed in the "ON" mode, if a no-load condition or light-load condition continues more than three seconds, the automatic engine control reduces engine speed from high idle to 1300 rpm.
- At any time, the operator can activate a switch on the top of the right control lever to reduce the engine speed to 950 rpm. This feature, referred to as one-touch idle, can be used both to conserve fuel and to reduce engine sound levels. Activate switch again to return to previous level.

High displacement, low rpm rating and conservative HP rating mean longer service hours with less downtime for maintenance and repair.

Turbo-charged and aftercooled to increase engine power by burning fuel with greater efficiency.

Two-piece pistons are used for high durability, good fuel efficiency and low vibration. These pistons better withstand higher internal cylinder pressure.

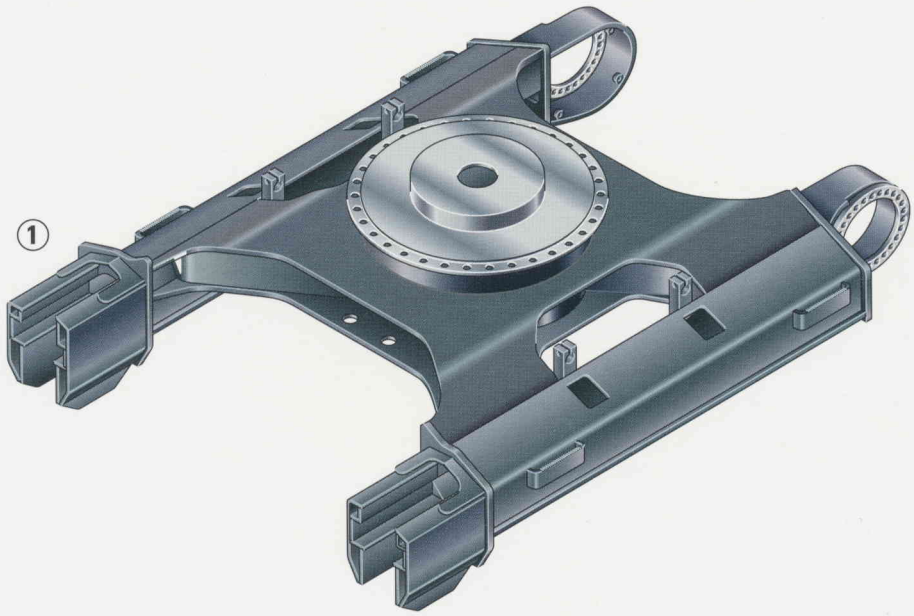
Meets all current and proposed worldwide emissions standards up to the year 2001.

Air intake heating is standard on the 325B for easier cold starts. When coolant temperature is above 10° C (50° F) the air intake heater does not operate, below that temperature the length of the heating period automatically adjusts to the temperature.

Fuel tank capacity has been increased to allow 15 hours of continuous operation under normal load.

Structures

The 325B structural components are the backbone of the machine's durability.



1 Advanced carbody design stands up in the toughest applications.

- Modified X-shaped, box-section carbody provides excellent resistance to torsional bending.
- Upper structure weight and stresses are distributed evenly across the full length of the track roller frame.
- Smooth transitions and long welds reduce stresses at the carbody-to-roller frame junctions for excellent durability.
- Robot welding ensures consistent, high-quality welds throughout the manufacturing process.

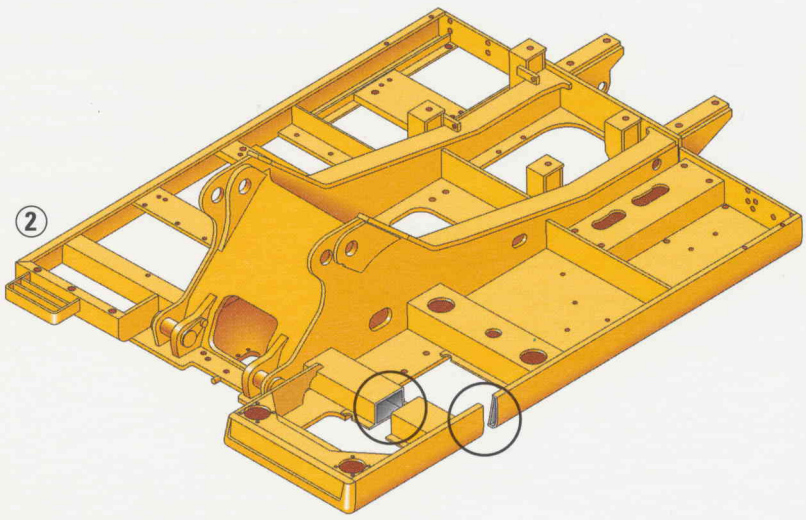
Robot-welded track roller frames are press-formed, pentagonal units to deliver exceptional strength and service life.

2 Rugged main frame is designed for maximum durability and efficient use of materials.

- Outer frame utilizes curved side rails, which are die-formed, for excellent uniformity and strength throughout the length.
- Box section channels improve upper frame rigidity under the cab.
- Inverted U-channels span the width of the main frame and are formed, rather than fabricated, for superior strength and reduced weight.
- Boom tower and main rails are constructed of solid, high-tensile strength steel plates.
- Boom foot and engine mount areas reinforced for additional strength.
- Sheet metal supporting structure is improved by integrating the mounting into upper frame structure.

Caterpillar excavator booms and sticks are built for performance and long service life.

- Castings and forgings are used at high stress areas such as boom nose, boom foot, boom cylinder and stick foot.
- Large, welded, box-section structures with thick, multi-plate fabrications in high-stress areas.
- Construction allows structures to flex and dissipate stresses.
- All booms and sticks are stress relieved to maximize material strength and durability, while minimizing weight for improved performance.



Undercarriage

Durable undercarriage absorbs stresses and provides excellent stability.

Precision robotic welding ensures a quality weld every time. These welds increase rigidity, reduce internal stresses and enhance durability for the chassis and track roller frames.

Heavy-duty, X-shaped chassis design. Cat undercarriage components are purposely oversized to offer heavy-duty performance and durability.

Strutted track links are sealed for longer life. Track rollers, carrier rollers and idlers are also sealed and lubricated for excellent service life.

Smoother autoshifting two-speed travel motors offer 11 percent increase in top travel speeds and plenty of pull on slopes or turns.

Long (L) undercarriage maximizes stability and lifting capacity. Long, wide and sturdy undercarriage offers a very stable work platform.

Steeper track roller frame design and the elimination of a ledge at carbody and roller frame juncture reduces material build-up and makes digging out easier.

