
CAT 215C LC

EXCAVATOR

Maximum:

Reach At Ground Level

.....9290 mm/30' 6"
Digging Depth6270 mm/20' 7"
Travel Speed3.6 km/h/2.2 MPH
Drawbar Pull ...14 700 kg/144 kN/32,400 lb.

■ Flywheel Power86 kW/115 HP
■ Operating Weight ..20 006 kg/44,104 lb.
■ General Purpose
 Bucket Capacity(SAE) 425 to
 1010 liters/.56 to 1.32 yd³

Machine shown may have optional equipment.



SPECIFICATIONS

Engine

Flywheel power at 1800 RPM, 86 kW/115 HP (Kilowatts (kW) is the International System of Units equivalent to horsepower.)

Net power at the flywheel of the vehicle engine is based on SAE J1349 standard conditions, 25°C/77°F and 100 kPa/29.61" Hg, using 35 API gravity fuel at 15.6°C/60°F. Power rating is adjusted for fan, air cleaner, fuel pump, water pump, lubricating oil pump, muffler and alternator. No derating is required up to 3000 m/10,000 ft. altitude.

These additional ratings also apply at 1800 RPM

	kw	HP
ISO 1585	86	115
ISO 3046-1	84.4	113.2
EEC 80/1269	86	115

Cat four-stroke-cycle 3304 turbocharged diesel Engine with four cylinders, 121 mm/4.75" bore, 152 mm/6.0" stroke and 7.0 liters/425 in³ displacement.

Direct-injection Caterpillar fuel system with individual, adjustment-free injection pumps and valves.

Cam-ground and tapered, aluminum alloy pistons have 3 rings and are spray-cooled. Steel-backed, copper-bonded, aluminum bearings. Heat-treated crankshaft. Pressure lubrication with full-flow filtered and cooled oil. Dry-type air cleaner with primary and safety elements.

24-volt direct electric starting system, with 35-amp alternator and two 132 amp-hour batteries. Ether starting aid available.

Hydraulic System

Two variable-flow, bent-axis piston pumps power the boom, stick, bucket, swing and travel circuits. Output of pumps at rated engine RPM and 6890 kPa/68.9 bar/1000 psi...2 X 166.0 l/min/2 X 43.8 gpm.

A fixed-displacement gear pump powers the pilot control circuits. Output to pilot system @ rated engine RPM and 2310 kPa/23 bar/335 psi...85.2 l/min/22.5 gpm.

Relief valve settings:

Implement circuits	28 960 kPa/290 bar/4200 psi
Travel circuits	32 410 kPa/324 bar/4700 psi
Swing circuit	13 790 kPa/138 bar/2000 psi
Pilot circuit	2310 kPa/23 bar/335 psi

Cylinders, bore and stroke:

Boom (2)	121 X 975 mm/4.75" X 38.4"
Stick (1)	140 X 1207 mm/5.5" X 47.5"
Bucket (1)	121 X 967 mm/4.75" X 38.1"

Easy-to-reach switch increases maximum implement pressure available from 28 960 kPa/290 bar/4200 psi to 32 410 kPa/324 bar/4700 psi and slows swing and implement speeds for precise control.

Brakes

Two oil-disc brakes on final drive input shafts. Spring-applied, hydraulically released. Depressing a travel pedal simultaneously disengages brakes. When pedal is released, brakes automatically apply.

Drive

Fully hydrostatic. Each track is driven by a hydraulic motor. Two travel pedals: when idlers are in front, right pedal gives forward movement...the left, reverse. Triple-reduction, spur and planetary gear final drive, fully enclosed and splash lubricated. Duo-Cone Floating Ring Seals on output shafts.

Maximum

drawbar pull 14 700 kg/144 kN/32,400 lb

Maximum travel

speed @ rated engine rpm 3.6 km/h/2.2 mph

Track

Cat designed and built, track-type undercarriage. Reinforced, box-section track roller frame. Sealed Track. Lifetime Lubricated rollers, idlers.

