



320B L

Hydraulic
Excavator



CAT[®]

Operating weight

5.68 m (18'7") boom 2.9 m (9'7") stick

320B L 800 mm (32") track 20 620 kg 45,400 lb

Travel Speed (maximum)

5.5 km/h 3.4 mph

Cat[®] 3066T Diesel Engine

Gross 100 kW 134 hp

Flywheel power 96 kW 128 hp

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 dampening restrains drift and improves positioning during finishing and lifting applications reducing operator fatigue.

Full time nine percent in hydraulic relief pressure increases boom, stick and bucket forces, an average of ten percent higher lift capacity over the front, and a 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 to lower the boom. This allows pumps to have all pressure and flow available for other circuits.

The optional 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.

Scheduled Oil Sampling valve allows faster sampling and maintenance time, speeding machines back to production.

Auxiliary hydraulic valve is standard on the 320B L for use with optional hydraulic circuits.

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 320B L.

- O-ring face seal couplings provide positive sealing for reliable, leak-free connections.

Hydraulic tank located closer to pumps for increased hydraulic efficiency through decreased line loss.

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front












Load Radius Over Side

R2.5 B STICK – 2500 mm (8'2")

UNDERCARRIAGE – Long

BOOM – 5680 mm (18'7")

BUCKET – 1082 mm, 1.0 m³ (42", 1.25 yd³) **SHOES** – 800 mm (32") triple grouser

		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft
												
7.5 m 25.0 ft	kg lb									*2660 *5800	*2660 *5800	7.2 22.6
6.0 m 20.0 ft	kg lb					*4390 *9600	*4390 *9400			*2410 *5400	*2410 *5400	8.3 25.6
4.5 m 15.0 ft	kg lb					*4860 *10,600	4280 9200	*4500 *9400	2810 6000	*2400 *5300	2090 4800	9.0 29.0
3.0 m 10.0 ft	kg lb			*7400 *15,900	6470 13,900	*5630 *12,200	4060 8700	4630 9900	2740 5900	*2470 *5400	1900 4300	9.3 30.3
1.5 m 5.0 ft	kg lb			*8950 *19,300	5970 12,900	*6420 *13,800	3840 8200	4520 9700	2650 5700	*2850 *5700	1860 4100	9.3 30.5
Ground Line	kg lb			*9740 *21,100	5710 12,300	6360 13,700	3680 7900	4440 9500	2570 5500	*2950 *6300	1960 4200	8.9 29.7
-1.5 m -5.0 ft	kg lb	*9180 *20,900	*9180 *20,900	*9740 *21,100	5650 12,100	6290 13,500	3610 7800	4420 9500	2560 5500	*3470 *7200	2250 4700	8.3 27.9
-3.0 m -10.0 ft	kg lb	*12,790 *27,700	11,560 24,700	*8990 *19,400	5730 12,300	6390 13,600	3660 7900			*3930 *6900	2950 5900	7.1 24.7
-4.5 m -15.0 ft	kg lb	*9870 *21,100	*9870 *21,100	*8990 *19,400	5960 12,900							0.0 0.0










* 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.

R1.9 C STICK – 1900 mm (6'3")

UNDERCARRIAGE – Long

BOOM – 5680 mm (18'7")

BUCKET – 948 mm, 1.1 m³ (36", 1.5 yd³) **SHOES** – 800 mm (32") triple grouser

		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft
												
7.5 m 25.0 ft	kg lb									*3980 *8800	3850 *8800	8.5 19.8
6.0 m 20.0 ft	kg lb					*4780 *10,500	4150 8800			*4000 *8800	2670 6400	7.7 24.4
4.5 m 15.0 ft	kg lb			*6210 *13,400	*6210 *13,400	*5120 *11,100	4040 8700			3760 8700	2160 5000	8.4 27.0
3.0 m 10.0 ft	kg lb			*7780 *16,700	6000 13,000	*5760 *12,500	3800 8200	4420 9300	2530 5200	3450 7700	1940 4400	8.7 28.4
1.5 m 5.0 ft	kg lb			*9040 *19,500	5490 11,800	6260 13,400	3560 7700	4330 9300	2450 5200	3410 7500	1900 4200	8.7 28.6
Ground Line	kg lb			*9450 *20,500	5300 11,400	6100 13,100	3420 7400			3660 7800	2040 4300	8.3 27.8
-1.5 m -5.0 ft	kg lb	*10,730 *24,600	*10,730 23,200	*9160 *19,800	5320 11,400	6090 13,100	3400 7300			4330 8800	2450 5000	7.5 25.7
-3.0 m -10.0 ft	kg lb	*10,970 *23,800	*10,970 *23,800	*8080 *17,400	5510 11,900							0.0 0.0

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Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front


















Load Radius Over Side

R3.9 B STICK – 3900 mm (12'8")
BUCKET – 1082 mm, 1.0 m³ (42", 1.25 yd³)

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

BOOM – 5680 mm (18'7")

