

320C FM Forest Machine



Configurations

The 320C Forest Machine can be configured with purpose-built undercarriages, linkages, cab risers, guarding and work tools to best suit many applications.

Engine and Hydraulics

The Cat® 3066 T engine and proven hydraulics combine to give the 320C FM consistently high power and control in the field.

Structures

Rugged Caterpillar® undercarriage design and proven structural manufacturing techniques assure outstanding durability in the toughest applications.

Operator Station

Spacious purpose built OPS/FOPS/FOGS/TOPS certified cab with excellent sightlines to the work area.

Attachments

Forest Machines are designed for flexibility to help bring higher production and efficiency to your jobs.

Undercarriage

Heavy Duty link assemblies provide toughness and durability. This track will maximize undercarriage life and minimize operating costs.

Guarding

Caterpillar guarding helps to extend service life, reduces downtime and helps protect your forestry machine investment.

Serviceability and Customer Support

Longer service intervals and easier maintenance results in better machine availability and lower owning and operating costs.

Work Tools

- Forestry Grapples

Caterpillar Grapples

Cat grapples are tough, built for performance and reliability in the woods. High-grade steel is used throughout the grapple. Hydraulics are engineered for maximum protection and reliability, but are easily accessible for routine inspection and service.

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Specifications

Engine		
Engine Model	Cat 3066 T Diesel Engine	
Gross Power	107 kW	143 hp
Flywheel Power	103 kW	138 hp
ISO 9249	103 kW	138 hp
J1349	103 kW	138 hp
EEC 80/1269	103 kW	138 hp
Bore	102 mm	4.02 in
Stroke	130 mm	5.12 in
Displacement	6.37 L	389 in ³

Weights

Operating Weight	28 000 kg	61,600 lb
General Forestry (HDLC)	24 500 kg	54,013 lb
General Forestry (HW)	25 630 kg	56,504 lb
Log Loader (U/U)	29 644 kg	65,354 lb

- Operating weight with front linkage, without bucket or grapple.

Service Refill Capacities

Fuel Tank	400 L	106 gal
Cooling System	30 L	7.9 gal
Engine Oil	30 L	7.9 gal
Swing Drive	8 L	2.1 gal
Final Drive (each) - Std. Gauge	10 L	2.6 gal
Final Drive (each) - High-Wide	13 L	3.4 gal
Hydraulic System (including tank)	240 L	63 gal
Hydraulic Tank	120 L	32 gal

Hydraulic System

Main Implement System - Maximum Flow (2x)	205 L/min	54.2 gal/min
Max. pressure - Implements	34 300 kPa	4980 psi
Max. pressure - Travel	34 300 kPa	4980 psi
Max. pressure - Swing	25 000 kPa	3625 psi
Pilot System - Maximum flow	41 L/min	10.8 gal/min
Pilot System - Maximum pressure	4120 kPa	600 psi
Boom Cylinder - Bore	120 mm	5 in
Boom Cylinder - Stroke	1260 mm	52 in
Stick Cylinder - Bore	140 mm	5.5 in
Stick Cylinder - Stroke	1430 mm	56 in

Drive		
Std. Gauge Drawbar Pull	196 kN	44,040 lb
Maximum Travel Speed	5.5 kph	3.4 mph
High - Wide / High Drawbar Pull	236 kN	53,100 lb