4140 mm/13' 7" long undercarriage (LC):

Shoes each side, 51. Ground contact area with 500 mm/20" shoes, 3.64 m²/5,631 sq. in. In retracted position gauge is 1919 mm/75.6"; in extended position, 2224 mm/87.6". Distance from centerline sprocket to centerline idler is 3364 mm/132.5". Ten track rollers each side.

Controls

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

Right Lever: Move forward and backward to lower and raise boom. Right and left to control bucket curl and dump.

Left Lever: Move forward and backward to move stick out and in. Left and right to control swing direction.

Oblique movement of either lever operates two functions simultaneously. Manually applied lever on the left console completely neutralizes the control system.

Swing Mechanism

Case-hardened drive gears are splash lubricated. Hydraulic motor provides high swing torque for fast acceleration. Shoe-type brake on swing gear case, manually applied, holds upper structure steady on side slopes. Swing speed is 8.4 RPM at rated engine speed. Cushion swing control is standard.

Steering

A lever mounted between the travel pedals provides gradual pivot and counter-rotation steering. (1) Depress the forward or reverse pedal and move the lever right or left. This drives one track while slowing the other to turn the machine in the direction the lever was moved. (2) Move the lever farther, into contact with a "resistance" bumper spring, for a pivot turn with one track locked and the other driving. (3) Push the lever beyond the bumper spring to reverse the locked track for counter-rotation and a spot turn.

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Service Refill Capacities

	Liters	U.S. Gallons
Fuel Tank	266	70.2
Cooling System	26.5	7.0
Lubrication:		
Engine Oil	18.9	5.0
Swing Drive	22.3	5.9
Final Drives (each)	15.1	4.0
Hydraulic System (includes tank)	300	79.3
Hydraulic Tank	155	41.0



Weight (approximate)

Base — includes lubricants, coolant, 10% fuel, no front equipment:

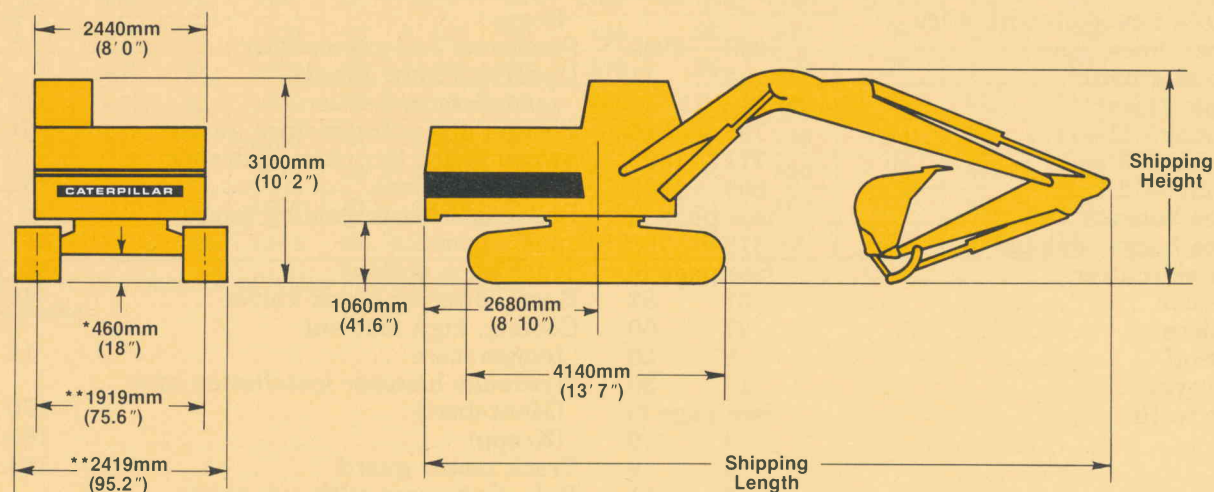
Triple Grouser Shoes	Kg	Lb
500 mm/20"	15 490	34,120
610 mm/24"	15 760	34,720
705 mm/28"	16 000	35,240
1015 mm/40"	16 770	36,930

Operating — See Track Shoes chart on page 5.



