



Cat[®]

420F2/420F2 IT

BACKHOE LOADER

The Cat[®] 420F2 and 420F2 IT Backhoe Loaders deliver performance, increased fuel efficiency, superior hydraulic system, versatility and an all new operator station. The 420F2 and 420F2 IT feature 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 Cat C4.4 ACERT™ engine delivers solid performance and meets U.S. EPA Tier 4 Final/EU Stage IV emission standards by utilizing Selective Catalytic Reduction technology with a diesel oxidation catalyst. The system allows the operator to disconnect the machine, even while the diesel exhaust fluid is being purged from the system.
- **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. The Integrated Tool Carrier (IT Loader) provides versatility and allows quick connection to a variety of Cat Work Tools.
- **Dual Lock Coupler** – Cat dual lock coupler is available from the factory with either mechanical or hydraulic operation. The coupler makes work tool changes quick and easy.

Specifications

Engine

Engine Model	Cat C4.4 ACERT	
Gross Power		
SAE J1995	76 kW	102 hp
ISO 14396	74 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 @ 1,800 rpm		
SAE J1349	78 kW	105 hp
ISO 9249	79 kW	106 hp
EEC 80/1269	79 kW	106 hp
Bore	105 mm	4.13 in
Stroke	127 mm	5 in
Displacement	4.4 L	268 in ³
Net Torque Rise @ 1,400 rpm	46%	
Net Peak Torque SAE J1349	436 N-m	322 lbf-ft

- Engine meets Tier 4 Final/Stage IV 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 ³ /1.31 yd ³) (no forks or teeth)	745 kg	1,642 lb
Loader, IT with Quick Coupler	317 kg	699 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 m³ (1.25 yd³) general purpose loader bucket, 610 mm (24 in) standard duty backhoe bucket, 240 kg (530 lb) counterweight and full fuel tank.



420F2/420F2 IT Backhoe Loader

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

AutoShift Transmission with Lock-Up Torque Converter – Optional

Forward – 1st	5.8 km/h	3.6 mph	5.8 km/h	3.6 mph
2nd	9.3 km/h	5.7 mph	9.3 km/h	5.7 mph
3rd	12 km/h	7 mph	12 km/h	7 mph
4th	19 km/h	12 mph	19 km/h	12 mph
5th	26 km/h	16 mph	23 km/h	14 mph
5th LUC	—	—	25 km/h	15 mph
6th	40 km/h	25 mph	40 km/h	25 mph
6th LUC	—	—	40 km/h	25 mph
Reverse – 1st	5.8 km/h	3.6 mph	5.8 km/h	3.6 mph
2nd	12 km/h	7.6 mph	12 km/h	7.6 mph
3rd	28 km/h	17 mph	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

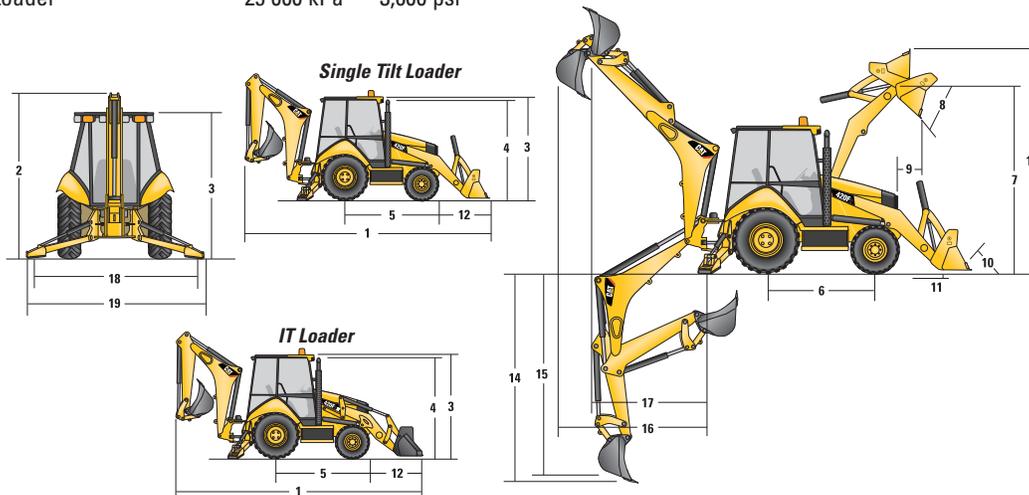
Cooling System with Air Conditioning	22.5 L	5.9 gal
Fuel Tank	160 L	42 gal
Diesel Exhaust Fluid	19 L	5.0 gal
Engine Oil with Filter	8.8 L	2.3 gal
Transmission – Power Shuttle		
2WD	15.0 L	4.0 gal
4WD	15.0 L	4.0 gal
Transmission – AutoShift		
4WD	19.0 L	5.0 gal
Rear Axle	16.5 L	4.4 gal
Planetaries	1.7 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