Standard idler guards and center track guides maintain track alignment. Optional sprocket guiding guards or full length track guiding guards are available for additional protection on steep side slopes.

Booms, Sticks and Attachments

The 325B has designed-in flexibility to help bring higher production and efficiency to your jobs.

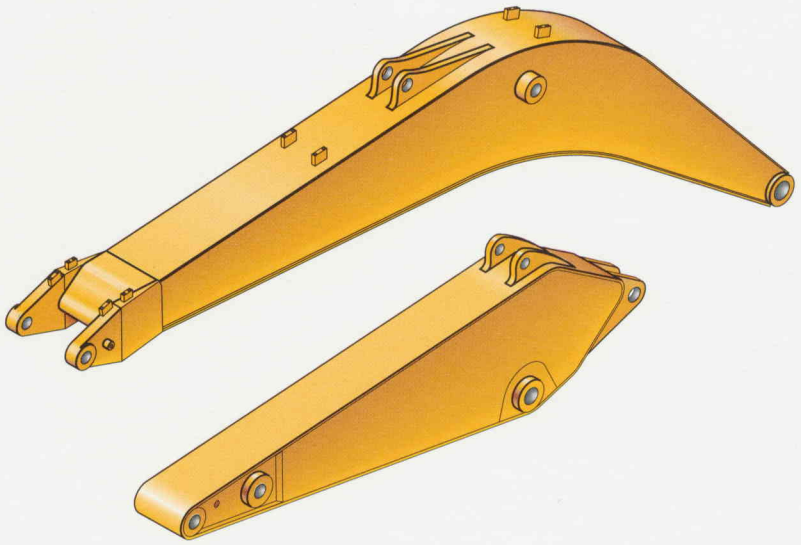
Select the right combination for the job with your Cat dealer and you'll help ensure top production from the start.

The choice of two booms and three sticks, plus a wide selection of buckets and attachments, means the 325B offers a large combination of reach and digging forces for optimum versatility.

Choose from a variety of work tools such as hammers, shears, rotators, grapples or crushers. Ask your Cat dealer for information on attachments or special configurations.

The Reach Boom (R) 6.15 m (20'2") features an optimum design that maximizes digging envelopes with two stick choices.

- The R/M3.2C stick gives the largest working envelope with medium (C-sized) buckets.
- The R2.7C stick uses the higher capacity buckets and is best suited to trenching, excavation and general construction applications.



The Mass Excavator (M) Boom 5.55 m (18'0") maximizes productivity. The M version offers significantly higher digging forces to allow use of larger buckets.

- The R/M3.2C stick gives the largest working envelope with the Mass Excavator (M) Boom and C-sized buckets.
- The M2.5D stick has been specifically designed for large earth moving applications and uses D-sized buckets.

1 Caterpillar side impact protection (optional) bumpers help protect machines from damage, reducing repair and service time. Rubber is bonded to high-strength steel plates and bolted to the upper frame.

Buckets

Increased offerings of buckets help optimize machine performance.

Caterpillar buckets provide increased service life with reduced repair costs. All buckets except ditch cleaning have the following features:

- Dual Radius design for increased heel clearance and reduced wear.
- Robot welding of hinge assembly (Cat and Balderson) and other critical areas (Cat only) for increased weld penetration and longer life.
- High strength and heat treated steel in high wear areas.

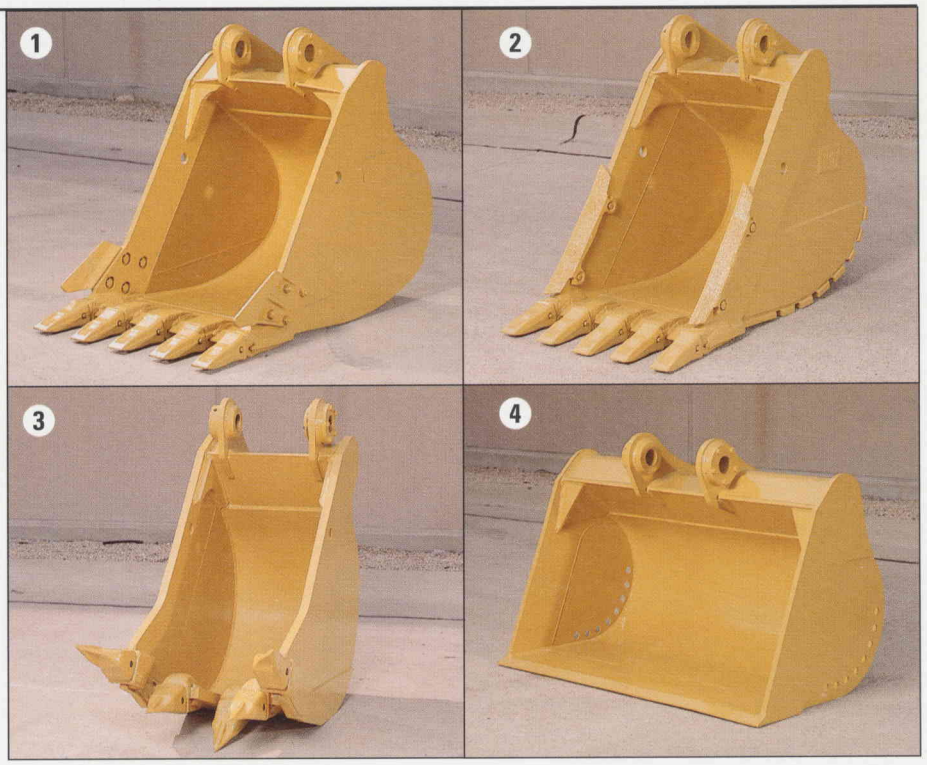
1 Heavy Duty (HD) Buckets for digging in moderate to hard abrasive materials. Differences from GP buckets are as follows:

- Larger Ground Engaging Tools (GET), thicker cutting edges and thicker bottom and side wear plates improve performance in demanding applications.

General Purpose (GP) Buckets (from Balderson) are best for digging in soft to hard ground with low to moderate abrasive materials.

2 Heavy Duty Rock (HDR) Buckets perform best when digging fragmented rock, frozen ground, caliche and highly abrasive materials. Differences from HD buckets are as follows:

- Additional, thicker wear plates extend beyond side plates for corner and rear dent protection and improved durability.
- Larger side plates provide additional dent protection.
- Sidebar protectors decrease sidebar wear.