Dimensions (approximate)

	With 1800 mm/ 5' 11" Stick	With 2200 mm/ 7' 3" Stick	With 2800 mm/ 9' 2" Stick
With one-piece boom:			
Shipping height	3200 mm/10' 6"	3200 mm/10' 6"	3380 mm/11' 1"
Shipping length	8990 mm/29' 6"	9000 mm/29' 6"	9030 mm/29' 8"
With two-piece boom, extended position, lower pinhole:			
Shipping height	3300 mm/10' 10"	3220 mm/10' 7"	3380 mm/11' 1"
Shipping length	8970 mm/29' 5"	8970 mm/29' 5"	9010 mm/29' 7"
With two-piece boom, center position, lower pinhole:			
Shipping height	3450 mm/11' 4"	3350 mm/11' 0"	3430 mm/11' 3"
Shipping length	8330 mm/27' 4"	8330 mm/27' 4"	8370 mm/27' 6"
With two-piece boom, retracted position, lower pinhole:			
Shipping height	3660 mm/12' 0"	3610 mm/11' 10"	3630 mm/11' 11"
Shipping length	7680 mm/25' 3"	7640 mm/25' 1"	7660 mm/25' 2"



* Minimum ground clearance.

** With 500mm/20" shoes. Add 305mm (12") for extended track gauge.

SPECIFICATIONS



Standard Equipment

NOTE: Standard and optional equipment may vary. Consult your Caterpillar Dealer for specifics.

- Alternator (35-amp).
- Cab, all-weather with:
 - Air cleaner service indicator.
 - Armrests.
 - Tinted LEXAN sheet in windows and skylight; sliding rear window with friction lock.
 - Cigar lighter.
 - Defroster fan.
 - Dome and dash lights.
 - Dual windshield wipers and washer.
 - Electric clock hour meter.
 - Engine coolant temperature gauge.
 - Engine oil pressure gauge and flashing warning light.
- Floor mat.
- Hydraulic oil filter service indicator.
- Hydraulic oil temperature gauge.
- Side consoles.
- Suspension seat.
- 2-section windshield with tinted, laminated glass in top; clear, laminated glass in bottom.
- Voltmeter.
- Cushion swing control.
- 2755 kg/6069 lb counterweight.
- Dry-type air cleaner.
- Electric horns, front and rear.
- Front and rear track guiding guards.
- Governor control, 2-position.
- Heavy duty recoil mechanism.
- Heavy lift circuit.
- Hydraulic track adjusters.
- Lifetime Lubricated rollers and idlers.
- Mirrors, left and right.
- Muffler.
- Sealed linkage pins.
- Sealed Track.
- 500 mm/20" triple grouser shoes.
- Tow eyes.
- Travel alarm.
- 4140 mm/13' 7" LC undercarriage.
- Variable track gauge.
- Vandalism protection locks.


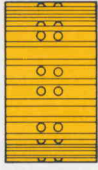
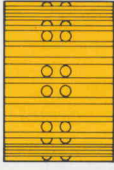
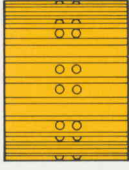


Optional Equipment

(approximate change in operating weight)

	Kg	Lb		Kg	Lb
One-piece boom with stick cylinder, pins	1887	4160	Ether starting aid	2	4
Two-piece stub boom with lines, pins	737	1625	Lighting systems:		
Two-piece foreboom with stick cylinder, lines, pins	1000	2205	Upperstructure	6	13
50-amp alternator	5	11	Boom	9	20
Backhoe sticks:			Precleaner and prescreener	6	13
1800 mm/5' 11"	733	1616	Upperstructure guards,		
2200 mm/7' 3"	771	1699	vandalism protection	16	35
2800 mm/9' 2"	899	1983	Bottom of upperstructure guard	21	46
Backhoe buckets	(see page 5)		Swivel guard (provides hydraulic line protection)	51	112
Backhoe bucket linkage	318	700	Full-length track guiding guards and segments	207	456
Bucket sidecutters	(see page 6)		Track shoe options	(see page 5)	
Extension	37	82	Boom lowering check valves	45	100
One-piece	27	60	Cooling, high ambient temperature	15	33
Strike-off	9	20	Hydraulic hammer installation kits:		
Tooth-type	14	30	(Montabert)	170	375
Bucket teeth	(see page 6)		(Krupp)	185	408
Short	4	9	Track motor guard	184	406
Long	4	9	Refueling pump with automatic shutoff	12	26
Penetration	5	11	Cab ventilating fan	1	2
Wide	5	11	Automatic engine speed control	23	50
Sharp	8.2	15			
Operator station heater	11	24			
Low temperature starting system (includes two 252-amp heavy duty batteries)	34	75			

