



# Cat<sup>®</sup> 420F2

## BACKHOE LOADER

The Cat<sup>®</sup> 420F2 Backhoe Loader delivers performance, increased fuel efficiency, superior hydraulic system, versatility and an all new operator station. The 420F2 features the following:

- **Ergonomic Operator Station** – Ample legroom inside the cab makes rotating the seat simple. The air suspension seat provides comfort to the operator while roading. New backhoe control pods allow for unlimited adjustability.
- **Load Sensing Hydraulics** – The Cat Backhoe Loader's load sensing piston pump provides full hydraulic lifting and digging forces at any engine speed. Variable flow pump matches hydraulic power to work demands.
- **Machine Performance** – The 420F2 Backhoe Loader delivers superior breakout forces and aggressiveness in hard bank applications.
- **Machine Versatility** – A broad range of performance matched Cat Work Tools make the Cat Backhoe Loader the most versatile machine on the job site. All Backhoe Loaders have standard thumb ready sticks.
- **Dual Lock Coupler** – Cat dual lock coupler is available from the factory. The coupler makes work tool changes quick and easy.

## Specifications

### Engine

Engine Model	Cat C4.4 Mechanical Turbocharged	
Gross Power		
SAE J1995	76 kW	102 hp
ISO 14396	75 kW	100 hp
Rated Net Power @ 2,200 rpm		
SAE J1349	69 kW	93 hp
ISO 9240	70 kW	94 hp
EEC 80/1269	70 kW	94 hp
Net Peak Power @ 2,200 rpm		
SAE J1349	70 kW	94 hp
ISO 9249	71 kW	95 hp
EEC 80/1269	71 kW	95 hp
Bore	105 mm	4.13 in
Stroke	127 mm	5 in
Displacement	4.4 L	268 in <sup>3</sup>
Net Torque Rise @ 1,400 rpm	31%	
Net Peak Torque SAE J1349	398 N·m	293 lbf·ft

- Engine will meet the Brazil MAR-1 requirement for noise and emission for agriculture and road machines and U.S. EPA Tier 3/EU Stage IIIA equivalent emission standards.

### Weights\*

Operating Weight		
Minimum	7726 kg	17,033 lb
Maximum (ROPS Capacity)	11 000 kg	24,251 lb
Cab, ROPS/FOPS	163 kg	359 lb
AutoShift Transmission	238 kg	525 lb
Ride Control	14 kg	31 lb
Air Conditioning	42 kg	93 lb
Four Wheel Drive	165 kg	364 lb
MP Bucket (1.0 m <sup>3</sup> /1.31 yd <sup>3</sup> ) (no forks or teeth)	745 kg	1,642 lb
Extendible Stick	305 kg	672 lb
Counterweights (Option 1)	115 kg	255 lb
Counterweights (Option 2)	240 kg	530 lb
Counterweights (Option 3)	460 kg	1,015 lb

\*Specifications shown are for machine equipped with single tilt loader, OROPS, two wheel drive, standard stick, 0.96 m<sup>3</sup> (1.25 yd<sup>3</sup>) general purpose loader bucket, 610 mm (24 in) standard duty backhoe bucket, 240 kg (530 lb) counterweight and full fuel tank.

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## Transmission

### Power Shuttle Transmission – Standard

Forward – 1st	5.4 km/h	3.4 mph
2nd	9.0 km/h	5.6 mph
3rd	21 km/h	13 mph
4th	40 km/h	25 mph
Reverse – 1st	5.4 km/h	3.4 mph
2nd	9.0 km/h	5.6 mph
3rd	21 km/h	13 mph
4th	40 km/h	25 mph

### AutoShift Transmission – Optional

Forward – 1st	5.8 km/h	3.6 mph
2nd	9.3 km/h	5.7 mph
3rd	12 km/h	7 mph
4th	19 km/h	12 mph
5th	26 km/h	16 mph
5th LUC	—	—
6th	40 km/h	25 mph
6th LUC	—	—
Reverse – 1st	5.8 km/h	3.6 mph
2nd	12 km/h	7.6 mph
3rd	28 km/h	17 mph