3 Heavy Duty Rock Ripping (RR) Buckets dig hard rock and work in areas where material is virgin or poorly prepared. Differences from HDR buckets are as follows:

- Stepped tooth design allows one or two tip penetration for higher break-out forces and keeps the trench floor flat.
- Thicker side wear plates, cutting edges and larger GET (C family only) mean additional wear life.

4 Ditch Cleaning (DC) Buckets (from Balderson) are wide shallow buckets for bank forming, ditch cleaning and finishing.

Mechanical and hydraulic quick couplers speed attachment changes.

- Actuator mechanism is sealed, lubricated and has high strength, heat-treated steel wear surfaces for use in severe applications.
- The quick coupler allows buckets and attachments from the 320 through the 330 to be interchanged.

Complete Customer Support

Cat dealer services help you operate longer with lower costs.

Your Cat dealer offers a wide range of services that can be set up under a customer support agreement when you purchase your equipment. To help you get the best return on your investment, the dealer will help you choose a plan that can cover everything from machine and attachment selection to replacement.

Selection. Make detailed comparisons of the machines you are considering before you buy. What are the job requirements? What production is needed? What is the true cost of lost production? Your Cat dealer can give you precise answers to these questions.

Purchase. Look past initial price. Consider the financing options available as well as day-to-day operating costs. This is also the time to look at dealer services that can be included in the cost of the machine to yield lower equipment owning and operating costs over the long run.

Operation. Improving operating techniques can boost your profits. Your Cat dealer has training videotapes, literature and other ideas to help you increase productivity.

Maintenance. What is the cost of preventive maintenance? More and more equipment buyers are planning for effective maintenance before buying equipment. Choose from your dealer's wide range of maintenance services at the time you purchase your machine. Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as Scheduled Oil Sampling and Technical Analysis help you avoid unscheduled repairs.

Replacement. Repair, rebuild or replace? Your Cat dealer can help you evaluate the cost involved so you can make the right choice.

Product support. You will find nearly all parts at our dealer parts counter. Cat dealers utilize a worldwide computer network to find in-stock parts to minimize machine down time. Save money with remanufactured parts. You receive the same warranty and reliability as new products at cost savings of 40 to 70 percent.

Engine

Caterpillar four-cycle 3116TA quad turbo-charged and aftercooled, diesel engine.

Ratings at 2000 rpm*	kW	HP
Gross power	132	177
Net power	125	168

The following ratings apply at 2000 rpm when tested under the specified standard conditions for the specified standard:

Net power	kW	HP
Caterpillar	125	168
ISO 9249	125	168
SAE J1349	125	168
EEC 80/1269	125	168

Dimensions

Bore	105 mm	4.13 in
Stroke	127 mm	5.0 in
Displacement	6.6 liters	403 in^3

***Power rating conditions**

- based on standard air conditions of 25°C (77°F) and 99 kPa (29.32 in Hg) dry barometer
- used 35° API gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 30°C (86°F) [ref. a fuel density of 838.9 g/L (7.001 lb/ U.S. gal)]
- net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator

Features

- mechanical unit fuel injectors control fuel delivery more efficiently, resulting in better performance, fuel economy, and reduced emissions
- two hard-faced inlet and exhaust valves per cylinder, valve rotators and hard alloy-steel seats
- self-aligning roller followers on camshaft
- two-piece pistons with steel crown (three rings) and thermally isolated aluminum skirt
- 24-volt electric system with 52-amp alternator and two 100-amp/hr batteries

Drive

Drive system is fully hydrostatic.

Ratings		
Maximum drawbar pull	215 kN	(48,350 lb)
Maximum travel speed	5.0 kph	(3.1 mph)

Features

- each track is driven by one independent, automatic shifting, two-speed bent-axis piston motor via integral planetary final drives
- multiple disc brakes have increased braking capacity, are spring-engaged and pressure released
- each drive module is well integrated into the roller frame for total protection

Hydraulic System

Two variable displacement, axial-piston pumps power the boom, stick, swing, bucket, auxiliary and travel circuits. One single-section, gear-type pump powers the pilot circuit.

Main Implement System	
Maximum flow	2 x 208 liters/min (2 x 54.9 gpm)
Maximum pressure	
Implements	34 300 kPa (4980 psi)
Travel	34 300 kPa (4980 psi)
Swing	27 500 kPa (3990 psi)

Pilot System	
Maximum flow	41 liters/min (10.8 gpm)
Maximum pressure	4100 kPa (565 psi)

Cylinders, Bore and Stroke	
Boom (2)	140 x 1407 mm (5.5" x 4'7")
Stick (1)	150 x 1569 mm (5.9" x 5'2")
Bucket (1)	
C family	130 x 1156 mm (5.1" x 3'10")
D family	150 x 1156 mm (5.9" x 3'10")

Features

- main hydraulic pumps are electronically controlled and dependent on engine speed
- power modes match hydraulic output to application severity

Steering

Two rocker pedals with detachable hand levers control steering and travel functions.

Controls

- controls are pilot-operated for reduced efforts
- left pedal and lever control left track; right pedal and lever control right track
- when idlers are in front, pushing both pedals or levers forward moves the excavator straight ahead
- when the idlers are in front, rocking both pedals or pulling both levers backward moves the excavator straight back
- moving one pedal or lever more than the other, either forward or backward, results in a gradual turn
- moving one pedal or lever forward and the other pedal or lever backward counter-rotates the tracks for spot turns
- optional straight travel third pedal drives both tracks forward or reverse at the same speed. Steering adjustments can be made by simultaneously pressing right or left pedal.

Brakes

Meets the following standards:
SAE J1026 APR90

Service and parking brake features

- wet, multiple-disc brakes are used on the final drive input shafts
- spring-applied, hydraulically released
- actuating a travel control simultaneously releases the brakes
- when the controls are released, the brakes automatically apply

Swing Mechanism

Hydrostatic with independent planetary reduction.

Ratings

Swing Torque	76 kN•m (56,080 lb ft)

Features

- the swing mechanism is driven by a pinion gear sealed in a grease bath through a double-reduction planetary gear set.

Service Refill Capacities

	L	Gallons
Fuel Tank	420	111
Cooling System	31.5	8.3
Engine Oil	20	5.3
Swing Drive	10	2.6
Final Drive (each)	8	2.1
Hydraulic system (including tank)	310	82
Hydraulic tank	175	46

Track

Caterpillar designed and built track-type undercarriage.

Track width	
standard	800 mm (32") triple grouser
optional	600 mm (24") double grouser
	700 mm (28") double grouser
Ground clearance	480 mm (1'7")

Implement Controls

Two joystick hand levers actuate boom, stick, bucket and swing (SAE pattern).