- Requires ultra-low sulfur fuel ≤ 15 ppm fuel sulfur

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
- 340/80R 18/19.5L-24 (12 ply) R4 ATU
- 340/80R 18/500/70R 24 RT



420F2/420F2 IT Backhoe Loader

Dimensions

	Single Tilt Loader				IT Loader with Quick Coupler			
	0.96 m ³ (1.25 yd ³) GP Bucket		1.00 m ³ (1.31 yd ³) MP Bucket		0.96 m ³ (1.25 yd ³) GP Bucket		1.00 m ³ (1.31 yd ³) MP Bucket	
1 Overall Length (Loader on Ground) – Standard Stick	7141 mm	23'5"	7059 mm	23'2"	7289 mm	23'11"	7197 mm	23'7"
Overall Length (Loader on Ground) – Extendible Stick	7147 mm	23'5"	7064 mm	23'2"	7295 mm	23'11"	7203 mm	23'8"
Overall Transport Length – Standard Stick	7169 mm	23'6"	7133 mm	23'5"	7282 mm	23'11"	7211 mm	23'8"
Overall Transport Length – Extendible Stick	7175 mm	23'6"	7139 mm	23'5"	7288 mm	23'11"	7217 mm	23'8"
2 Overall Transport Height – Standard Stick	3577 mm	11'9"						
Overall Transport Height – Extendible Stick	3631 mm	11'11"						
Overall Width	2322 mm	7'7"						
3 Height to Top of Cab/Canopy	2819 mm	9'3"						
4 Height to Top of Exhaust Stack	2744 mm	9'0"						
Height to Loader Hinge Pin (Transport)	381 mm	1'3"	432 mm	1'5"	396 mm	1'4"	386 mm	1'3"
Ground Clearance (minimum)	294 mm	1'0"						
5 Rear Axle Centerline to Front Grill	2705 mm	8'10"						
Front Wheel Tread Gauge	1895 mm	6'3"						
Rear Wheel Tread Gauge	1714 mm	5'7"						
6 Wheelbase 2WD/4WD	2200 mm	7'3"						