Swing Mechanism

Swing Torque	61.8 kN·m	45,611 lb ft
Swing Speed	11.5 RPM	11.5 RPM

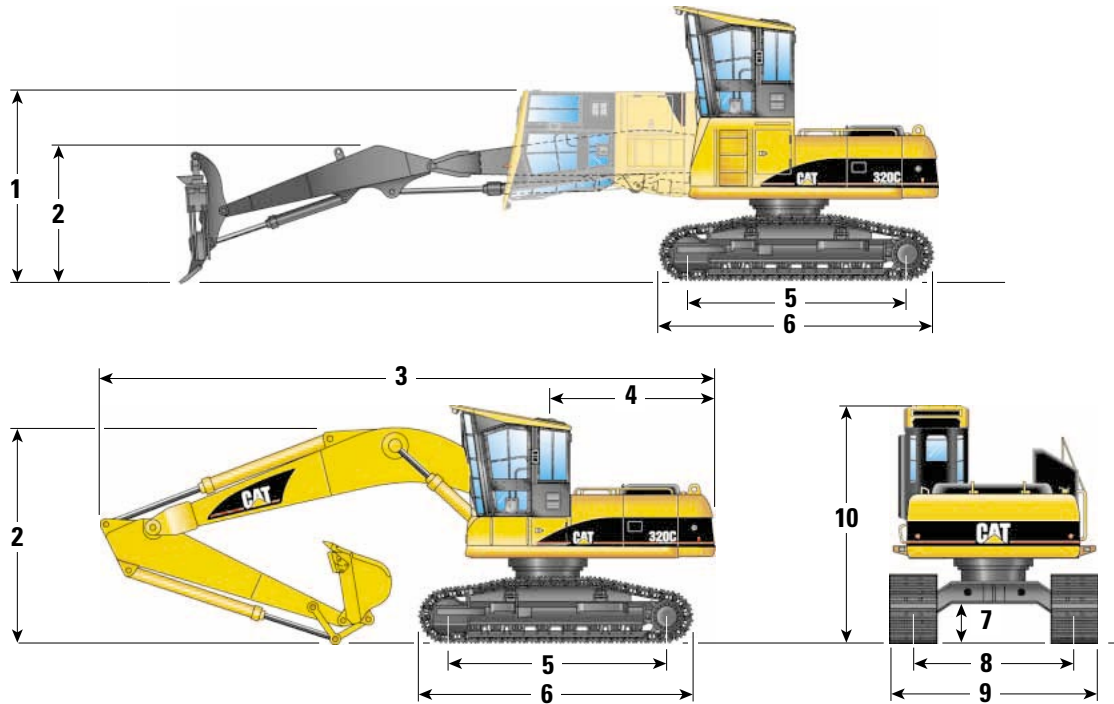
Track

Standard (double grouser)	700 mm	28 in
Optional (double grouser)	600 mm	24 in
Optional (triple grouser)	700 mm	28 in
Optional (triple grouser)	800 mm	32 in

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Dimensions

All dimensions are approximate.



320C	Heel Boom Under/Under	Road Builder (Std. gauge)***
1 Shipping height. (All risers with cab tilted)	3176 mm (10' 5")	2993 mm (9' 10")
2 Boom height	2390 mm (7' 10")	2940 mm (9' 8")
3 Shipping length*	13 240 mm (43' 5")	9410 mm (30' 11")
4 Tail swing radius	2719 mm (8' 11")	2719 mm (8' 11")
5 Length to centers of rollers	3650 mm (12' 0")	3650 mm (12' 0")
6 Track length	4480 mm (14' 8")	4480 mm (14' 8")
7 Ground clearance	650 mm (2' 2")	475 mm (1' 7")
8 Track gauge	2590 mm (8' 6")	2380 mm (7' 10")
9 Transport width with 700 mm (28") shoes	3290 mm (10' 10")	3256 mm (10' 9")**
10 Overall height	4657 mm (15' 3")	3713 mm (12' 2")

* Shipping length to pin on stick for Road Builder, to pin on grapple for Heel Boom configurations.