Boom/Bucket Controls (Right Joystick)

- move forward and backward to lower and raise boom
- move left and right to control bucket curl and dump
- button on top is one-touch low idle

Stick/Swing Controls (Left Joystick)

- move forward and backward to move stick out and in
- move left and right to control direction of swing
- button on top controls horn

Other Features

- oblique movement of either lever operates two functions simultaneously
- manually applied lever on left console cuts off pilot pressure for joysticks and travel controls and electrical power for engine starting circuit
- optional hand control pattern changer allows easy change-over between SAE and backhoe loader patterns

Cab/FOGS

Bolt-on Falling Object Guard System (FOGS) is available as an attachment.

Cab Certifications

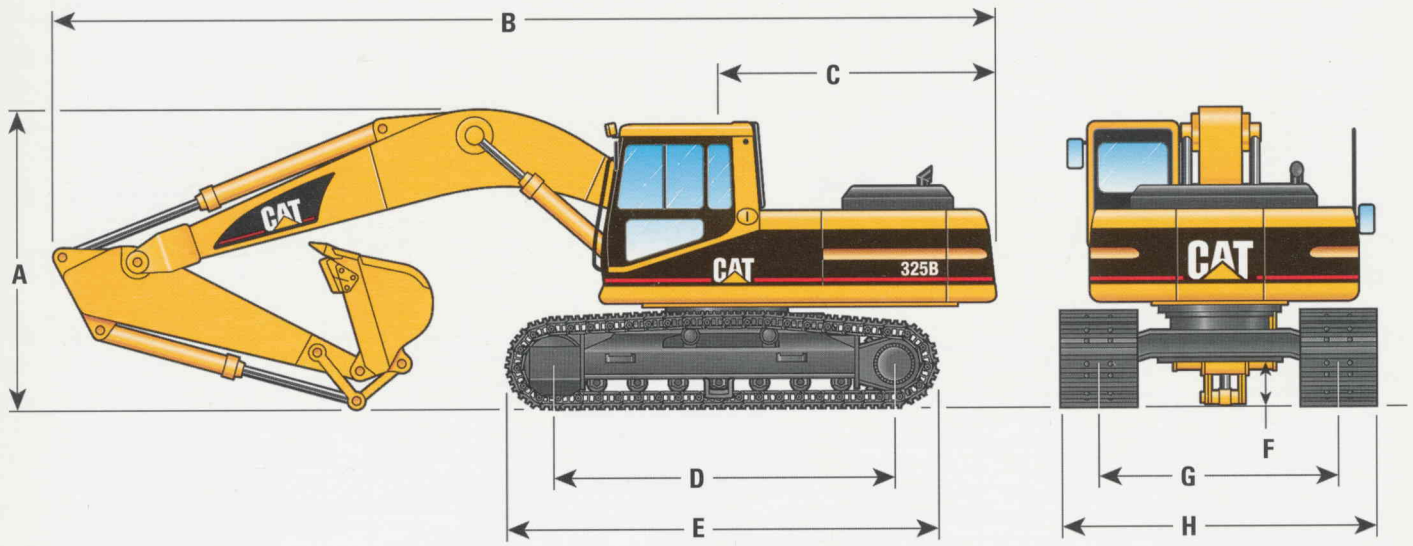
- Optional Falling Object Guard System is designed to protect the operator from falling objects, and is certified under SAE J1356 Feb 88 and ISO 3449-1984 specifications.

Note

When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 MAY90, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.

Dimensions

All dimensions are approximate.

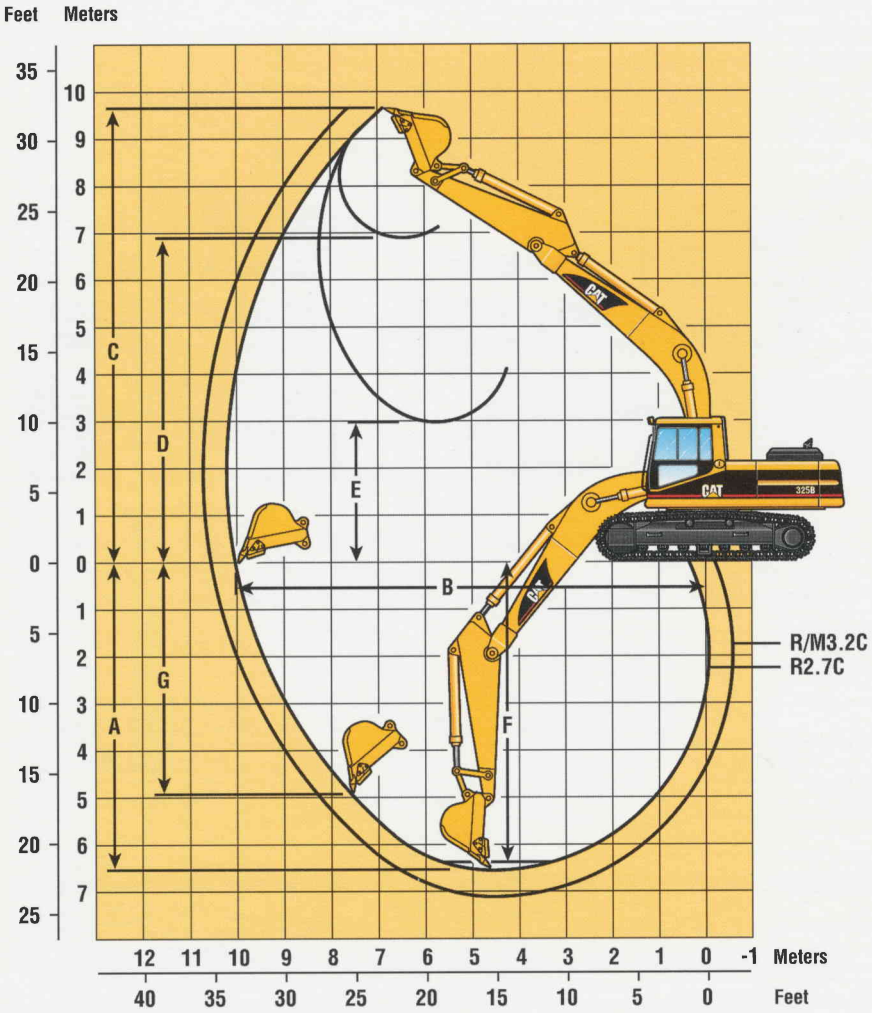


Reach Boom 6.15 m (20'2")	R/M3.2C m (10'6") Stick	R2.7C m (8'8") Stick
A Shipping height	3270 mm (10'9")	3270 mm (10'9")
B Shipping length	10 290 mm (33'9")	10 290 mm (33'9")
C Tail swing radius (Reach and Mass Boom)	3050 mm (10')	3050 mm (10')
D Length to centers of rollers (Reach and Mass Boom)	3795 mm (12'5")	3795 mm (12'5")
E Track length (Reach and Mass Boom)	4660 mm (15'3")	4660 mm (15'3")
F Ground clearance (Reach and Mass Boom)	480 mm (1'7")	480 mm (1'7")
G Track gauge (Reach and Mass Boom)	2590 mm (8'6")	2590 mm (8'6")
H Transport width (Reach and Mass Boom) with 800 mm (32") Shoes	3390 mm (11'1")	3390 mm (11'1")