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		9.0 m/30.0 ft				m ft			
																		
7.5 m 25.0 ft	kg lb									*2050 *2050			*1490 *3300	*1490 *3300	8.8 28.1			
6.0 m 20.0 ft	kg lb									*3200 *7100	2850 6300		*1410 *3100	*1410 *3100	9.7 31.3			
4.5 m 15.0 ft	kg lb									*3440 *7500	2890 6200	*2130 1910	*1400 *3100	*1400 *3100	10.3 33.3			
3.0 m 10.0 ft	kg lb									*4420 *9600	4170 8900	*3890 *6500	2760 5900	*3120 *6100	1870 4000	*1450 *3200	1400 3100	10.5 34.3
1.5 m 5.0 ft	kg lb			*9620 *23,200	*9620 *23,200	*7910 *15,800	6200 13,300	*5390 *11,700	3870 8300	*4420 *9600	2600 5600	3240 6900	1800 3800	*1570 *3400	1350 3000	10.5 34.5		
Ground Line	kg lb			*6580 *15,100	*6580 *15,100	*8760 *18,900	5710 12,300	*6230 *13,500	3610 7800	4350 9300	2470 5300	3170 6800	1740 3700	*1780 *3700	1400 3000	10.2 33.9		
-1.5 m -5.0 ft	kg lb	*4410 *9900	*4410 *9900	*8280 *18,800	*8280 *18,800	*9480 *20,500	5460 11,700	6140 13,200	3450 7400	4250 9100	2380 5100			*2070 *4300	1580 3300	9.7 32.3		
-3.0 m -10.0 ft	kg lb	*7210 *16,200	*7210 *16,200	*11,530 *26,200	10,940 23,400	*9470 *20,500	6410 11,600	6080 13,000	3400 7300	4230 9100	2360 5100			*2810 *5300	1900 3900	8.7 29.7		
-4.5 m -15.0 ft	kg lb	*10,740 *24,200	*10,740 *24,200	*12,860 *27,700	11,320 24,000	*8640 *18,600	5510 11,800	6150 *13,200	3460 7500					*3500 *7200	2680 5200	7.3 25.7		
-6.0 m -20.0 ft	kg lb			*9530 *20,000	*9530 *20,000	*6410 *13,300	5800 12,500											

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




R2.9 B STICK – 2900 mm (9'7")

UNDERCARRIAGE – Long

BOOM – 5680 mm (18'7")

BUCKET – 1082 mm, 1.0 m³ (42", 1.25 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 25.0 ft	kg lb											*1900 *4300	*1900 *4300	7.8 24.4		
6.0 m 20.0 ft	kg lb									*3380 *8700	*3380 *8700	*2570 *4000	*1790 *4000	8.8 28.1		
4.5 m 15.0 ft	kg lb									*4490 *9800	4330 9300	*4180 *6200	2850 6100	*1770 *3900	1770 3900	9.4 30.4
3.0 m 10.0 ft	kg lb			*11,090 *23,500	*11,090 *23,500	*6850 *14,700	6600 14,200	*5300 *11,500	4100 8800	*4550 *9900	2760 5900	*1830 *4000	1740 3900	9.7 31.5		
1.5 m 5.0 ft	kg lb					*8540 *18,400	6070 13,100	*5150 *13,300	3860 8300	4520 9700	2650 5700	*1970 *4200	1700 3800	9.6 31.8		
Ground Line	kg lb			*5230 *12,100	*5230 *12,100	*9590 *20,700	6740 12,300	6370 13,700	3680 7900	4420 9500	2550 5500	*2210 *4700	1780 3800	9.9 31.0		
-1.5 m -5.0 ft	kg lb	*5140 *11,500	*5140 *11,500	*8840 *20,100	*8840 *20,100	*9800 *21,200	5630 12,100	6270 13,400	3590 7700	4380 9400	2510 5400		*2610 *5400	2020 4200	8.7 29.3	
-3.0 m -10.0 ft	kg lb	*9130 *20,500	*9130 *20,500	*13,580 *29,400	11,450 24,500	*9280 *20,000	5670 12,200	6280 13,500	3600 7700				*3050 *6700	2570 5200	7.6 26.3	
-4.5 m -15.0 ft	kg lb			*11,060 *23,700	*11,060 *23,700	*7720 *16,500	5860 12,600							*6900 *6900	0.0 21.5	

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Standard Equipment

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

Alternator, 50-amp	Literature compartment	Pre-start monitoring system
Automatic engine speed control	Low fuel indicator light	Power Mode Selector
Automatic swing brake	Joysticks, adjustable pilot-operated	Power train
Auxiliary hydraulic valve and auxiliary pump drive location	Positive filtered ventilation	CAT 3066T Diesel engine with 24-volt electric starting
Cab	Radio mounting	Water separator
Air conditioner with automatic climate control	Seat belt, retractable	Work Mode Selector
Ash tray with cigar lighter	Seat, suspension, fully adjustable	Undercarriage
Coat hook	Skylight, push-open	Hydraulic track adjusters
Defroster	Storage compartment suitable for a lunch box cooler	Track-type sealed undercarriage
Drink holder	Travel control pedals	Idler and center section track guides
Floor mat	Two-speed auto shift travel	320B L 800 mm (32") triple grouser shoes
Heater and defroster	Windshield wiper and washer (upper)	
Horn	Counterweight (3870 kg, 8,520 lb)	
Instrument panel with gauges	Door locks and caps locks with Caterpillar one-key security system	
Gauges and indicator lights for fuel level, coolant temperature and hydraulic oil temperature	Hydraulic neutralizer lever for all controls	
Light, interior	Mirrors, frame and cab	
	Muffler	