** Shipping width determined by width of upper structure and walkways.

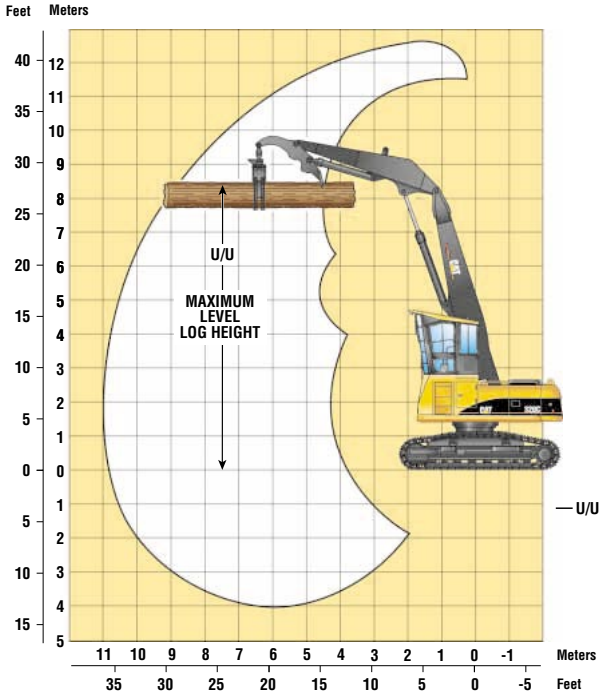
*** Road Builder configured with the 5.7 m (18' 8") SA Boom and 2.9 m (9' 6") SA Stick.

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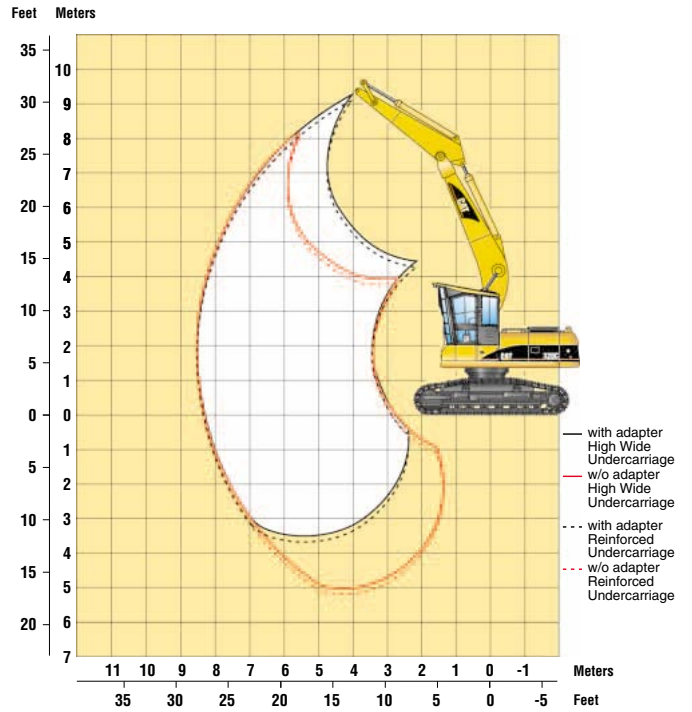
320C Working Ranges

Heel Boom (Under/Under) and Road Builder Reach Ranges

Heel Boom



5.7 m (18' 8") Reach Boom with 2.9 m (9' 6") Reach Stick



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320C High-wide Special Application Boom and Stick

CONFIGURATION – 5.7 m (18' 8") SA Boom, 2.9 m (9' 6") SA Stick, with Hoist Cylinder Adapter and Heavy Counterweight