## Axle Ratings

Front Axle, 2WD		
Static	22 964 kg	50,582 lb
Dynamic	9186 kg	20,233 lb
Front Axle, 4WD		
Static	22 964 kg	50,582 lb
Dynamic	9186 kg	20,233 lb
Rear Axle		
Static	22 964 kg	50,582 lb
Dynamic	9186 kg	20,233 lb

## Hydraulic System

Type	Closed Center	
Pump Type	Variable Flow, Axial Piston	
Pump Capacity @ 2,200 rpm	163 L/min	43 gal/min
System Pressure – Backhoe	25 000 kPa	3,600 psi
System Pressure – Loader	25 000 kPa	3,600 psi

## Steering

Type	Front Wheel	
Power Steering	Hydrostatic	
Bore	65 mm	2.6 in
Stroke	120 mm	4.7 in
Rod Diameter	36 mm	1.4 in
Axle Oscillation	11°	
Turning Circle – 2WD/4WD (inner wheel not braked)		
Outside, Front Wheels	8.18 m	26'10"
Outside, Widest Loading Bucket	10.97 m	36'0"

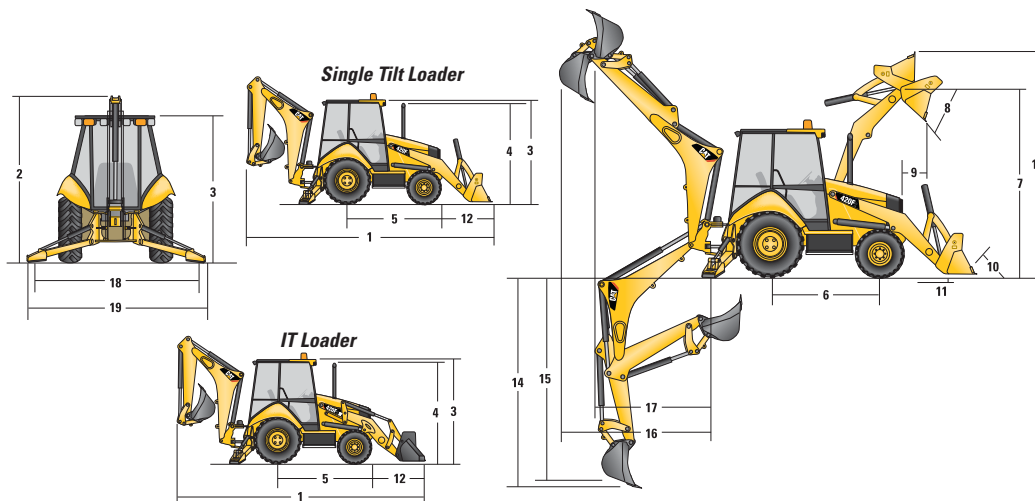
## Service Refill Capacities

Cooling System with Air Conditioning	18.5 L	4.9 gal
Fuel Tank	160 L	42 gal
Engine Oil with Filter	8.8 L	2.3 gal
Transmission – Power Shuttle		
2WD	15.0 L	4.0 gal
4WD	15.0 L	4.0 gal
Transmission – AutoShift		
4WD	19.0 L	5.0 gal
Rear Axle	16.5 L	4.4 gal
Planetaries	1.7 L	0.4 gal
Front Axle (4WD)	11.0 L	2.9 gal
Planetaries	0.7 L	0.2 gal
Hydraulic System	95.0 L	25.1 gal
Hydraulic Tank	40.0 L	10.6 gal

## Tires

Choices listed as combination of front/rear tires:

- 11L-16 (12 ply) F-3/19.5L-24 (12 ply) R4 ATU
- 12.5/80-18 (12 ply) 1-3/19.5L-24 (12 ply) ATU
- 12.5/80-18 NHS (12 ply) 1-3/21L-24 (16 ply) R4 ATU
- 12.5/80-18 (10 ply)/21L-24 (16 ply) for flotation
- 340/80R 18/500/70R 24 RT