Mass Boom 5.55 m (18'2")	R/M3.2C m (10'6") Stick	M2.5D m (8'2") Stick
A Shipping height	3190 mm (10'6")	3460 mm (11'4")
B Shipping length	9700 mm (31'10")	9710 mm (31'10")

Reach Excavator Working Ranges

Reach (R) boom configuration

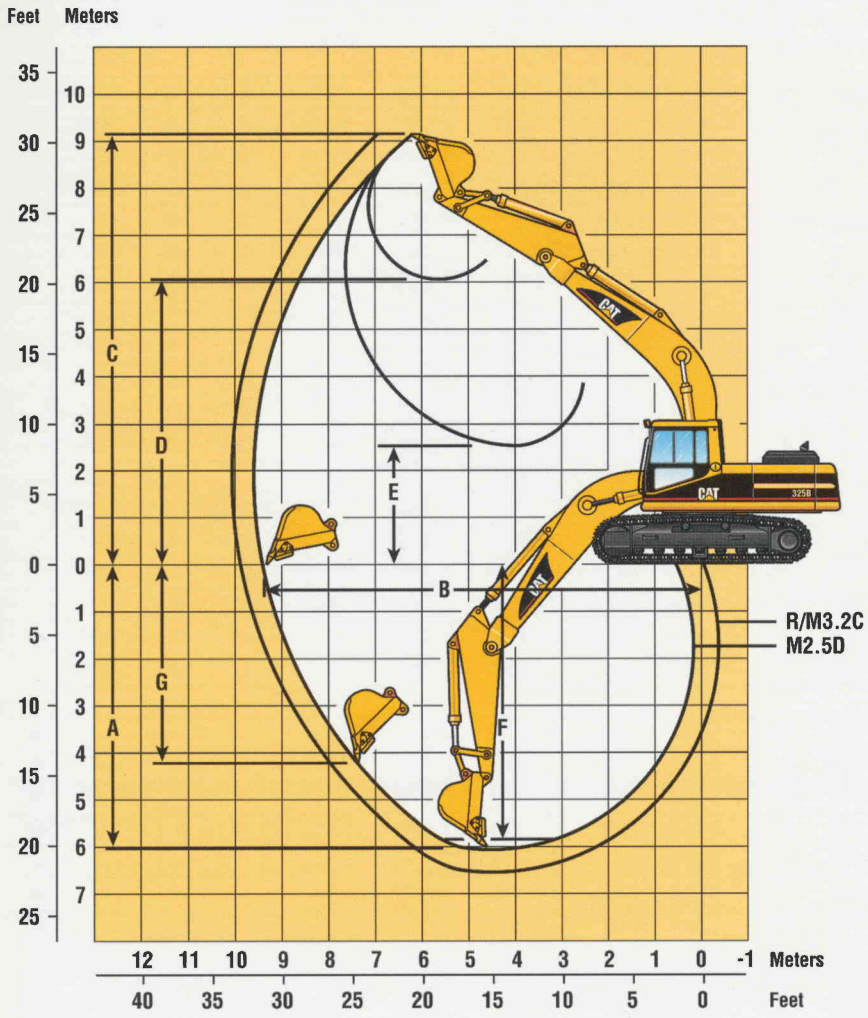


Stick Length	R/M3.2C m (10'6")*	R2.7C m (8'8")*
A Maximum Digging Depth	7.12 m (23'4")	6.57 m (21'7")
B Maximum Reach at Ground Level	10.55 m (34'7")	10.04 m (32'11")
C Maximum Cutting Height	9.88 m (32'5")	9.68 m (31'9")
D Maximum Loading Height	7.08 m (23'3")	6.87 m (22'6")
E Minimum Loading Height	2.42 m (7'11")	2.97 m (9'9")
F Maximum Depth Cut for 244 mm (8') Level Bottom	6.96 m (22'10")	6.38 m (20'11")
G Maximum Vertical Wall Digging Depth	5.36 m (17'7")	4.95 m (16'3")
Bucket Digging Force (SAE)	169 kN (37,940 lb)	168 kN (37,660 lb)
Stick Digging Force (SAE)	122 kN (27,440 lb)	140 kN (31,430 lb)

* All measurements shown are for machines equipped with the 1.2 m^3 (1.5 yd^3) bucket

Mass Excavator Working Ranges

Mass (M) boom configuration



Stick Length	R/M3.2C m (10'6")**	M2.5D m (8'2")*
A Maximum Digging Depth	6.57 m (21'6")	6.04 m (19'10")
B Maximum Reach at Ground Level	9.91 m (32'6")	9.38 m (30'9")
C Maximum Cutting Height	9.47 m (31'1")	9.15 m (30'0")
D Maximum Loading Height	6.66 m (21'10")	6.06 m (19'11")
E Minimum Loading Height	2.00 m (6'7")	2.53 m (8'3")
F Maximum Depth Cut for 244 mm (8') Level Bottom	6.40 m (21'0")	5.85 m (19'2")
G Maximum Vertical Wall Digging Depth	4.87 m (16'0")	4.21 m (13'10")
Bucket Digging Force (SAE)	169 kN (37,940 lb)	183 kN (41,080 lb)
Stick Digging Force (SAE)	122 kN (27,420 lb)	133 kN (29,870 lb)

** All measurements shown are for machines equipped with the 1.2 m^3 (1.5 yd^3) bucket

* All measurements shown are for machines equipped with the 1.5 m^3 (2.0 yd^3) bucket