UNDERCARRIAGE – HW
SHOES – 700 mm (28") double grouser

Load Point Height	3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		Load at Maximum Reach			
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft	
9.0 m 25.0 ft	kg lb				*9800	*9800			*4700	*4700	4.21 13.8	
7.5 m 20.0 ft	kg lb		*14,200	*14,200	*4450	*4450			*3900	*3900	6.14 20.1	
6.0 m 15.0 ft	kg lb	*20,400	*20,400	*6500	*6500	*6250	*6250	*11,150	*11,150	*3650	*3650	7.28 23.9
4.5 m 10.0 ft	kg lb	*9250	*9250	*8450	*8450	*7200	*7200	*5500	*5500	*3550	*3550	7.98 26.2
3.0 m 5.0 ft	kg lb			*10 150	*10 150	*7800	*7800	*6550	5950	*3650	*3650	8.35 27.5
1.5 m 5.0 ft	kg lb			*11 200	*11 200	*8300	7850	*6700	5850	*3850	*3850	8.44 27.7
†0.0 m 10.0 ft	kg lb	*5850	*5850	*11 300	*11 300	*8400	7700	*6600	5750	*4250	*4250	8.26 27.1
-1.5 m -5.0 ft	kg lb	*10 100	*10 100	*10 400	*10 400	*7900	7600	*5950	5700	*5000	*5000	7.78 25.5
-3.0 m -10.0 ft	kg lb			*8500	*8500	*6450	*6450			*4950	*4950	6.95 22.8

* Indicates that the load is limited by hydraulic capacity rather than tipping capacity. Lift capacity ratings are based on SAE standard J1097. Rated loads are at 87% of hydraulic lifting capacity or 75% of tipping capacity.
† Ground line.

320C High-wide Special Application Boom and Stick

CONFIGURATION – 5.7 m (18' 8") SA Boom, 2.9 m (9' 6") SA Stick, without Hoist Cylinder Adapter and with Standard Counterweight

UNDERCARRIAGE – HW
SHOES – 700 mm (28") double grouser

Load Point Height	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		Load at Maximum Reach			
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft	
7.5 m 25.0 ft	kg lb						*4450	*4450			*3900	*3900	6.14 20.1	
6.0 m 20.0 ft	kg lb						*5100	*5100			*3650	*3650	7.28 23.9	
4.5 m 15.0 ft	kg lb						*5600	*5600	*5300	5100	*3550	*3550	7.98 26.2	
3.0 m 10.0 ft	kg lb					*8100	*8100	*6400	*6400	*5600	5000	*3650	*3650	8.35 27.5
1.5 m 5.0 ft	kg lb					*9750	*9750	*7250	6600	*6050	4900	*3850	*3850	8.44 27.7
†0.0 m 10.0 ft	kg lb			*5850	*5850	*10 700	9500	*7850	6400	*6300	4800	*4250	4250	8.26 27.1
-1.5 m -5.0 ft	kg lb	*6250	*6250	*10 100	*10 100	*10 750	9400	*8000	6350	*6300	4750	*5000	4550	7.78 25.5
-3.0 m -10.0 ft	kg lb	*10 700	*10 700	*14 200	*14 200	*10 100	9450	*7550	6350			*6200	5300	6.95 22.8
-4.5 m -15.0 ft	kg lb			*11 350	*11 350	*8250	*8250					*6250	*6250	5.60 18.4

* Indicates that the load is limited by hydraulic capacity rather than tipping capacity. Lift capacity ratings are based on SAE standard J1097. Rated loads are at 87% of hydraulic lifting capacity or 75% of tipping capacity.
† Ground line.

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320C Special Application Boom and Stick

CONFIGURATION – 5.7 m (18' 8") SA Boom, 2.9 m (9' 6") SA Stick, with Hoist Cylinder Adapter and Heavy Counterweight