## Dimensions

	Single Tilt Loader			
	0.96 m <sup>3</sup> (1.25 yd <sup>3</sup> ) GP Bucket		1.00 m <sup>3</sup> (1.31 yd <sup>3</sup> ) MP Bucket	
1 Overall Length (Loader on Ground) – Standard Stick	7141 mm	23'5"	7059 mm	23'2"
Overall Length (Loader on Ground) – Extendible Stick	7147 mm	23'5"	7064 mm	23'2"
Overall Transport Length – Standard Stick	7169 mm	23'6"	7133 mm	23'5"
Overall Transport Length – Extendible Stick	7175 mm	23'6"	7139 mm	23'5"
2 Overall Transport Height – Standard Stick	3577 mm	11'9"	3577 mm	11'9"
Overall Transport Height – Extendible Stick	3631 mm	11'11"	3631 mm	11'11"
Overall Width	2322 mm	7'7"	2322 mm	7'7"
3 Height to Top of Cab/Canopy	2819 mm	9'3"	2819 mm	9'3"
4 Height to Top of Exhaust Stack	2744 mm	9'0"	2744 mm	9'0"
Height to Loader Hinge Pin (Transport)	381 mm	1'3"	432 mm	1'5"
Ground Clearance (minimum)	294 mm	1'0"	294 mm	1'0"
5 Rear Axle Centerline to Front Grill	2705 mm	8'10"	2705 mm	8'10"
Front Wheel Tread Gauge	1895 mm	6'3"	1895 mm	6'3"
Rear Wheel Tread Gauge	1714 mm	5'7"	1714 mm	5'7"
6 Wheelbase 2WD/4WD	2200 mm	7'3"	2200 mm	7'3"

## Loader Bucket Dimensions and Performance

	Single Tilt Loader			
	0.96 m <sup>3</sup> (1.25 yd <sup>3</sup> ) GP Bucket		1.00 m <sup>3</sup> (1.31 yd <sup>3</sup> ) MP Bucket	
Capacity (SAE Rated)	0.96 m <sup>3</sup>	1.25 yd <sup>3</sup>	1.0 m <sup>3</sup>	1.31 yd <sup>3</sup>
Overall Bucket Width	2262 mm	89 in	2279 mm	90 in
Lift Capacity at Maximum Height	3283 kg	7,237 lb	3097 kg	6,828 lb
Lift Breakout Force	49 809 N	11,197 lbf	49 019 N	11,020 lbf
Tilt Breakout Force	50 190 N	11,283 lbf	57 555 N	12,938 lbf
Tipping Load at Breakout Point	6578 kg	14,503 lb	6659 kg	14,681 lb
7 Maximum Hinge Pin Height	3474 mm	11'5"	3474 mm	11'5"
8 Dump Angle at Full Height		44°		44°
Dump Height at Maximum Angle	2746 mm	9'0"	2798 mm	9'2"
9 Dump Reach at Maximum Angle	808 mm	2'8"	716 mm	2'4"
10 Maximum Bucket Rollback at Ground Level		37°		38°
11 Digging Depth	83 mm	3"	110 mm	4"
Maximum Grading Angle		112°		116°
Width of Dozer Cutting Edge		N/A	2262 mm	7'5"
12 Grill to Bucket Cutting Edge, Carry Position	1487 mm	4'11"	1451 mm	4'9"
13 Maximum Operating Height	4355 mm	14'3"	4404 mm	14'5"
Jaw Opening Maximum		N/A	790 mm	2'7"
Bucket Jaw Clamping Force		N/A	55 700 N	12,521 lbf
Weight (does not include teeth or forks)	451 kg	994 lb	745 kg	1,642 lb