325B Bucket Specifications and Compatibility

	Capacity*		Width		Tip Radius		Weight		Teeth	Reach		Mass Ex.	
										3.2C	2.7C	3.2C	2.5D
	m^3	yd^3	mm	in	mm	in	kg	lb	Qty	(10'6")	(8'8")	(10'6")	(8'3")
C Buckets for Reach Linkage													
Heavy Duty (HD)	0.7	0.88	775	30	1638	64.5	792	1,742	3	●	●	●	—
	0.9	1.25	948	36	1638	64.5	888	1,954	4	●	●	●	—
	1.1	1.5	1098	42	1638	64.5	962	2,116	5	●	●	●	—
	1.2	1.5	1378	54	1638	64.5	1082	2,380	5	●	●	●	—
	1.3	1.75	1248	48	1638	64.5	1037	2,281	5	●	●	●	—
	1.5	2.0	1395	54	1518	60	1119	2,462	6	◒	●	●	—
	1.7	2.25	1522	60	1638	64.5	1195	2,629	7	◒	◒	◒	—
	1.9	2.5	1680	66	1638	64.5	1281	2,818	7	○	○	◒	—
General Purpose (GP)	0.8	1.12	775	30	1778	70	803	1,767	3	●	●	●	—
	1.1	1.5	948	36	1778	70	890	1,958	5	●	●	●	—
	1.3	1.75	1098	42	1778	70	951	2,092	5	●	●	●	—
	1.6	2.12	1248	48	1778	70	1046	2,301	6	◒	●	●	—
	1.9	2.5	1395	54	1778	70	1116	2,455	7	○	◒	◒	—
Ditch Cleaning (DC)	1.1	1.5	1676	66	1132	45	813	1,789	—	●	●	●	—
	1.2	1.62	1829	72	1132	45	860	1,892	—	●	●	●	—
Heavy Duty Rock (HDR)	0.9	1.25	948	36	1638	64.5	1000	2,200	4	●	●	●	—
	1.1	1.5	1098	42	1638	64.5	1084	2,385	5	●	●	●	—
	1.3	1.75	1248	48	1638	64.5	1168	2,570	5	●	●	●	—
Rock Ripping (RR)	0.6	0.75	850	33	1660	65	1084	2,385	5	X	●	X	—
D Buckets for Mass Ex. Linkage													
Heavy Duty (HD)	0.7	1.0	775	30	1764	69	875	1,925	3	—	—	—	●
	0.9	1.25	925	36	1764	69	968	2,130	3	—	—	—	●
	1.2	1.5	1098	42	1764	69	1079	2,374	4	—	—	—	●
	1.4	1.88	1246	48	1764	69	1206	2.653	5	—	—	—	●
	1.5	2.0	1440	57	1695	67	1330	2,926	5	—	—	—	◒
	1.6	2.12	1400	55	1764	69	1306	2,873	5	—	—	—	●
	1.8	2.5	1540	60	1764	69	1407	3,095	6	—	—	—	◒
	2.0	2.75	1695	66	1764	69	1493	3,285	6	—	—	—	◒
	2.2	3.0	1820	72	1764	69	1620	3,564	7	—	—	—	○
General Purpose (GP)	0.8	1.12	775	30	1854	73	947	2,083	3	—	—	—	●
	1.1	1.5	925	36	1854	73	1024	2,253	3	—	—	—	●
	1.4	1.88	1098	42	1854	73	1116	2,455	5	—	—	—	●
	1.7	2.25	1246	48	1854	73	1146	2,521	5	—	—	—	●
	1.9	2.5	1400	55	1854	73	1192	2,622	5	—	—	—	●
	2.2	3.0	1540	60	1854	73	1400	3,080	6	—	—	—	◒
Ditch Cleaning (DC)	1.7	2.25	1676	66	1424	56	1192	2,622	—	—	—	—	●
	1.8	2.5	1829	72	1424	56	1239	2,726	—	—	—	—	●
Heavy Duty Rock (HDR)	1.2	1.5	1098	42	1764	69	1294	2,847	4	—	—	—	●
	1.4	1.88	1246	48	1764	69	1437	3,161	5	—	—	—	●
	1.6	2.12	1400	55	1764	69	1553	2,417	5	—	—	—	●
Rock Ripping (RR)	0.7	0.88	900	35	1746	69	1123	2,471	5	—	—	—	●
QC Buckets													
General Purpose (GP)	0.5	.62	700	29	1570	62	757	1,665	3	●	●	●	●
	0.8	1.0	925	36	1570	62	891	1,960	5	●	●	●	●
	1.0	1.25	1075	42	1570	62	943	2,075	5	●	●	●	●
	1.2	1.5	1225	48	1670	66	1052	2,314	5	●	●	●	●
	1.3	1.75	1525	60	1670	66	987	2,171	—	◒	◒	●	●
	1.4	1.75	1375	54	1670	66	1114	2,451	5	◒	●	●	●
	1.6	2.0	1520	60	1322	52	1215	2,673	6	◒	◒	●	●

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

* Based on SAE J296, some calculations of capacity specs fall on borderlines. Rounding may allow two buckets to have the same English rating, but different metric ratings.

● 2,000 kg/m^3 (3,400 lbs/yd^3) max material density
◒ 1,800 kg/m^3 (3,000 lbs/yd^3) max material density
○ 1,500 kg/m^3 (2,500 lbs/yd^3) max material density
— Not Available
X Not Recommended

Standard Equipment

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

- Alternator, 52-amp
- Alarm, travel
- Automatic engine speed control
- Automatic swing parking brake
- Auxiliary hydraulic valve and auxiliary pump drive location
- Cab
  - Air conditioner with automatic climate control
  - Ash tray with cigar lighter
  - Coat hook
  - Drink holder
  - Floor mat
  - Heater and defroster
  - Horn
  - Instrument panel with gauges
    - Gauges and indicator lights for fuel level, coolant temperature and hydraulic oil temperature
  - Light, interior
  - Literature compartment
  - Low fuel indicator light
  - Joysticks, adjustable pilot-operated
  - Prewired radio mounting
  - Positive filtered ventilation
  - Seat belt, retractable
  - Seat, suspension, fully adjustable
  - Stationary skylight
  - Storage compartment suitable for a lunch box cooler
  - Travel control pedals
    - Two-speed auto shift travel
  - Windshield wiper and washer
- Counterweight
- Door locks and caps locks with Caterpillar one-key security system
- Fine swing control
- Fully pressurized hydraulic system
- Hydraulic neutralizer lever for all controls
- Lights, working
  - Frame mounted, one
  - Boom, both sides
  - Cab mounted, two
- Mirrors, frame and cab
- Muffler
- Pre-start monitoring system
- Polycarbonate and glass windows
- Power Mode Selector
- Power train
  - CAT 3116TA Diesel engine with 24-volt electric starting and air intake heater
- Water separator
- Work Mode Selector
- Undercarriage
  - Hydraulic track adjusters
  - Track-type sealed undercarriage
  - Idler and center section track guides
  - 800 mm (32") triple-grouser shoes