UNDERCARRIAGE – Heavy Duty LC
SHOES – 700 mm (28") double grouser

Load Point Height	3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		Load at Maximum Reach			
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft	
9.0 m 25.0 ft	kg lb				*9800	*9800			*4700 *8650	*4700 *8650	4.21 13.8	
7.5 m 20.0 ft	kg lb		*14,200	*14,200	*4450 *13,450	*4450 *13,450			*3900 *8000	*3900 *8000	6.14 20.1	
6.0 m 15.0 ft	kg lb	*20,400	*20,400	*6500 *18,150	*6500 *18,150	*6250 *15,650	*6250 *15,650	*11,150	*11,150	*3650 *7850	*3650 *7850	7.28 23.9
4.5 m 10.0 ft	kg lb	*9250	*9250	*8450 *21,900	*8450 *21,900	*7200 *16,950	*7200 *16,950	*5500 *14,200	*5500 *12,100	*3550 *8000	*3550 *8000	7.98 26.2
3.0 m 5.0 ft	kg lb			*10 150 *24,250	*10 150 *23,800	*7800 *18,000	7650 *16,000	*6550 *14,500	5650 *11,900	*3650 *8450	*3650 *8450	8.35 27.5
1.5 m 5.0 ft	kg lb			*11 200 *24,690	11 050 *23,800	*8300 *18,300	7450 *16,420	*6700 *14,700	5500 *12,560	*3850 *8490	*3850 *8490	8.44 27.7
†0.0 m †0.0 ft	kg lb	*5850 *13,400	*5850 *13,400	*11 300 *24,500	10 750 *23,150	*8400 *18,200	7250 *15,650	*6600 *14,250	5400 *11,700	*4250 *9350	*4250 *9350	8.26 27.1
-1.5 m -5.0 ft	kg lb	*10 100 *22,850	*10 100 *22,850	*10 400 *22,550	*10 400 *22,550	*7900 *17,050	7150 *15,450	*5950 *12,650	5400 *11,600	*5000 *11,000	*5000 *11,000	7.78 25.5
-3.0 m -10.0 ft	kg lb			*8500 *18,350	*8500 *18,350	*6450 *13,750	*6450 *13,750			*4950 *10,850	*4950 *10,850	6.95 22.8

* Indicates that the load is limited by hydraulic capacity rather than tipping capacity. Lift capacity ratings are based on SAE standard J1097. Rated loads are at 87% of hydraulic lifting capacity or 75% of tipping capacity.

† Ground line.

320C Special Application Boom and Stick

CONFIGURATION – 5.7 m (18' 8") SA Boom, 2.9 m (9' 6") SA Stick, without Hoist Cylinder Adapter and with Standard Counterweight

UNDERCARRIAGE – Heavy Duty LC
SHOES – 700 mm (28") double grouser

Load Point Height	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		Load at Maximum Reach			
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft	
7.5 m 25.0 ft	kg lb						*4450 *9800	*4450 *9800			*3900 *8650	*3900 *8650	6.14 20.1	
6.0 m 20.0 ft	kg lb						*5100 *11,250	*5100 *11,250			*3650 *8000	*3650 *8000	7.28 23.9	
4.5 m 15.0 ft	kg lb						*5600 *12,200	*5600 *12,200	*5300 *11,150	4900 *10,550	*3550 *7850	*3550 *7850	7.98 26.2	
3.0 m 10.0 ft	kg lb				*8100 *17,450	*8100 *17,450	*6400 *13,900	*6400 *13,900	*5600 *12,250	4800 *10,350	*3650 *8000	*3650 *8000	8.35 27.5	
1.5 m 5.0 ft	kg lb				*9750 *21,050	9450 *20,350	*7250 *15,700	6350 *13,650	*6050 *13,100	4700 *10,100	*3850 *8450	*3850 *8450	8.44 27.7	
†0.0 m †0.0 ft	kg lb		*5850 *13,400	*5850 *13,400	*10 700 *23,100	9150 *19,700	*7850 *17,000	6150 *13,300	*6300 *13,700	4600 *9900	*4250 *9350	4050 *8950	8.26 27.1	
-1.5 m -5.0 ft	kg lb	*6250 *14,000	*6250 *14,000	*10 100 *22,850	*10 100 *22,850	*10 750 *23,350	9050 *19,450	*8000 *17,350	6100 *13,100	*6300 *13,550	4550 *9850	*5000 *11,000	4350 *9600	7.78 25.5
-3.0 m -10.0 ft	kg lb	*10 700 *24,050	*10 700 *24,050	*14 200 *30,750	*14 200 *30,750	*10 100 *21,800	9100 *19,550	*7550 *16,250	6100 *13,150		*6200 *13,700	5050 *11,200	6.95 22.8	
-4.5 m -15.0 ft	kg lb			*11 350 *24,350	*11 350 *24,350	*8250 *17,550	*8250 *17,550				*6250 *13,800	*6250 *13,800	5.60 18.4	

* Indicates that the load is limited by hydraulic capacity rather than tipping capacity. Lift capacity ratings are based on SAE standard J1097. Rated loads are at 87% of hydraulic lifting capacity or 75% of tipping capacity.