Loader Bucket Dimensions and Performance

	Single Tilt Loader				IT Loader with Quick Coupler			
	0.96 m ³ (1.25 yd ³) GP Bucket		1.00 m ³ (1.31 yd ³) MP Bucket		0.96 m ³ (1.25 yd ³) GP Bucket		1.00 m ³ (1.31 yd ³) MP Bucket	
Capacity (SAE Rated)	0.96 m ³	1.25 yd ³	1.0 m ³	1.31 yd ³	0.96 m ³	1.25 yd ³	1.0 m ³	1.31 yd ³
Overall Bucket Width	2262 mm	89 in	2279 mm	90 in	2262 mm	89 in	2279 mm	90 in
Lift Capacity at Maximum Height	3283 kg	7,237 lb	3097 kg	6,828 lb	3716 kg	8,193 lb	3448 kg	7,601 lb
Lift Breakout Force	49 809 N	11,197 lbf	49 019 N	11,020 lbf	51 085 N	11,484 lbf	49 678 N	11,168 lbf
Tilt Breakout Force	50 190 N	11,283 lbf	57 555 N	12,938 lbf	46 314 N	10,411 lbf	50 380 N	11,325 lbf
Tipping Load at Breakout Point	6578 kg	14,503 lb	6659 kg	14,681 lb	5951 kg	13,120 lb	6029 kg	13,292 lb
7 Maximum Hinge Pin Height	3474 mm	11'5"	3474 mm	11'5"	3490 mm	11'5"	3490 mm	11'5"
8 Dump Angle at Full Height	44°		44°		44°		44°	
Dump Height at Maximum Angle	2746 mm	9'0"	2798 mm	9'2"	2679 mm	8'9"	2745 mm	9'0"
9 Dump Reach at Maximum Angle	808 mm	2'8"	716 mm	2'4"	869 mm	2'10"	814 mm	2'8"
10 Maximum Bucket Rollback at Ground Level	37°		38°		40°		39°	
11 Digging Depth	83 mm	3"	110 mm	4"	105 mm	4"	95 mm	4"
Maximum Grading Angle	112°		116°		110°		112°	
Width of Dozer Cutting Edge	N/A		2262 mm	7'5"	N/A		2262 mm	7'5"
12 Grill to Bucket Cutting Edge, Carry Position	1487 mm	4'11"	1451 mm	4'9"	1600 mm	5'3"	1529 mm	5'0"
13 Maximum Operating Height	4355 mm	14'3"	4404 mm	14'5"	4407 mm	14'6"	4480 mm	14'8"
Jaw Opening Maximum	N/A		790 mm	2'7"	N/A		790 mm	2'7"
Bucket Jaw Clamping Force	N/A		55 700 N	12,521 lbf	N/A		55 700 N	12,521 lbf
Weight (does not include teeth or forks)	451 kg	994 lb	745 kg	1,642 lb	447 kg	985 lb	724 kg	1,596 lb

Backhoe Dimensions and Performance

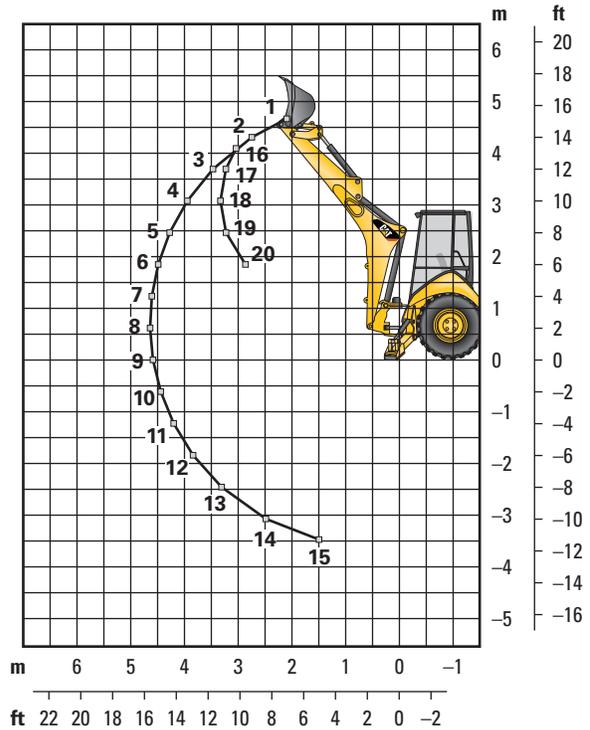
	Standard Stick		E-Stick Retracted		E-Stick Extended	
14 Digging Depth, SAE (max.)	4360 mm	14'4"	4390 mm	14'5"	5442 mm	17'11"
15 Digging Depth, 610 mm (2 ft) Flat Bottom	4311 mm	14'2"	4351 mm	14'4"	5405 mm	17'9"
Reach from Rear Axle Centerline at Ground Line	6702 mm	22'1"	6737 mm	22'2"	7742 mm	25'6"
16 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