Optional Equipment

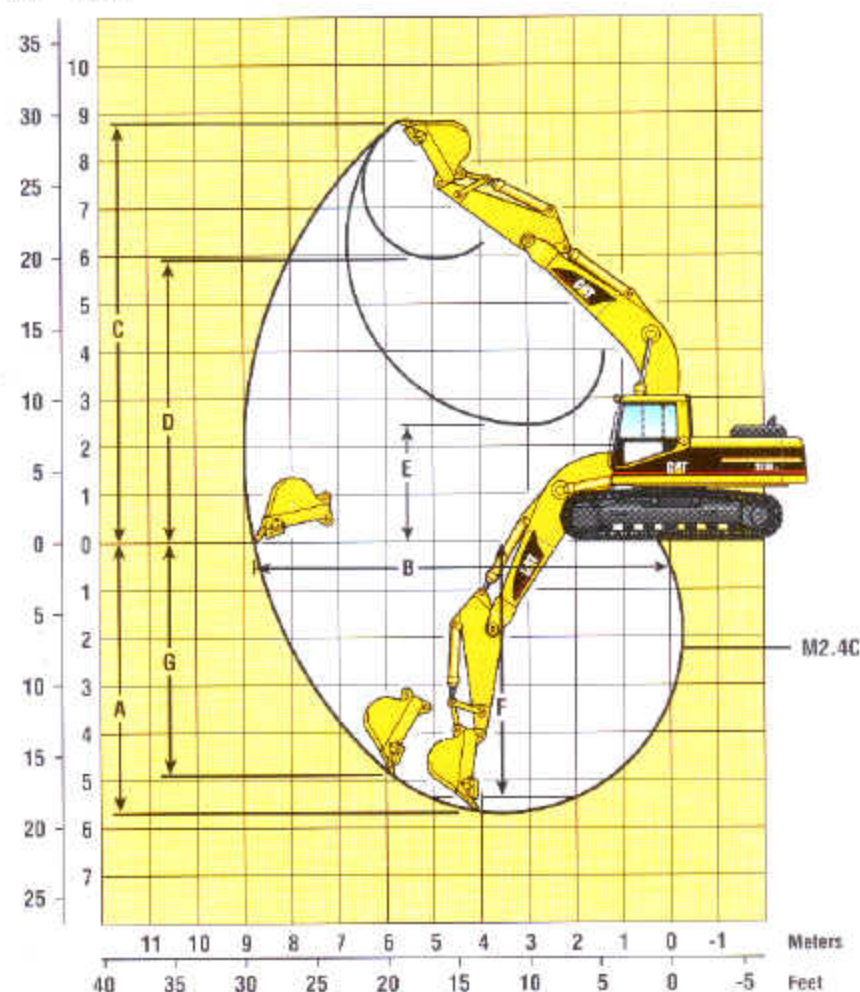
Optional equipment may vary. Consult your Caterpillar dealer for specifics.

Air conditioner, omission	Sprocket guiding	Sticks:
Alarm, travel (Required in the U.S.)	Vandalism protection	Reach 5.68 m (18'7") Boom:
Boom lowering check valve	Hand Control Pattern Changers:	3900 mm (12'8") R3.9B
Booms, with left side light:	2 ways (SAE/STD)	2900 mm (9'7") R2.9B
Reach 5.68 m (18'7")	Headrest	2500 mm (8'2") R2.5B
Mass Excavation 5.2 m (17'5")	Hydraulic arrangements, auxiliary:	1900 mm (6'3") R1.9C
Buckets	Combined function arrangement, includes two pump flow	Mass Excavation 5.2 m (17'1") Boom:
Bucket linkage:	Hydraulic pump flow controls	2400 mm (7'10") M2.4C
B family	Hydraulic lines, auxiliary for Reach Boom and sticks	Sun visor, windshield
C family	Lights:	Third pedal, for straight travel
Bucket sidecutters and tips	Boom, right side	Track:
Cabs, optional:	Cab mounted, two	600 mm (24") triple-grouser shoes
Cab, with polycarbonate windows	Long Reach Front	700 mm (28") triple-grouser shoes
Cab, with radio mount and vandal bosses	Quick Coupler	Wiper, lower windshield
Cooling system, high ambient 52C	Rain protector, cab front	
Control, line swing	Refueling pump, electric	
Guards:	Starting aid, cold weather	
Falling Object, for cab	Starting aid, ether	
Full length track guiding		
Heavy-duty, bottom		