† Ground line.

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320C Heel Boom Machines Under/Under Lift Capacities

CONFIGURATION – 11 m (36') UNDER/UNDER Log Loader
Front with heel, without Grapple and Heavy Counterweight

UNDERCARRIAGE – HW
SHOES – 700 mm (28") double grouser

Load Point Height	4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		9.0 m/30.0 ft		10.5 m/35.0 ft		Load at Maximum Reach				
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft		
12.0 m 40.0 ft	kg lb												*8800 *21,900	*8800 *21,900	4.17 11.98
10.5 m 35.0 ft	kg lb			*7950 *16,550	*7950 *16,550								*5550 *12,600	*5550 *12,600	6.78 21.53
9.0 m 30.0 ft	kg lb			*8200 *18,000	*8200 *18,000	*7300 *15,250	5950 12,650						*4500 *10,050	*4500 *10,050	8.36 27.01
7.5 m 25.0 ft	kg lb			*8050 *17,650	*8050 *17,650	*7300 *15,950	6050 12,900	6100 *12,050	4400 9300				*4000 *8800	3950 8800	9.44 30.73
6.0 m 20.0 ft	kg lb			*8350 *18,200	*8350 *18,200	*7400 *16,150	6000 12,850	6150 13,200	4400 9450				*3700 *8150	3500 7750	10.18 33.28
4.5 m 15.0 ft	kg lb	*6950 *15,550	*6950 *15,550	*9000 *19,550	8350 17,950	*7700 *16,750	5850 12,600	6100 13,100	4350 9350	4750 10,400	3350 7350		*3550 *7800	3250 7100	10.66 34.93
3.0 m 10.0 ft	kg lb			*9800 *21,250	8000 17,200	8000 17,150	5700 12,200	6000 12,900	4300 9200	4700 10,100	3350 7100		*3500 *7650	3100 6800	10.92 35.80
1.5 m 5.0 ft	kg lb			*10 450 *22,650	7600 16,350	7750 16,700	5500 11,800	5900 12,650	4150 8950	4650 10,000	3300 7050		*3500 *7700	3050 6750	10.96 35.96
†0.0 m †0.0 ft	kg lb	*14 400 *31,300	11 050 23,800	*10 600 22,750	7300 15,700	7550 16,300	5300 11,400	5800 12,450	4100 8750	*4500 *9050	3250 7000		*3550 *7850	3150 6900	10.79 35.41
-1.5 m -5.0 ft	kg lb	*10 600 *25,100	*10 600 23,150	*9900 *21,350	7100 15,250	7450 16,000	5200 11,150	*5650 *12,000	4050 8650				*3500 *7700	3400 7450	10.25 33.59
-3.0 m -10.0 ft	kg lb	*10 750 *23,150	10 700 23,000	*8200 *17,600	7050 15,100	*6150 *13,050	5150 11,100						*4150 *9150	4100 9100	8.92 29.04

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† Ground line.

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Standard Equipment

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

Alternator, 50 amp

Automatic engine speed control

Automatic swing brake

Operator Environment

Purpose built forestry cab with 7 lights and all scratch resistant polycarbonate windows, ISO 8084 and SAE 1084 certified OPS, ISO 8083 and SAE J231 certified FOPS, ISO 10262 and SAE J1356 certified FOGS, OR-OSHA code 437-007-0775 TOPS and WCB G602/G603/G604/G608 standards.