Optional Equipment

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

- Air conditioner, with automatic climate control, omission
- Alarm, travel (required in U.S.)
- Booms:
  - Reach 6.15 m (20'2")
  - Mass excavation 5.55 m (18'2")
- Buckets, see pages 13 and 20
- Bucket linkage:
  - C family
  - D family
- Bucket sidecutters and tips
- Check valves:
  - Boom lowering
- Cooling system, high ambient
- Easy Shift Control Pattern Changer
- Easy clean side-by-side radiator and hydraulic oil cooler
- Guards:
  - Falling Object, for cab
  - Full length track guiding
  - Sprocket guiding
  - Heavy duty, under house
  - Vandalism protection
- Hydraulic arrangements, basic auxiliary:
  - One-way, includes two-pump flow
  - One-way/two-way, includes two-pump combined flow
- Hydraulic lines, auxiliary for Reach Boom and sticks
- Hydraulic tank suction line shut-off valve
- Quick Coupler:
  - mechanical or hydraulic
- Rubber bumper side impact protection
- Starting aid, cold weather
- Starting aid, ether
- Straight travel third pedal option
- Sticks:
  - Reach 6.15 m (20'2") Boom:
    - 3200 mm (10'6") R/M3.2C
    - 2650 mm (8'8") R2.7C
  - Mass excavation 5.55 m (18'2") Boom:
    - 3200 mm (10'6") R/M3.2C
    - 2500 mm (8'2") M2.5D
- Sun screen
- Track:
  - 600 mm (24") double-grouser shoes
  - 700 mm (28") double-grouser shoes

Reach Boom Lift Capacities

 Load Point Height

 Load at Maximum Reach

 Load Radius Over Front

 Load Radius Over Side

3.20C STICK – 3200 mm (10'6")
BUCKET – 948 mm, 1.1 m³ (36", 1.5 yd³)

UNDERCARRIAGE – Long
SHOES – 800 mm (32") triple grouser

BOOM – 6150 mm (20'2")

		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)				
																m ft
9.0 m	kg													*2910	*2910	7.6
30.0 ft	**lb**															
7.5 m	kg									*3960	*3960			*2660	*2660	8.9
25.0 ft	**lb**													***6,000**	***6,000**	**28.3**
6.0 m	kg									*5970	4760			*2570	*2570	9.8
20.0 ft	**lb**									***12,700**	**10,200**			***5,700**	***5,700**	**31.4**
4.5 m	kg							*7290	6860	*6560	4660	*3920	3260	*2580	*2580	10.3
15.0 ft	**lb**							***15,800**	**14,700**	***14,300**	**10,000**			***5,600**	***5,600**	**33.3**
3.0 m	kg					*11 530	10 280	*8680	6490	6640	4480	4820	3210	*2670	2470	10.5
10.0 ft	**lb**					***24,800**	**22,100**	***18,800**	**14,000**	**14,200**	**9,600**	**10,300**	**6,800**	***5,800**	**5,500**	**34.2**
1.5 m	kg					*14 090	9490	9270	6110	6430	4290	4730	3120	*2860	2440	10.4
5.0 ft	**lb**					***30,400**	**20,400**	**19,900**	**13,200**	**13,800**	**9,200**	**10,100**	**6,700**	***6,100**	**5,400**	**34.3**
†0.0 m	kg			*4210	*4210	14 590	9050	8960	5840	6260	4130	4650	3050	*3170	2550	10.1
†0.0 ft	**lb**			***9700**	***9700**	**31,200**	**19,400**	**19,200**	**12,600**	**13,400**	**8,900**	**10,000**	**6,500**	***6,700**	**5,500**	**33.6**
-1.5 m	kg	*4890	*4890	*8140	*8140	14 420	8900	8810	5700	6170	4050			*3670	2840	9.5
-5.0 ft	**lb**	***11,000**	***11,000**	***18,500**	***18,500**	**30,800**	**19,100**	**18,900**	**12,300**	**13,300**	**8,700**			***7,600**	**6,000**	**31.9**
-3.0 m	kg	*9100	*9100	*13 230	*13 230	14 470	8950	8800	5700	6180	4060			*4550	3460	8.5
-10.0 ft	**lb**	***20,400**	***20,400**	***30,100**	***30,100**	**31,000**	**19,200**	**18,900**	**12,300**	**13,300**	**8,700**			***9,200**	**7,000**	**29.1**
-4.5 m	kg			*18 010	*18 010	*12 870	9160	8960	5840					*3760	*3760	6.9
-15.0 ft	**lb-**			***38,700**	***38,700**	***27,600**	**19,700**	**19,300**	**12,600**					***10200**	**9,400**	**24.7**

* Indicates that the load is limited by hydraulic capacity rather than tipping capacity. Lift capacity ratings are based on SAE standard J1097. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

† Ground line

2.7C STICK – 2650 mm (8'8")
BUCKET – 948 mm, 1.1 m³ (36", 1.5 yd³)

UNDERCARRIAGE – Long
SHOES – 800 mm (32") triple grouser

BOOM – 6150 mm (20'2")

		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)				
												m ft
7.5 m	kg									***7,600**	***7,600**	**26.2**
25.0 ft	**lb**											
6.0 m	kg							*6630	4670	*3400	*3400	8.3
20.0 ft	**lb**					***15,200**	**15,000**	***13,300**	**10,000**	***7,300**	***7,300**	**29.5**
4.5 m	kg			*9820	*9820	*7980	6750	6760	4590	*3290	2910	9.8
15.0 ft	**lb**					***17,300**	**14,500**	**14,500**	**9,800**	***7,200**	**6,600**	**31.6**
3.0 m	kg			*12 660	10 020	*9310	6400	6590	4440	*3400	2720	10.0
10.0 ft	**lb**			***27,200**	**21,600**	***20,100**	**13,800**	**14,100**	**9,500**	***7,400**	**6,100**	**32.6**
1.5 m	kg			*14 880	9320	9200	6060	6410	4270	*3630	2690	9.9
5.0 ft	**lb**			**32,000**	**20,100**	**19,800**	**13,000**	**13,800**	**9,200**	***7,800**	**5,900**	**32.7**
†0.0 m	kg			14 540	9010	8950	5830	6270	4150	*4010	2830	9.6
†0.0 ft	**lb**			**31,100**	**19,400**	**19,200**	**12,500**	**13,500**	**8,900**	***8,500**	**6,100**	**31.9**
-1.5 m	kg	*8290	*8290	14 480	8960	8850	5750	6220	4100	*4640	3200	8.9
-5.0 ft	**lb**	***18,900**	***18,900**	**31,000**	**19,200**	**19,000**	**12,400**	**13,400**	**8,800**	***9,700**	**6,700**	**30.1**
-3.0 m	kg	*15 130	*15 130	*14 290	9070	8900	5790			*4950	4020	7.8
-10.0 ft	**lb**	***34,500**	***34,500**	***30,900**	**19,500**	**19,100**	**12,500**			***11,600**	**8,000**	**27.1**
-4.5 m	kg	*15 880	*15 880	*11 720	9350	*8290	6010					
-15.0 ft	**lb**	***34,100**	***34,100**	***25,000**	**20,100**	***17,200**	**13,000**			***7,300**	***7,300**	**22.2**