Mass Excavator Working Ranges

Mass (M) Boom configuration

Feet Meters



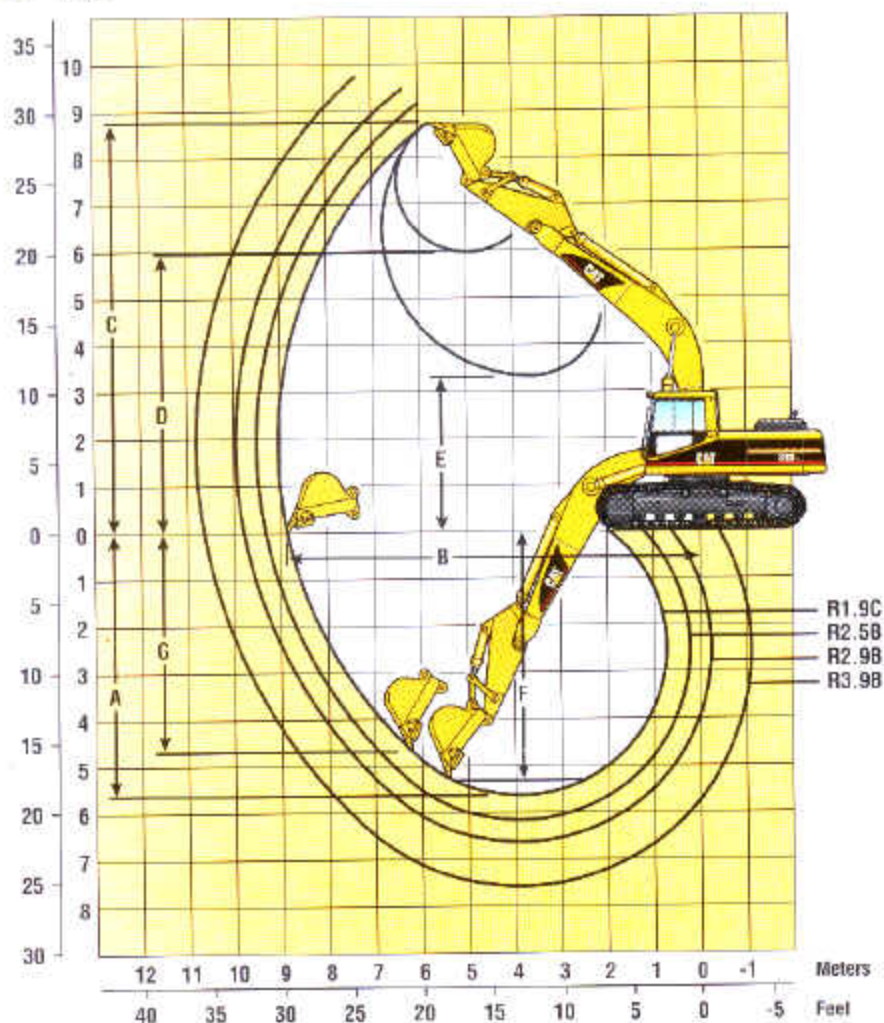
Stick Length	M2.4C (7'10")*
A Maximum Digging Depth	5.72 m (18'9")
B Maximum Reach at Ground Level	8.79 m (28'10")
C Maximum Cutting Height	8.69 m (28'6")
D Maximum Loading Height	5.89 m (19'4")
E Minimum Loading Height	2.39 m (7'10")
F Maximum Depth Cut for 2440 mm (8') Level Bottom	5.52 m (18'1")
G Maximum Vertical Wall Digging Depth	4.02 m (13'2")
Bucket Digging Force (SAE)	164 kN (36,900 lb)
Stick Digging Force (SAE)	125 kN (28,100 lb)

* - Measurements shown are for machines equipped with the 1.5 m³ (2.0 yd³) bucket.

Reach Excavator Working Ranges

Reach (R) Boom configuration

Feet Meters



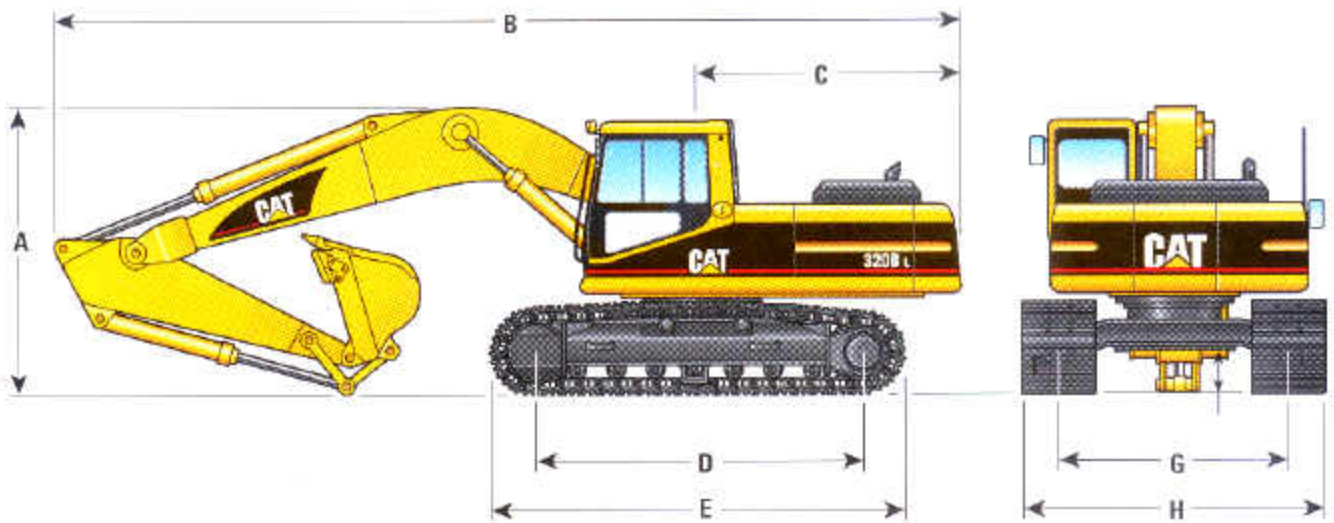
Stick Length	R3.9B (12'8")*	R2.9B (9'7")*	R2.5B (8'2")*	R1.9C (6'3")**
A Maximum Digging Depth	7.64 m (25'1")	6.70 m (22'0")	6.28 m (20'7")	5.66 m (18'7")
B Maximum Reach at Ground Level	10.69 m (35'1")	9.83 m (32'3")	9.44 m (31'0")	8.79 m (28'10")
C Maximum Cutting Height	9.65 m (31'8")	9.33 m (30'7")	9.14 m (30'0")	8.56 m (28'1")
D Maximum Loading Height	6.86 m (22'6")	6.51 m (21'4")	6.32m (20'9")	5.92 m (19'5")
E Minimum Loading Height	1.25 m (4'1")	2.19 m (7'2")	2.61 m (8'6")	3.26 m (10'9")
F Maximum Depth Cut for 2440 mm (8') Level Bottom	7.50 m (24'7")	6.53 m (21'5")	6.09 m (20'0")	5.40 m (17'9")
G Maximum Vertical Wall Digging Depth	5.50 m (18'1")	4.81 m (15'9")	4.45 m (14'7")	2.88 m (9'6")
Bucket Digging Force (SAE)	129 kN (29,100 lb)	129 kN (29,100 lb)	129 kN (29,100 lb)	163 kN (36,700 lb)
Stick Digging Force (SAE)	82 kN (18,500 lb)	97 kN (21,800 lb)	110 kN (24,700 lb)	144 kN (32,300 lb)