Seat KAB 528P/C, four-way adjustable suspension seat with adjustable armrest, retractable seatbelt and headrest

Integrated seat, console and joystick type controls

Language display monitor with gauges

Warning information, filter/fluid change information, working hour information, machine condition, error code and tool mode setting information, start up level check for hydraulic oil, engine oil and engine coolant

Full time clock on monitor (2 weeks)

Seat mounted joystick with extra functions for grapple

Fixed polycarbonate skylight with retractable sun shade, meeting SAE J1084

Interior lighting

4 Front working lights, cab top mounted

2 Front working lights, riser mounted

1 Left side working light, cab mounted

Lower and upper windshield wipers and washer

Positive filtered ventilation, pressurized cab with bi-level air conditioner, heater and defroster with manual control

Forced air fan

2 post mounted fresh air vents

Behind seat storage tray with tie down points

2 CB radio mounts

1 Converter/2 sockets – 12V-10A power supply

Radio/CD player (12V)

1 Fire extinguisher mount

1 Attachment computer control mount

Secondary roof exit, openable from inside and outside

2 Coat hooks

Ashtray with lighter

Literature holder

Cup holder

Neutral lever for all controls

Travel control pedals with removable hand levers

Washable floor mat

Horn

Power Train

- Cat 3066 T diesel engine with 24-volt electric starting and air intake heater

- One-touch low idle

- Straight line travel

- Swing-out oil cooler

- Two speed auto-shift travel

- Water separator in fuel line

Undercarriage

- Heavy-duty swivel guard

- 700 mm (28") double grouser shoes

- Hydraulic track adjusters

- Track-type undercarriage with grease lubricated seals

Other Standard Equipment

- Automatic swing parking brake

- Auxiliary hydraulic valve (one)

- Core hydraulic lines & controls with standard main valves on upper structures

- Door locks, cap locks and Caterpillar one-key security system

- Heavy-duty upper frame

- Bottom guard with walkways

- Heavy-duty side doors

- Travel alarms

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Optional Equipment

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

Booms and sticks:

- SA reach
- Log loader reel

Bucket linkage:

- 320C - B Family

Counterweight:

- Heavy
- Standard

Guards:

- Cab windshield:
 - LEXAN with 16 mm x 505 mm (5/8" x 4") bars
 - 51 mm x 51 mm (2" x 2") mesh
 - 152 mm x 203 mm (6" x 8") bars
- Cab side door:
 - 51 mm x 51 mm (2" x 2")
 - 152 mm x 203 mm (6" x 8")
- Corner guard, right front

Fine swing control

Full length track shoe support

Hoist cylinder adapter

Hydraulic arrangements:

- Rotating grapple
- Harvesting head

Starting aid, cold weather

Track:

- 600 mm (24") double grouser shoes
- 700 mm (28") triple grouser shoes
- 800 mm (32") triple grouser shoes

320C FM Forest Machine

Work Tools

Forestry Grapples

Cat offers a variety of forestry grapples to meet the range of needs in the industry.

Specifications	(219-2364)	(219-2365)
Rotation	360° (360°)	360° (360°)
Maximum Opening	1397 mm (55 in)	1524 mm (60 in)
Minimum Opening	133 mm (5.24 in)	133 mm (5.24 in)
Weight	1268 kg (2796 lb)	1341 kg (2957 lb)
Width	1050 mm (41.34 in)	1050 mm (41.34 in)
Height	2165 mm (85.24 in)	2267 mm (89.25 in)

Specifications	(219-2366)
Rotation	360° (360°)
Maximum Opening	1321 mm (52 in)
Minimum Opening	133 mm (5.24 in)
Weight	1266 kg (2791.5 lb)
Width	1050 mm (41.34 in)
Height	2115 mm (83.27 in)

Notes

320C FM Forest Machine

Materials and specifications subject to change without notice.

Featured machines in photo may include additional equipment.

For more complete information on Cat products, dealer services,
and industry solutions, visit us on the web at www.cat.com.

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