* Indicates that the load is limited by hydraulic capacity rather than tipping capacity. Lift capacity ratings are based on SAE standard J1097. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

† Ground line

Mass Excavation Boom Lift Capacities

 Load Point Height

 Load at Maximum Reach

 Load Radius Over Front

 Load Radius Over Side

3.20C STICK – 3200 mm (10'6") **UNDERCARRIAGE** – Long **BOOM** – 5500 mm (18'2")
BUCKET – 948 mm, 1.1 m³ (36", 1.5 yd³) **SHOES** – 800 mm (32") triple grouser

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)				
														m ft
7.5 m	kg											*2630	*2630	8.2
25.0 ft	**lb**											***5,900**	***5,900**	**25.6**
6.0 m	kg									*4590	*4590	*2510	*2510	9.1
20.0 ft	**lb**									***8,800**	***8,800**	***5,600**	***5,600**	**29.1**
4.5 m	kg							*7500	6990	*6270	4710	*2510	*2510	9.6
15.0 ft	**lb**							***16,300**	**15,000**	***13,200**	**10,100**	***5,500**	***5,500**	**31.1**
3.0 m	kg			*17 320	*17 320	*11 250	10 700	*8860	6670	6740	4570	*2610	*2610	9.8
10.0 ft	**lb**			***36,900**	***36,900**	***24,200**	**23,000**	***19,200**	**14,300**	**14,500**	**9,800**	***5,700**	***5,700**	**32.2**
1.5 m	kg			*7050	*7050	*13 950	9930	9510	6320	6560	4400	*2820	2820	9.8
5.0 ft	**lb**			***16,800**	***16,800**	***30,100**	**21,400**	**20,400**	**13,600**	**14,100**	**9,400**	***6,000**	***6,000**	**32.3**
†0.0 m	kg			*7920	*7920	15 060	9420	9200	6050	6410	4260	*3170	2960	9.4
†0.0 ft	**lb**			***18,200**	***18,200**	**32,200**	**20,300**	**19,800**	**13,000**	**13,800**	**9,100**	***6,700**	**6,400**	**31.5**
-1.5 m	kg	*6810	*6810	*11 850	*11 850	14 810	9220	9040	5910	6330	4190	*3760	3340	8.7
-5.0 ft	**lb**	***15,200**	***25,800**	***26,900**	***26,900**	**31,700**	**19,800**	**19,400**	**12,700**	**13,600**	**9,000**	***7,700**	**7,000**	**29.6**
-3.0 m	kg	*11 480	*11 480	*18 000	*18 000	14 830	9240	9040	5900			*4870	4220	7.6
-10.0 ft	**lb**	***25,800**	***25,800**	***41,000**	**40,400**	**31,700**	**19,800**	**19,400**	**12,700**			***9,700**	**8,400**	**26.5**
-4.5 m	kg			*17 330	*17 330	*12 170	9470	*8200	6140					
-15.0 ft	**lb**			***37,100**	***37,100**	***25,900**	**20,400**					***8,300**	***8,300**	**21.5**

* Indicates that the load is limited by hydraulic capacity rather than tipping capacity. Lift capacity ratings are based on SAE standard J1097. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

† Ground line

2.50D STICK – 2500 mm (8'2") **UNDERCARRIAGE** – Long **BOOM** – 5500 mm (18'2")
BUCKET – 1098 mm, 1.4 m³ (42", 1.88 yd³) **SHOES** – 800 mm (32") triple grouser

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)				
														m ft
7.5 m	kg											*3740	*3740	7.3
25.0 ft	**lb**											***8,400**	***8,400**	**22.8**
6.0 m	kg							*7400	6750			*3580	*3580	8.4
20.0 ft	**lb**							***16,200**	**14,400**			***7,900**	***7,900**	**26.7**
4.5 m	kg					*9690	*9690	*8160	6590	*6450	4320	*3600	3200	9.0
15.0 ft	**lb**							***17,700**	**14,100**	***12,400**	**9,200**	***7,900**	**7,300**	**29.0**
3.0 m	kg					*12 310	10 110	*9340	6280	6400	4230	*3770	2940	9.2
10.0 ft	**lb**					***26,500**	**21,800**	***20,200**	**13,500**	**13,700**	**9,000**	***8,200**	**6,600**	**30.1**
1.5 m	kg					*14 580	9400	9140	5960	6250	4090	*4100	2910	9.2
5.0 ft	**lb**					***31,400**	**20,200**	**19,600**	**12,800**	**13,400**	**8,800**	***8,700**	**6,400**	**30.2**
†0.0 m	kg					14 620	9010	8890	5740	6140	3990	*4660	3100	8.8
†0.0 ft	**lb**					**31,300**	**19,400**	**19,100**	**12,300**	**13,200**	**8,600**	***9,800**	**6,600**	**29.3**
-1.5 m	kg	*7890	*7890	*13 330	*13 330	14 520	8930	8800	5660			5580	3640	8.0
-5.0 ft	**lb**	***17,700**	***17,700**	***30,400**	***30,400**	**31,100**	**19,200**	**18,900**	**12,200**			***11,500**	**7,500**	**27.3**
-3.0 m	kg			*19 150	18 800	*13 620	9070	8890	5740			*4130	*4130	6.7
-10.0 ft	**lb**			***41,400**	**40,100**	***29,300**	**19,500**	**19,100**	**12,400**			***11,300**	**9,600**	**23.8**
-4.5 m	kg					*9480	9480							
-15.0 ft	**lb**					***19,700**	***19,700**							

* Indicates that the load is limited by hydraulic capacity rather than tipping capacity. Lift capacity ratings are based on SAE standard J1097. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

† Ground line

325B L Hydraulic Excavator

AEHQ5163 (4-96)

CATERPILLAR®