* - Measurements shown are for machines equipped with the 1.0 m³ (1.25 yd³) bucket

** - Measurements shown are for machines equipped with the 1.5 m³ (2.0 yd³) bucket

Dimensions and Weights

All dimensions are approximate.



Reach Boom 5.68 m (18'7")	R3.9B (12'8") Stick	R2.9B (9'7") Stick	R2.5B (8'2") Stick	R1.9C (6'3") Stick
A Shipping height	3430 mm (11'3")	2930 mm (9'7")	3010 mm (9'11")	3050 mm (10'8")
B Shipping length	9420 mm (30'11")	9440 mm (31')	9460 mm (31')	9490 mm (31'2")
C Tail swing radius	2750 mm (9')	2750 mm (9')	2750 mm (9')	2750 mm (9')
D Length to centers of rollers	3650 mm (12')	3650 mm (12')	3650 mm (12')	3650 mm (12')
E Track length	4455 mm (14'7")	4455 mm (14'7")	4455 mm (14'7")	4455 mm (14'7")
F Ground clearance	475 mm (1'7")	475 mm (1'7")	475 mm (1'7")	475 mm (1'7")
G Track gauge	2380 mm (7'10")	2380 mm (7'10")	2380 mm (7'10")	2380 mm (7'10")
H Transport width	800 mm (32") shoes	600 mm (24") shoes	700 mm (28") shoes	800 mm (32") shoes
Long	3180 mm (10'5")	2980 mm (9'9")	3080 mm (10'1")	3180 mm (10'5")

Mass Boom 5.2 m (17'1")	M2.4C m (7'10") Stick
A Shipping height	3050 mm (10'8")
B Shipping length	9000 mm (29'6")

Operating Weight	600 mm (24") Shoes		700 mm (28") Shoes		800 mm (32") Shoes	
	kg	lb	kg	lb	kg	lb
Sticks:						
3.9 m (12'8")	20 180	44,500	20 540	45,200	20 860	45,900
2.9 m (9'7")	19 940	43,900	20 300	44,700	20 620	45,400
2.5 m (8'2")	19 900	43,800	20 240	44,600	20 580	45,300
1.9 m (6'3")	20 300	44,700	20 650	45,500	20 980	46,200

Mass Boom	600 mm (24") Shoes		700 mm (28") Shoes		800 mm (32") Shoes	
Stick:						
2.4 m (7'10")	20 320	44,700	20 670	45,500	20 990	46,200

Ground Pressure with Reach Boom, 2.9 m (9'7") Stick	600 mm (24") Shoes		700 mm (28") Shoes		800 mm (32") Shoes	
	41.4 kPa	6.0 psi	36.1 kPa	5.2 psi	32.1 kPa	4.7 psi

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.

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 FEB88 and ISO 3449-1984 specifications. The front guard is also certified under SAE J1356 FEB88.

Track

Caterpillar designed and built track-type undercarriage.

Track width

Standard	
320B L	800 mm (32") triple grouser
Optional	600 mm (24") triple grouser
	700 mm (27") triple grouser
Ground clearance	475 mm (17")

Drive

Drive system is fully hydrostatic.

Ratings

Maximum drawbar pull	177 kN	(39,800 lb)
Maximum travel speed	5.5 kph	(3.4 mph)
Maximum gradeability (based on engine performance)		70%

Features

- each track is driven by one independent, automatic shifting, two-speed axial piston motor via integral planetary final drives
- each drive module is well integrated into the roller frame for total protection

Swing Mechanism

Hydrostatic with independent planetary reduction.

Ratings

Swing Torque	57 kN·m	(42,050 lb ft)
Maximum Swing Speed		10.7 rpm

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	U.S. Gallons
Fuel Tank	340	90
Cooling System	25	6.6
Engine Oil	20.5	5.1
Swing Drive	6	1.6
Final Drive (each)	10	2.6
Hydraulic System (including tank)	220	58
Hydraulic Tank	130	34

Major Component Weights

Booms: including lines, boom cylinders, stick cylinders

	kg	lb
Reach	1960	4310
Mass	1950	4290

Sticks: including bucket cylinder and bucket linkage

	kg	lb
R3.9B	1200	2650
R2.9B	960	2120
R2.5B	920	2030
R1.9C	1150	2530
M2.4C	1170	2580
Counterweight	3870	8520

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.