## Backhoe Dimensions and Performance

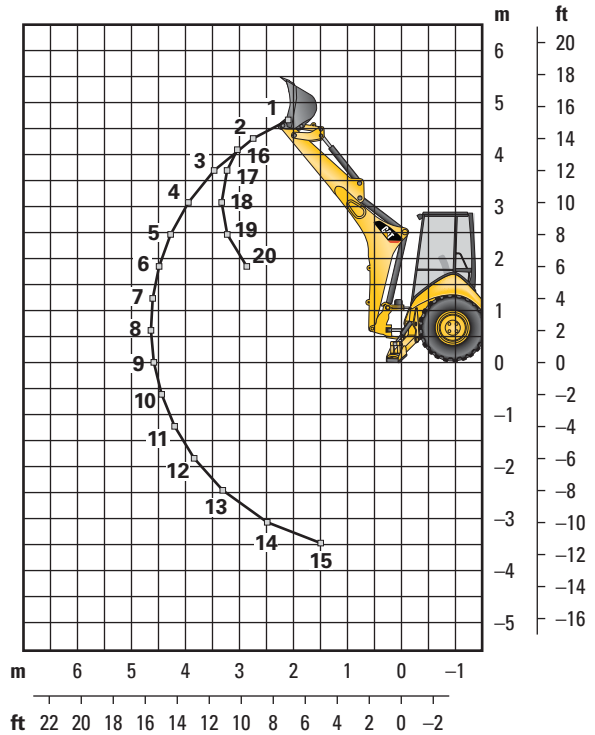
	Standard Stick		E-Stick Retracted		E-Stick Extended	
14 Digging Depth, SAE (max.)	4360 mm	14'4"	4390 mm	14'5"	5442 mm	17'11"
15 Digging Depth, 610 mm (2 ft) Flat Bottom	4311 mm	14'2"	4351 mm	14'4"	5405 mm	17'9"
Reach from Rear Axle Centerline at Ground Line	6702 mm	22'1"	6737 mm	22'2"	7742 mm	25'6"
16 Reach from Swing Pivot at Ground Line	5612 mm	18'5"	5647 mm	18'7"	6652 mm	21'10"
Maximum Operating Height	5522 mm	18'1"	5546 mm	18'3"	6282 mm	20'8"
Loading Height	3642 mm	11'11"	3599 mm	11'10"	4169 mm	13'8"
17 Loading Reach	1842 mm	6'1"	1929 mm	6'4"	2844 mm	9'4"
Swing Arc		180°		180°		180°
Bucket Rotation		205°		205°		205°
18 Stabilizer Spread, Operating Position (center)	3310 mm	10'10"	3310 mm	10'10"	3310 mm	10'10"
Stabilizer Spread, Operating Position (outside)	3770 mm	12'4"	3770 mm	12'4"	3770 mm	12'4"
Stabilizer Spread, Transport Position	2322 mm	7'7"	2322 mm	7'7"	2322 mm	7'7"
Bucket Dig Force	64 191 N	14,431 lbf	63 290 N	14,228 lbf	63 290 N	14,228 lbf
Stick Dig Force	43 510 N	9,781 lbf	43 402 N	9,757 lbf	31 682 N	7,122 lbf