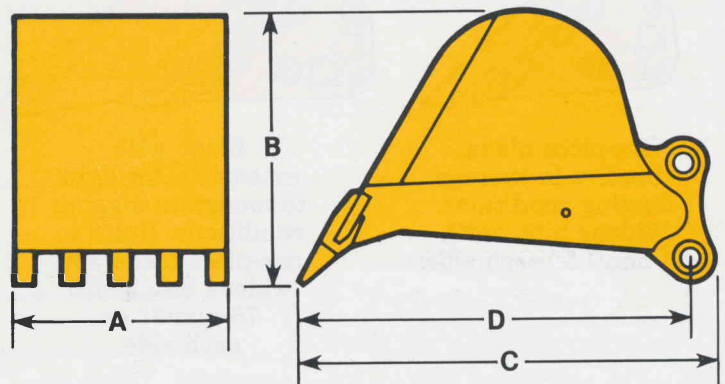
Track Shoes

	Triple Grouser			
				
Shoe Width	500 mm/20"	610 mm/24"	705 mm/28"	1015 mm/40"
Ground Pressure	52.8 kPa/0.54 kg/cm ² /7.66 psi	43.5 kPa/0.45 kg/cm ² /6.32 psi	38.5 kPa/0.39 kg/cm ² /5.59 psi	27.8 kPa/0.28 kg/cm ² /4.0 psi
Operating * Weight	19 498 kg/42,986 lb	19 771 kg/43,586 lb	20 006 kg/44,104 lb	20 769 kg/45,786 lb

* Includes 50% full fuel tank, operator, one-piece boom, 2800 mm/9' 2" stick, 1070 mm/42" bucket, bottom and swivel guards, full-length track guiding guards, heater, lights, and precleaner. For two-piece boom, add 266 kg/586 lb to above weights. For shipping weights of complete machine, subtract 170 kg/375 lb.

Bucket Specifications

Caterpillar buckets curl 174° for excellent load retention and easy digging under obstructions. High-strength, heat-treated steel used in the primary wear areas. Side plates angled inward to reduce bucket drag, aid self-cleaning.



A		B		C		D		SAE Heaped		CECE Heaped		Weight With Tips		Number of Teeth
mm	in.	mm	in.	mm	in.	mm	in.	Liter	cu. yd.	Liter	cu. yd.	Kg	Lb	
610	24	1070	42	1600	63	*1405	*55	425	.56	430	.56	390	960	3
760	30	1070	42	1600	63	*1405	*55	570	.75	570	.75	450	990	4
910	36	1070	42	1600	63	1356	53	760	1.0	730	.95	510	1124	5
1070	42	970	38	1560	61	1356	53	760	1.0	720	.94	520	1146	5
**1070	42	1010	40	1475	58	1245	49	620	.81	580	.76	600	1320	5
1220	48	970	38	1560	61	1356	53	870	1.14	800	1.05	570	1257	6
1370	54	970	38	1560	61	1356	53	1010	1.32	920	1.20	615	1356	6

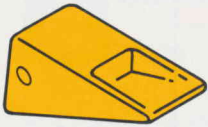
* Long tip radius buckets, all other short tip radius.

** Rock bucket

NOTE: All dimensions, both British and metric measures, have been rounded.

SPECIFICATIONS

Teeth



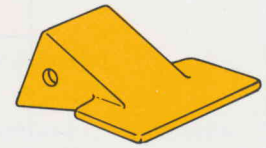
Short (severe)...
for tough digging.