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 185 liters/min (2 x 48.9 gpm)
Maximum pressure	
Implements	34.300 kPa (4980 psi)
Travel	34.300 kPa (4980 psi)
Swing	23.000 kPa (3340 psi)

Pilot System

Maximum flow	41 liters/min (10.8 gpm)
Maximum pressure	4100 kPa (600 psi)

Cylinders, Bore and Stroke

Boom (2)	120 x 1260 mm (5.0" x 4'2")
Stick (1)	140 x 1430 mm (5.5" x 4'8")
Bucket (1)	
B family	120 x 1030 mm (5.0" x 3'5")
C family	130 x 1156 mm (5.1" x 3'10")

Features

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

Engine

Caterpillar 3066T turbo-charged diesel engine.

Ratings at 1800 rpm*	kW	hp
Gross power	100	134
Net power	96	128

The following ratings apply at 1800 rpm when tested under the specified standard conditions for the specified standard:

Net power	kW	hp
Caterpillar	96	128
ISO 9249	96	128
SAE J1349	96	128
EEC 80/1269	96	128

Dimensions

Bore	102 mm	4.02 in
Stroke	130 mm	5.12 in
Displacement	6.37 liters	389 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
- no engine derating required below 2300 m (7,550 ft) altitude

Features

- mechanical unit fuel injectors control fuel delivery more efficiently, resulting in better performance, fuel economy, and reduced emissions
- 24-volt electric system with 50-amp alternator and two 100-amp/hr batteries
- low profile, heat-resistant, aluminum alloy pistons
- high carbon, steel forged connecting rods
- precision cast two-piece cylinder head with helical intake ports
- one-piece, induction hardened forged alloy crankshaft

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

320B Long Undercarriage Bucket Specifications and Compatibility

	Capacity*		Width		Tip Radius		Weight		Teeth Qty	Reach				Mass	
	m ³	yd ³	mm	in	mm	in	kg	lb		3.9B (12'8")	2.9B (9'7")	2.5B (8'2")	1.9C (6'3")	2.4C (7'10")	
B Buckets for Reach Linkage															
Heavy-Duty (HD)	0.5	0.62	625	24	1563	61.5	578	1,274	3	●	●	●	-	-	
	0.6	0.75	775	30	1563	61.5	656	1,446	4	●	●	●	-	-	
	0.8	1.0	932	36	1563	61.5	748	1,649	5	●	●	●	-	-	
	1.0	1.25	1082	42	1563	61.5	811	1,788	5	○	●	●	-	-	
	1.2	1.5	1230	48	1551	61.0	910	2,007	6	○	○	○	-	-	
	1.4	1.75	1377	54	1551	61.0	969	2,137	7	○	○	○	-	-	
	1.5	2.0	1507	60	1551	61.0	1025	2,260	7	○	○	○	-	-	
General Purpose (GP)	0.7	0.88	775	30	1626	64.0	665	1,466	4	●	●	●	-	-	
	0.9	1.12	932	36	1626	64.0	741	1,634	5	●	●	●	-	-	
	1.1	1.5	1082	42	1626	64.0	777	1,713	5	○	○	●	-	-	
	1.3	1.75	1230	48	1626	64.0	906	1,998	6	○	○	○	-	-	
Heavy-Duty Rock (HDR)	0.6	0.75	775	30	1563	61.5	759	1,674	4	●	●	●	-	-	
	0.8	1.0	932	36	1563	61.5	863	1,903	5	●	●	●	-	-	
	1.0	1.25	1082	42	1563	61.5	939	2,093	5	○	●	●	-	-	
Ditch Cleaning (DC)	0.9	1.12	1422	60	1143	45.0	681	1,502	-	○	○	●	-	-	
	1.1	1.5	1727	72	1143	45.0	786	1,733	-	○	○	●	-	-	
C Buckets for Reach and Mass Ex. Linkage															
Heavy-Duty (HD)	0.7	0.88	775	30	1638	64.5	792	1,722	3	-	-	-	●	●	
	0.9	1.25	948	36	1638	64.5	888	1,932	4	-	-	-	●	●	
	1.1	1.5	1098	42	1638	64.5	962	2,108	5	-	-	-	●	●	
	1.2	1.5	1378	54	1518	60.0	1088	2,399	5	-	-	-	○	○	
	1.3	1.75	1248	48	1638	64.5	1037	2,280	5	-	-	-	○	○	
	1.5	2.0	1395	54	1638	64.5	1119	2,456	6	-	-	-	○	○	
	1.7	2.25	1522	60	1638	64.5	1195	2,622	7	-	-	-	○	○	
General Purpose (GP)	1.9	2.5	1680	66	1638	64.5	1281	2,825	7	-	-	-	○	○	
	0.8	1.12	775	30	1778	70.0	807	1,779	3	-	-	-	●	●	
	1.1	1.5	948	36	1778	70.0	909	2,004	5	-	-	-	●	●	
	1.3	1.75	1098	42	1778	70.0	966	2,130	5	-	-	-	○	○	
	1.6	2.12	1248	48	1778	70.0	1052	2,320	6	-	-	-	○	○	
Heavy-Duty Rock (HDR)	1.9	2.5	1395	54	1778	70.0	1138	2,509	7	-	-	-	○	○	
	0.9	1.25	948	36	1638	64.5	988	2,179	4	-	-	-	●	●	
	1.1	1.5	1098	42	1638	64.5	1084	2,390	5	-	-	-	○	○	
Ditch Cleaning (DC)	1.3	1.75	1248	48	1638	64.5	1165	2,569	5	-	-	-	○	○	
	1.1	1.5	1676	66	1130	44.5	739	1,629	-	-	-	-	●	●	
Rock Ripping (RR)	1.2	1.62	1829	72	1130	44.5	837	1,890	-	-	-	-	○	○	
	0.6	0.75	850	33	1660	65	1084	2,385	5	-	-	-	●	●	