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## Backhoe Lift Capacity

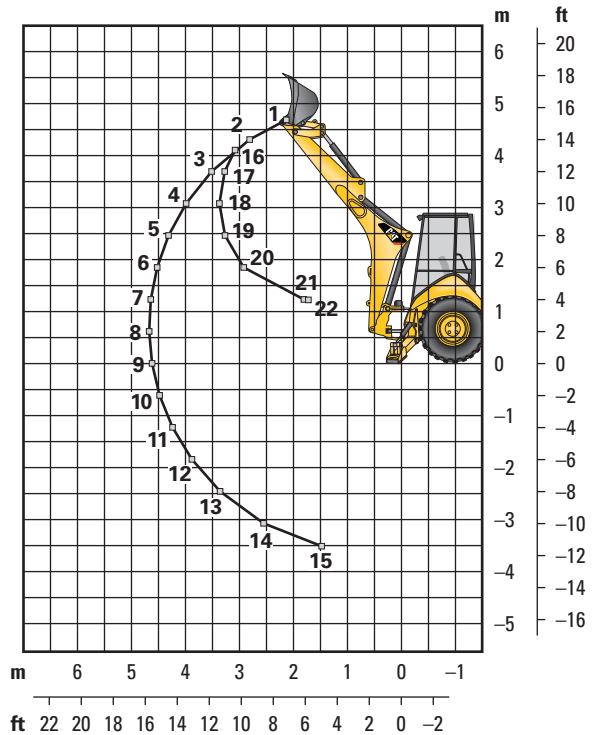
### Cat 420F2 Standard Stick

Boom Lifting	kg	lb
1	1621	3,573
2	1766	3,894
3	1785	3,936
4	1740	3,835
5	1678	3,700
6	1614	3,558
7	1551	3,420
8	1492	3,289
9	1437	3,168
10	1387	3,058
11	1342	2,959
12	1304	2,875
13	1278	2,817
14	1284	2,831
15	1426	3,145
Stick Lifting	kg	lb
16	1831	4,037
17	2557	5,638
18	2608	5,749
19	2704	5,961
20	3140	6,921



### Cat 420F2 Extendible Stick – Retracted

Boom Lifting	kg	lb
1	1439	3,173
2	1573	3,468
3	1582	3,487
4	1533	3,380
5	1470	3,241
6	1405	3,097
7	1341	2,957
8	1281	2,823
9	1224	2,699
10	1172	2,584
11	1124	2,479
12	1083	2,387
13	1050	2,314
14	1040	2,293
15	1149	2,534
Stick Lifting	kg	lb
16	1677	3,697
17	2387	5,262
18	2404	5,301
19	2492	5,493
20	2886	6,362
21	5629	12,409
22	6024	13,281

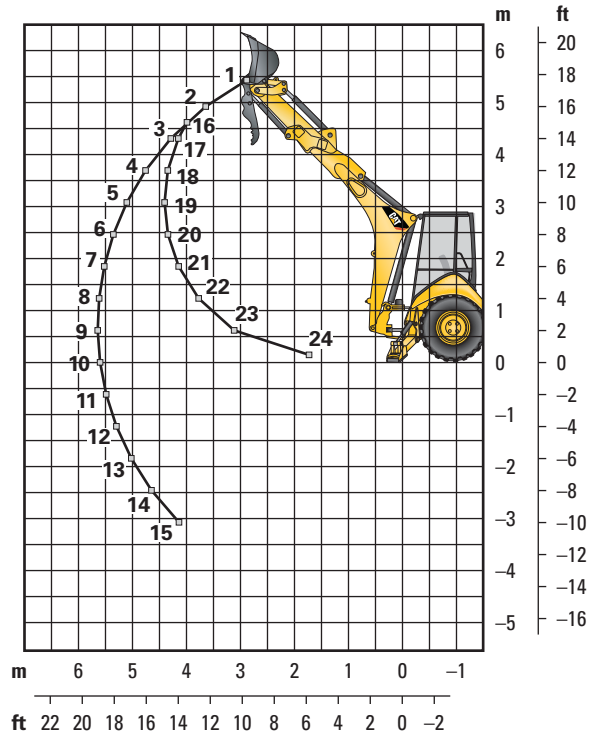


Lift Capacities are over-end values. Machine equipped with 4WD, OROPS, 0.96 m<sup>3</sup> (1.25 yd<sup>3</sup>) general purpose bucket, and no counterweight. Extendible stick includes 460 kg (1,015 lb) counterweight.