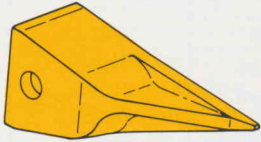
Long
(general purpose)...
for most digging
applications.



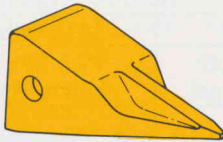
Penetration...
self-sharpening for
digging in tough,
compacted material.



Wide (spade)...
easy digging materials
for load retention
and clean-up grading.



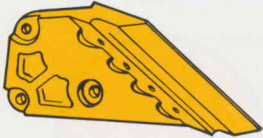
Sharp (corner)



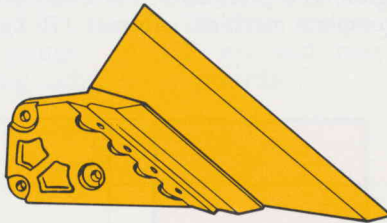
Sharp (center)

Sharp Tip...a special application ground engaging tool, designed to provide maximum penetration. It is recommended only when maximum penetration is the most important tip selection criterion — more important than wear life and strength.

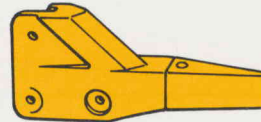
Sidcutters



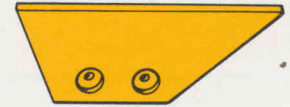
One-piece blade...
effective in average
digging conditions.
Widens bite width
38 mm/1.5" each side.



Blade with
extension...for light
to moderate digging
conditions. Bolts to
one-piece blade and
widens bite width
76 mm/3" on
each side.



Tooth-type...
for severe digging
applications. Widens
bite width 76 mm/3"
on each side.