Assumptions for maximum material density ratings:

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/m³ (3,400 lbs/yd³) max material density
- 1,800 kg/m³ (3,000 lbs/yd³) max material density
- 1,500 kg/m³ (2,500 lbs/yd³) max material density
- 1,200 kg/m³ (2,000 lbs/yd³) max material density
- Not Available

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:

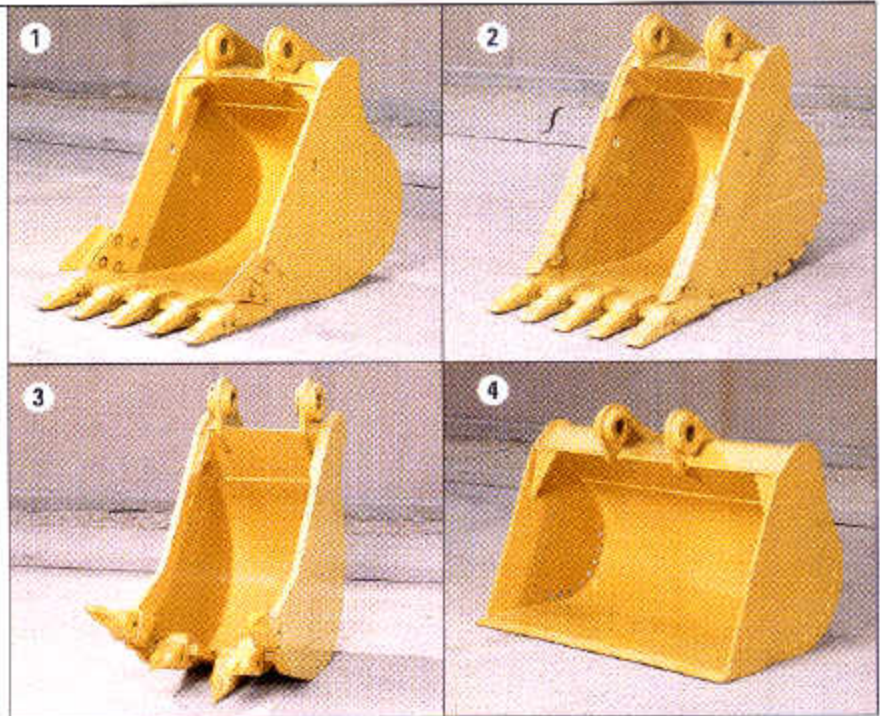
- Larger Ground Engaging Tools (GET), thicker cutting edges and thicker bottom and side wear plates improve performance in demanding applications.

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 (C family only) 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 mean additional wear life.

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

Mechanical quick coupler speeds 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.

Booms, Sticks and Attachments

The 320B L 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.

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

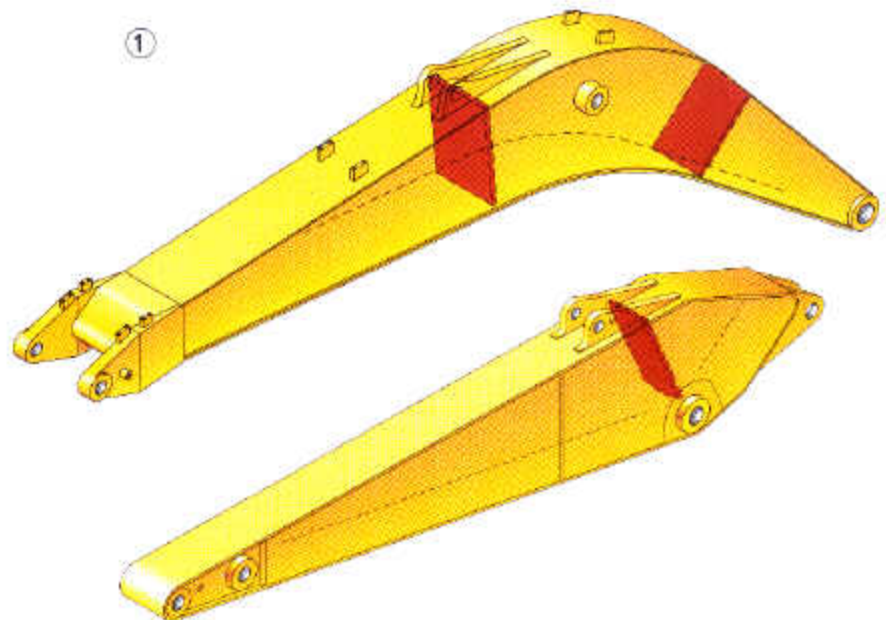
- Large, welded, box-section structures with thick, multi-plate fabrications in high-stress areas.
- Construction allows structures to flex and dissipate stresses.

The choice of two booms and five sticks, plus a wide selection of buckets and attachments, means the 320B L 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) 5.68 m (18'7") features an optimum design that maximizes digging envelopes with four stick choices.

- The R3.9B stick gives the largest working envelope with small (B-sized) buckets.
- The R2.9B stick is a versatile front linkage.
- The R2.5B stick provides a good digging envelope with large buckets and stability for hammer work.
- The R1.9C stick allows use of larger C family buckets.