## Backhoe Lift Capacity

### Cat 420F2 Extendible Stick – Extended

Boom Lifting	kg	lb
1	838	1,849
2	1010	2,226
3	1073	2,366
4	1085	2,392
5	1070	2,358
6	1041	2,296
7	1003	2,212
8	976	2,153
9	950	2,095
10	887	1,955
11	875	1,928
12	873	1,924
13	895	1,973
14	1023	2,255
15	1502	3,311
Stick Lifting	kg	lb
16	868	1,914
17	1116	2,461
18	1457	3,212
19	1644	3,624
20	1671	3,684
21	1777	3,918
22	2015	4,442
23	2614	5,762
24	5992	13,209



Lift Capacities are over-end values. Machine equipped with 4WD, OROPS, 0.96 m<sup>3</sup> (1.25 yd<sup>3</sup>) general purpose bucket, and no counterweight. Extendible stick includes 460 kg (1,015 lb) counterweight.

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## Counterweights (Minimum Counterweight Recommendations)

### Standard Stick

Loader Bucket	Power Train	Single-Tilt	
		kg	lb
GP	4WD	240	530
MP	4WD	no counterweight	
Forks	4WD	N/A	N/A
Material Handling Arm	4WD	N/A	N/A

### Extendible Stick

Loader Bucket	Power Train	Single-Tilt	
		kg	lb
GP	4WD	460	1,015
MP	4WD	240	530
Forks	4WD	N/A	N/A
Material Handling Arm	4WD	N/A	N/A

## Backhoe Buckets (With weld on adapters and pin-on teeth)

### Standard Duty

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft <sup>3</sup>	kg	lb	
305	12	80	2.8	111	245	3
457	18	120	4.2	122	268	4
610	24	180	6.4	141	311	5
762	30	230	8.1	157	345	5
914	36	290	10.2	176	388	6

### Heavy Duty

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft <sup>3</sup>	kg	lb	
305	12	80	2.8	121	266	3
406	16	110	3.9	128	282	3
457	18	120	4.2	135	299	4
610	24	180	6.4	151	333	5
762	30	230	8.1	177	391	5
914	36	290	10.2	201	443	6

### Soil Excavation

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft <sup>3</sup>	kg	lb	
457	18	180	6.4	155	341	4
610	24	240	8.5	182	402	5
762	30	320	11.3	206	454	5
914	36	380	13.4	233	513	6

### Heavy Duty Rock

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft <sup>3</sup>	kg	lb	
305	12	70	2.5	127	279	3
457	18	130	4.6	146	322	4
610	24	200	7.1	174	384	5
762	30	270	9.5	197	434	5
914	36	330	11.7	224	493	6

### Coral

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft <sup>3</sup>	kg	lb	
305	12	60	2.1	134	295	4
457	18	100	3.5	155	341	6
610	24	140	4.9	182	402	8
762	30	190	6.7	210	463	10

### Heavy Duty – Pin Lock

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft <sup>3</sup>	kg	lb	
305	12	96	3.4	113	249	3
406	16	123	4.3	131	288	3
457	18	139	4.9	139	307	4
610	24	207	7.3	168	370	5
762	30	275	9.7	194	428	5
914	36	345	12.2	224	494	6

### High Capacity – Pin Lock

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft <sup>3</sup>	kg	lb	
305	12	96	4.6	113	287	3
406	16	123	5.6	131	327	3
457	18	139	6.5	139	346	4
610	24	207	9.6	168	414	5
762	30	275	12.9	194	475	5
914	36	345	16.2	224	543	6

## STANDARD EQUIPMENT

### POWER TRAIN

- Air cleaner
- Brake, secondary parking
- Brakes, hydraulically boosted, oil disc, dual pedals, interlocking
- Coolant/antifreeze, extended life
- Diagnostic port for engine, machine and gauge cluster Electronic Control Modules
- Differential lock, loader joystick
- Engine, Cat C4.4 Mechanical Turbocharged Aftercooled, will meet the Brazil MAR-1 requirement for noise and emission for agriculture and road machines and Tier 3/ Stage IIIA equivalent emission standards
- Engine enclosure, sound suppression removal panels
- Fast reversing shuttle, all gears
- Filters, spin-on: fuel, engine oil, transmission oil, water separator
- Filters, bowl and cartridge: hydraulic fluid
- High ambient cooling package
- Torque converter
- Transmission, four speed, syncromesh
- Transmission neutralizer switch
- Two Wheel Drive