420F2/420F2 IT Backhoe Loader

Backhoe Lift Capacity

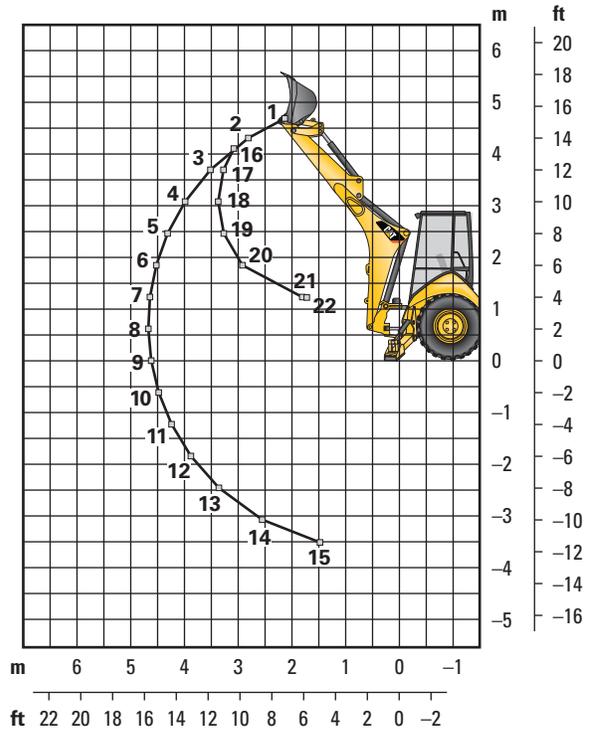
Cat 420F2/420F2 IT Standard Stick

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 420F2/420F2 IT 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



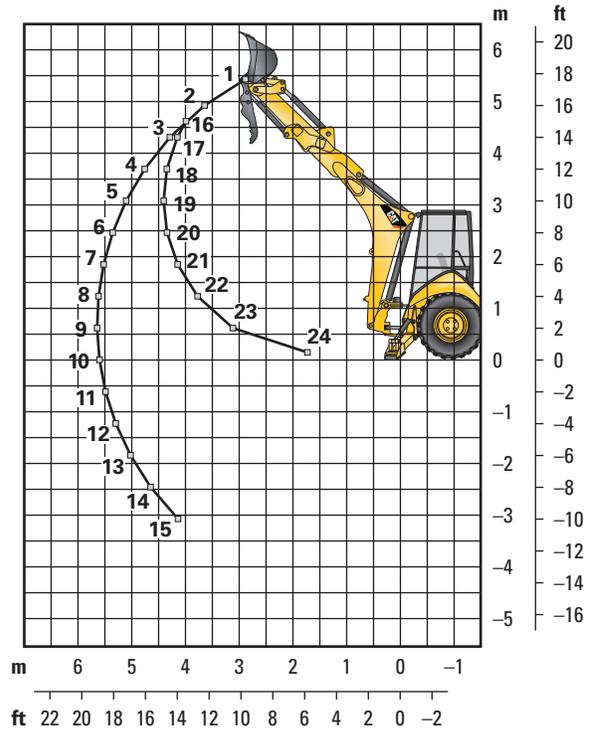
Lift Capacities are over-end values. Machine equipped with 4WD, OROPS, 0.96 m³ (1.25 yd³) general purpose bucket, and no counterweight. Extendible stick includes 460 kg (1,015 lb) counterweight.

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Backhoe Lift Capacity

Cat 420F2/420F2 IT 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 m³ (1.25 yd³) general purpose bucket, and no counterweight. Extendible stick includes 460 kg (1,015 lb) counterweight.

420F2/420F2 IT Backhoe Loader

Counterweights (Minimum Counterweight Recommendations)

Standard Stick

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

Extendible Stick

Loader Bucket	Power Train	Single-Tilt		IT Loader w/QC	
		kg	lb	kg	lb
GP	4WD	460	1,015	240	530
MP	4WD	240	530	no counterweight	
Forks	4WD	N/A	N/A	240	530
Material Handling Arm	4WD	N/A	N/A	240	530

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

Standard Duty

Width		Rated Capacity		Weight		No. of Teeth
mm	in	L	ft ³	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 ³	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 ³	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 ³	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 ³	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 ³	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 ³	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