The Mass Excavation (M) Boom 5.2 m (17'1") maximizes productivity. The M version offers significantly higher digging forces to allow use of larger buckets.

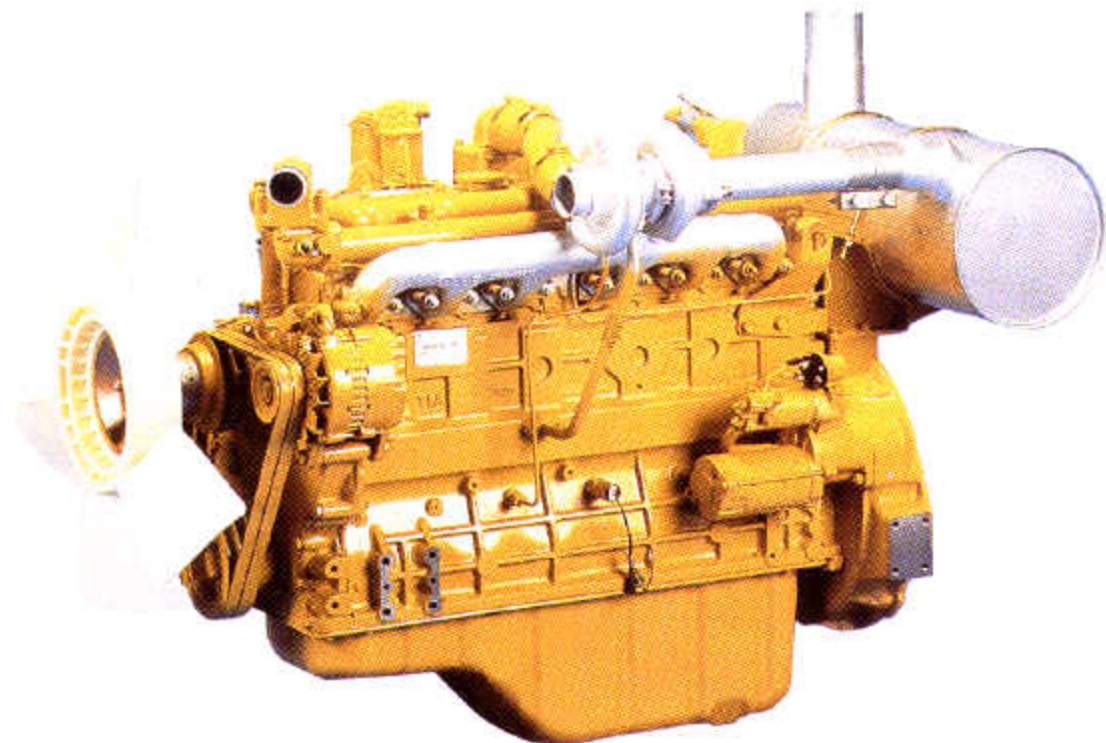
- The M2.4C stick gives a limited envelope but allows large bucket use with high digging forces.

2 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.



Cat 3066T Engine

The six cylinder turbo-charged 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 1020 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.

Efficient, direct unit injection fuel system means lower operating costs.

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

Eight balance, one-piece, forged crankshaft enhances balance and decreases vibration and is induction hardened to improve abrasion resistance.

Heat resistant aluminum alloy has a short compression height, reducing weight and improving efficiency.

Forged, high carbon steel connecting rods with smaller connecting rod to crank radius ratio results in a lightweight, powerful, compact engine.

Two-piece precision cast cylinder head minimizes cylinder pitch for cooling efficiency.

The lubricating tube inside the engine has been replaced with integrated cast oil passages.

Air intake heating is standard on the 320B L 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.

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

Fuel tank capacity allows 15 hours of continuous operation under normal load.

Mass Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front



Load Radius Over Side

M2.4 C STICK – 2400 mm (7'10")

BUCKET – 848 mm, 1.1 m² (36", 1.5 yd²)

UNDERCARRIAGE – Long

SHOES – 800 mm (32") triple grouser

BOOM – 5200 mm (17'1")

 7.5 m 25.0 ft kg lb	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			
	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	m ft	
7.5 m 25.0 ft												*3280 *7500	*3280 *7500	6.5 19.8
6.0 m 20.0 ft							14740 *10,500	4220 9000				*3060 *6900	2760 6600	7.7 24.1
4.5 m 15.0 ft					*5740 *12,300	*5740 *12,300	*5010 *10,900	4170 8900				*3040 *6700	3240 5200	8.4 27.0
3.0 m 10.0 ft					*7250 *15,600	6600 14,000	*5680 *12,300	3980 8500	4500	2600		*3150 *6800	2020 4600	8.7 28.4
1.5 m 5.0 ft					*8780 *18,900	5970 12,800	*6410 *13,900	3760 8100	4420 9500	2530 5400		*3410 *7300	1970 4300	8.7 28.6
Ground Line			*7660 *17,800	*7690 *17,800	*9620 *20,800	5660 12,200	6310 13,500	3600 7700	4390	2500		3730 8000	2110 4500	8.3 27.8
-1.5 m -5.0 ft		*7480 *16,800	*7480 *16,800	*13,660 *31,000	11,190 *23,900	*9590 *20,700	5990 12,000	6250 13,400	3550 7600			4410 9000	2520 5100	7.5 25.7
-3.0 m -10.0 ft				*12,370 *26,700	11,510 *24,600	*8560 *18,400	5700 12,300	*5830 12,300	3650			*3220 *8200	*3220 6800	6.2 22.1

* 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.