### OPERATOR ENVIRONMENT

- Joystick controls: pilot operated, excavator-style with pattern changer
- Canopy, ROPS/FOPS
- Coat restraint
- Drink holders, two
- Fan, suction and guard
- Floor mat
- Gauge cluster
  - Gauges: coolant temperature, fuel level, tachometer
- Indicators: air cleaner service, water separator service, engine coolant, oil pressure, torque converter temperature high, fuel level, charging, engine warning #1, engine warning #2, action lamp, wait to start
- Instrument panel lights
- Mirror, rearview
- Pattern changer, in cab
- Radio ready
- Seat belt, retractable, 51 mm (2 in)
- Steering knob
- Seat, mechanical suspension, vinyl
- Storage compartment, lockable
- Storage tray
- Tilt steering column
- Throttle, hand and foot, manual

### HYDRAULIC SYSTEM

- Adjustable auxiliary controls, backhoe loader
- Face seals, O-ring
- Hydraulic hose, XT™
- Hydraulic oil cooler
- Hydraulic oil level sight gauge
- Hydraulic valve, hydrostatic steering
- Hydraulic valves, loader 2 function
- Hydraulic valves, backhoe 5 function
- Hydraulics, load sensing with variable displacement piston pump

### ELECTRICAL

- Alarm, back-up
- Alternator, 120 amp
- Audible system fault alarm
- Battery, maintenance-free, 880 CCA
- Battery disconnect switch
- Battery remote jumpstart
- Dome light (cab only)
- Flashing hazards/signal lights
- Key start/stop system
- Lights, working (2 front, 2 rear)
- Power receptacle, 12 volt, 2 internal, 1 external
- Socket, two roof
- Starting system, glow plugs
- Stop and tail lights
- Warning horn, electric

### OTHER

- Boom transport lock
- Brace, lift cylinder
- Bucket level indicator
- Cat cushion swing system
- Counterweight, bumper
- Fenders, rear
- Fuel tank, fully enclosed
- Fully hinged front grill for cooling package cleaning access
- Ground level fuel fill
- Hood lock, inside cab
- Loader, self-leveling, return-to-dig and transmission disconnect switch
- Loader, single tilt
- Open circuit breather
- Power steering, hydrostatic
- Stabilizer shoes, street
- Swing transport lock
- Tires
- Toolbox, external, lockable
- Transport tie-downs
- Vandalism locks, four



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## OPTIONAL EQUIPMENT

- Cab, deluxe
- Cold weather fuel (-30° C/-22° F)
- Cold weather package, including additional battery, engine block heater, radiator antifreeze, cold weather fuel (-30° C/-22° F) and mounting for an ether bottle
- Counterweights, 115 kg (255 lb), 240 kg (530 lb) or 460 kg (1,015 lb)
- Fenders, front with integral steps
- Four Wheel Drive
- Guard, boom protection plate
- Guard, stabilizer, rock
- Hydraulic valves, loader with auxiliary roller thumb control (3rd valve for GP, MP or Quick Coupler)
- Hydraulic valves, backhoe 6 function
- Hydraulic lines, combined function auxiliary
- Product Link™, cellular, PL6411
- Product Link, satellite, PL631E
- Quick Coupler, manual, dual lock
- Radio, Bluetooth
- Ride Control
- Rotating beacon, magnetic mount
- Seat, air suspension, fabric with armrest
- Security system keypad
- Stabilizer pads, flip over
- Stick, extendible
- Storage box
- Transmission, AutoShift
- Vandalism protection, gauge cover
- Work Tool Attachments such as general purpose buckets, multi purpose buckets, heavy duty backhoe buckets and standard duty backhoe buckets. See your Cat dealer for more information.



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