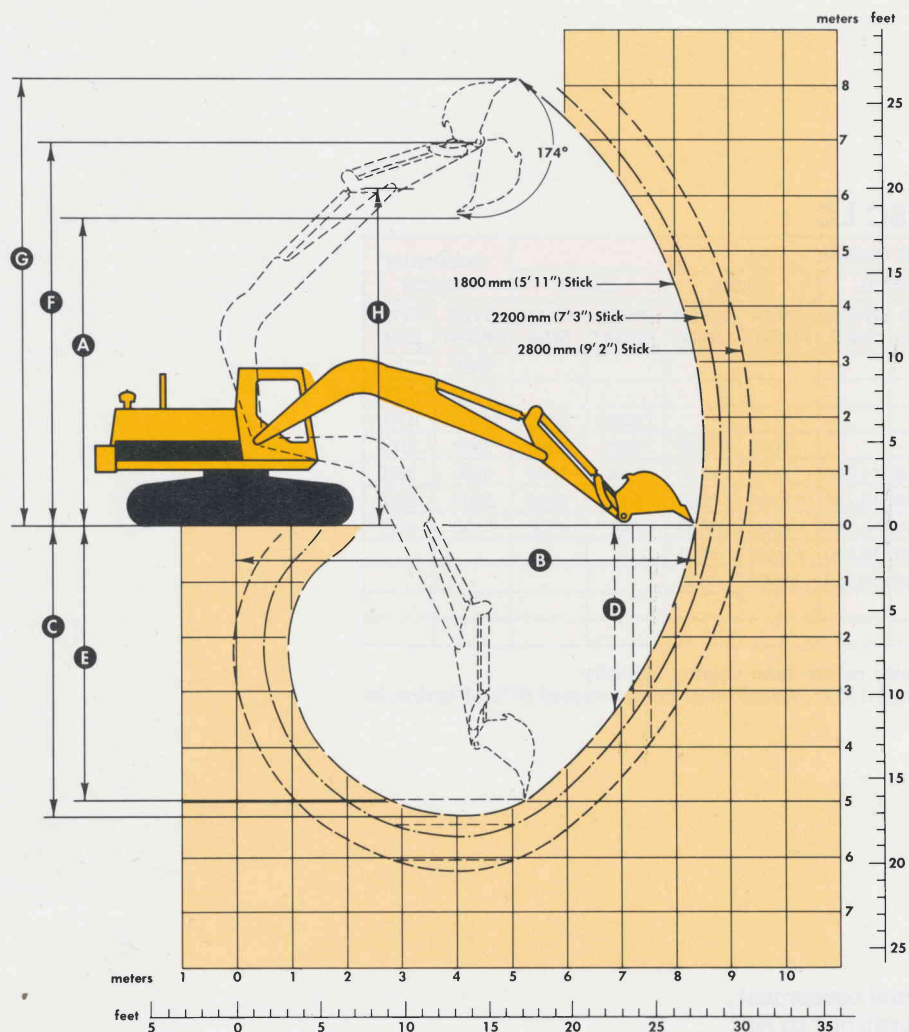


Strike-off...
protects bucket
corners from wear.
Does not widen bite
width.

Bucket and Stick Forces

General Purpose Buckets	Bucket Curling Forces		Stick Crowd Forces					
			1800 mm/5' 11"		2200 mm/7' 3"		2800 mm/9' 2"	
	kN	Lb	kN	Lb	kN	Lb	kN	Lb
Short Tip Radius	108	24,280	104	23,470	93	20,790	79	17,700
Long Tip Radius	104	23,430	103	23,130	91	20,530	78	17,510
Rock Bucket	118	26,450	109	24,450	96	21,560	81	18,260

Working Ranges and Digging Forces



	Stick Length					
	1800 mm (5' 11")		2200 mm (7' 3")		2800 mm (9' 2")	
A Maximum loading height bucket with teeth	5540 mm	18' 2"	5540mm	18' 2"	5790 mm	19' 0"
B Maximum reach at ground level	8430 mm	27' 8"	8620 mm	28' 7"	9290 mm	30' 6"
C Maximum digging depth	5270 mm	17' 3"	5670 mm	18' 7"	6270 mm	20' 7"
D Maximum vertical wall	3350 mm	11' 0"	3390 mm	11' 1"	3890 mm	12' 9"
E Maximum depth of cut for 2440 mm (8') level bottom	5020 mm	16' 6"	5430 mm	17' 10"	6070 mm	19' 11"
F Maximum bucket hinge pin height	6940 mm	22' 9"	6940 mm	22' 9"	7190 mm	23' 7"
G Maximum height to bucket teeth at highest arc	8110 mm	26' 7"	8050 mm	26' 5"	8290 mm	27' 2"
H Maximum height to boom/stick hinge pin	6030 mm	19' 9"	6030 mm	19' 9"	6030 mm	19' 9"

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Lift Capacities

BOOM — One-piece
 STICK — 2800 mm/9' 2"
 BUCKET — 910 mm/36"
 UNDERCARRIAGE — 500 mm/20" shoes
 HEAVY LIFT CIRCUIT — Activated

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BUCKET HEIGHT	LOAD RADIUS										MAXIMUM REACH	
	5.0 ft.		10.0 ft.		15.0 ft.		20.0 ft.		25.0 ft.		OVER FRONT	OVER SIDE
	OVER FRONT	OVER SIDE	OVER FRONT	OVER SIDE	OVER FRONT	OVER SIDE	OVER FRONT	OVER SIDE	OVER FRONT	OVER SIDE		
25.0											*5300	*5300
20.0											*5600	4900
15.0									*5900	5400	*5700	4100
10.0							*7000	*7000	*6400	5300	*5900	3700
5.0					*12,500	11,200	*8800	7300	*7300	5000	6000	3600
0.0					*15,200	10,400	*10,400	6800	8000	4800	6300	3800
-5.0					*16,100	10,200	11,000	6600	7800	4700	7100	4300
-10.0			*14,100	*14,100	*15,500	10,200	11,000	6600				
-15.0			*18,600	*18,600	*13,200	10,500	*9100	6800				
-20.0												
-25.0												

*Indicates 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.

Custom Machine Products

In addition to the standard range of optional equipment, special attachments and machine configurations to suit particular customer applications can be made. Contact your Caterpillar dealer for details on matching the Caterpillar product to your special application.



Helping you get more done