- Adjustable auxiliary controls, backhoe loader
- Air cleaner
- Alarm, back-up
- Audible system fault alarm
- Automatic Engine Speed Control (AESC)
- Battery, maintenance-free, 880 CCA
- Battery disconnect switch
- Battery remote jumpstart
- Boom transport lock
- Brace, lift cylinder
- Brake, secondary parking
- Brakes, hydraulically boosted, oil disc, dual pedals, interlocking
- Bucket level indicator
- Canopy, ROPS/FOPS
- Cat cushion swing system
- Coat restraint
- Coolant/antifreeze, extended life
- Counterweight, bumper
- Dome light (cab only)
- Diagnostic port for engine, machine and gauge cluster Electronic Control Modules
- Differential lock, loader joystick
- Drink holders, two
- Engine, Cat C4.4 ACERT (Direct Injection Turbocharged), meets Tier 4 Final/Stage IV emission standards, selective catalytic reduction, diesel oxidation catalyst (DOC)
- Engine enclosure, sound suppression removal panels
- Face seals, O-ring
- Fan, suction and guard
- Fast reversing shuttle, all gears
- Fenders, rear
- Filters, spin-on: fuel, engine oil, transmission oil, water separator
- Filters, bowl and cartridge: hydraulic fluid
- Flashing hazards/signal lights
- Floor mat
- Fuel tank, fully enclosed
- Fully hinged front grill for cooling package cleaning access
- Gauge cluster: coolant temperature, fuel level, torque converter temperature, DEF level
- Ground level fuel fill and DEF fill
- High ambient cooling package
- Hood lock, inside cab
- 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
- Indicator lights: wait to start, water in fuel, engine warning, warning lamp, emissions module malfunction, low battery/charging system warning, high hydraulic oil temperature: LCD warnings: engine oil pressure, machine locked, service due, air filter blocked, high coolant temperature, auto idle shutdown, high torque converter temperature, hydraulic filter bypass
- Instrument panel lights
- Joystick controls: pilot operated, excavator-style with pattern changer
- Key start/stop system
- LCD screen: engine speed, hour meter, gear/direction, battery voltage, hydraulic oil temperature, torque converter temperature, coolant temperature, trip totals (fuel and hours), lifetime totals (fuel and hours), operator settings (units, brightness, programmable hoe auxiliary flow), service mode diagnostics, maintenance intervals, ECM/system info
- Lights, working (4 front, 4 rear)
- Loader, self-leveling, return-to-dig and transmission disconnect switch
- Loader, single tilt
- Mirror, rearview
- One-touch low idle
- Open circuit breather
- Pattern changer, in cab
- Power receptacle, 12 volt, 2 internal, 1 external
- Power steering, hydrostatic
- Radio ready cab
- Seat belt, retractable, 51 mm (2 in)
- Socket, two roof
- Stabilizer shoes, street
- Steering knob
- Seat, air suspension, fabric or vinyl cover, with armrest
- Starting system, glow plugs
- Steering, hydrostatic
- Storage compartment, lockable
- Storage tray
- Stop and tail lights
- Swing transport lock
- Tilt steering wheel
- Tires
- Toolbox, external, lockable
- Torque converter
- Throttle, hand and foot, electronic
- Transmission, four speed, syncromesh
- Transmission neutralizer switch
- Transport tie-downs
- Two Wheel Drive
- Vandalism locks, four
- Warning horn, electric

420F2/420F2 IT Backhoe Loader

OPTIONAL EQUIPMENT

- Battery, additional, 880 CCA
- 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
- Loader, IT with Quick Coupler and pilot loader control
- Product Link™, satellite, PL631E
- Product Link, cellular, PL6411
- Quick Coupler, hydraulic, dual lock
- Quick Coupler, manual, dual lock
- Quick Coupler, pin lock
- Radio and CD player
- Radio and CD player, Bluetooth
- Ride Control
- Rotating beacon, magnetic mount
- Seat belt, 75 mm (3 in)
- Security system keypad
- Stabilizer pads, reversible
- Stick, extendible
- Storage box
- Transmission, AutoShift
- Transmission, AutoShift with lock-up torque converter
- Vandalism protection, gauge cover
- Work Tool Attachments such as buckets, forks, material handling arms, augers, hammers, brooms, cold planers and vibratory plate compactors. See your Cat dealer for more information.

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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