420F2/420F2 IT

Backhoe Loaders



Engine		
Engine Model	Cat® C4.4 ACERT™	
Rated Net Power – SAE J1349	69 kW	93 hp
Rated Net Power – ISO 9249	70 kW	94 hp

Weights		
Operating Weight – Minimum	7726 kg	17,033 lb
Operating Weight – Maximum (ROPS Capacity)	11 000 kg	24,251 lb
Backhoe		
Dig Depth – Standard	4360 mm	14'4"
Dig Depth – E-Stick Extended	5441 mm	17'11"

Features

All New Operator Station
Built with the operator in mind, the new F2 Backhoe Loader cab provides additional machine control at the operator's fingertips, with differential lock and auxiliary functions on the loader joystick. Adjustable steering column as well as adjustable seat and hoe pod controls provide additional operator comfort.

Industry Leading Hydraulic Technology
Electronically controlled load sensing piston pump provides optimum response for loader and hoe productivity. New programmable auxiliary flow allows the machine to work more efficiently with work tool attachments.

Economy Mode
New technology allows the F2 Backhoe Loader to save fuel while maintaining performance in applications such as trenching, lifting and truck loading. Zero reduction in performance means increased efficiency on the job site.

Greater Versatility
Quick and easy attachment changing provides increased versatility and the ability to match the correct tool to the job application. The hydraulic backhoe coupler allows for a tool change without exiting the operation station. The loader hydraulic coupler, standard on the Integrated Toolcarrier (IT) Backhoe Loader, provides additional options for loader applications.

Superior Power and Performance
Industry leading structural design and hydraulics mean greater lifting power and breakout forces. Machine aggressiveness delivers outstanding productivity in the toughest applications.

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Experience the Backhoe Loader designed around customer feedback. The Cat 420F2 Backhoe Loader puts all the machine controls at the operator's fingertips. Operate all auxiliary controls with thumb rollers. Move from job site to job site quickly and smoothly with the additional 6th gear on the autoshift transmission and optional lock-up torque converter.

Operator Station

A cab designed for maximum comfort and productivity.

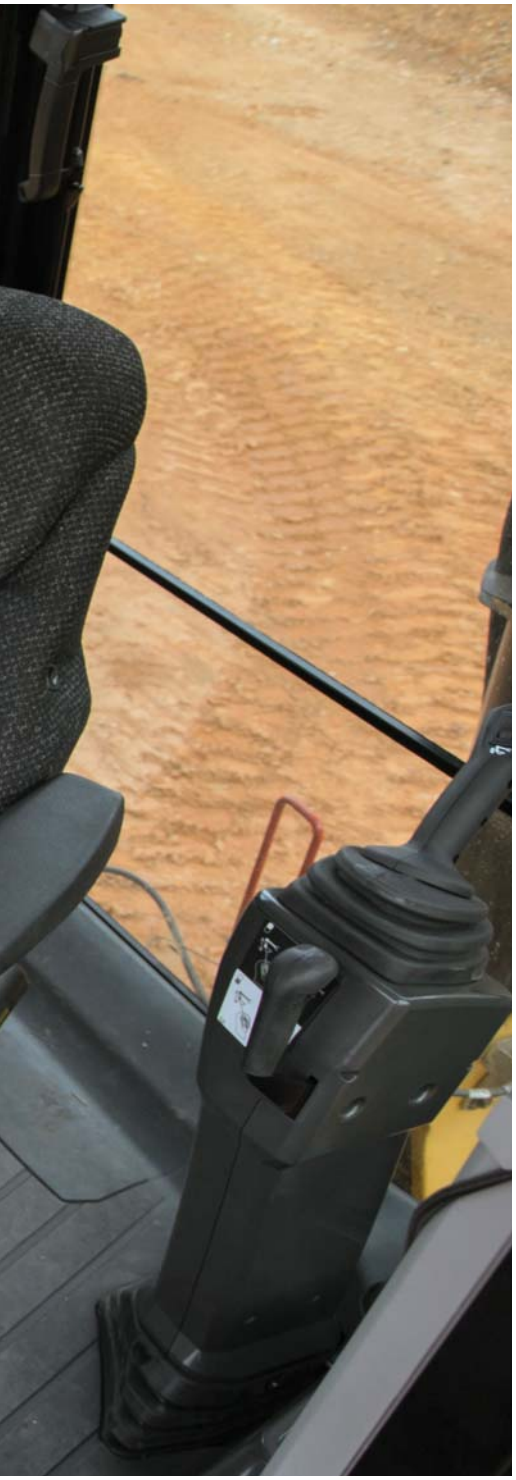






Joystick Controls

Cat Backhoe Loader joysticks are economically designed to provide precise control with low effort. Loader control levers on both the Single Tilt and Integrated Toolcarrier models offer a thumb roller for any 3rd function auxiliary. The differential lock control is newly located on the loader control to bring controllability to the operator's fingertips. New on the IT model is the forward, neutral, reverse control switch.



Unmatched Comfort

The ergonomic, automotive style operator station helps you work comfortably and productively all day long. Choose the configuration that meets your needs – Canopy, Cab Deluxe or Cab Deluxe with Air Conditioning. Other features include:

- Adjustable air suspension seat
- Tilt and telescoping steering column
- Excellent visibility over hood and up to bucket dump
- Pantograph windshield wiper
- Large front windshield screen
- Large LCD gauge cluster screen
- Ample legroom
- Optional heated seat
- Differential lock button on loader lever
- Large opening windows
- Solid roof cab
- LED brake lights
- Heated seat (optional)

Ride Control

The optional Ride Control System smoothes the ride in all conditions, including load and carry, highway roading or simply moving around the job site. The result can be increased operator comfort, potentially reducing operator fatigue, and improved material retention.

Pattern Selector

The pattern selector switch, located in the cab, lets you change from an excavator to a backhoe control pattern simply by pressing a button. This lets you use the pattern you are most comfortable with so you can be more productive.

Premium Gauge Cluster

Bright and large LCD screen makes it easy to monitor machine operation and settings. LED indicator lights and audible alarms allow the machine to clearly communicate with the operator.





Safety Getting in and out of the Cab

New longer grab handles and ergonomic step placement makes it easy to maintain three points of contact when getting in and out of the cab.



Power Train

Always built for performance, power and efficiency.

Cat Engine

The Cat C4.4 ACERT engine operates quietly while delivering performance and durability. The engine meets U.S. EPA Tier 4 Final emission standards. Engine features includes:

- Selective catalytic reduction
- Diesel oxidation catalyst
- Diesel exhaust fluid with system purge
- Limited operator interaction

Transmission

The standard power shuttle transmission provides four speeds forward and reverse. Hydraulically shifted clutches allow on-the-go direction and travel speed shifts. The optional auto-shift transmission matches gear with grade and load conditions. Now with six forward and reverse speeds, the machine can reach top speeds smoothly and quickly.

- The new optional lock-up torque converter, offered on the autoshift transmission, improves fuel efficiency up to 20% over the standard six gear autoshift. The lock-up torque converter also improves roading for long distances and with uphill climbs.
- Hydraulic proportional control valves deliver smooth speed and directional shifts.
- Four Wheel Drive option improves mobility and loader performance in poor underfoot conditions and can be activated on-the-go.
- Maximum roading speed of 40 km/h (25 mph) improves travel time between job sites.

Brake Mode Selector

Brake mode selector switch has three positions: two wheel drive, two wheel drive with all wheel braking and four wheel drive. Two wheel drive with all wheel braking provides better tire life while roading and engages the front axle when brakes are applied for improved braking performance. Brake mode selector is included in the 4WD package.



Advanced Hydraulics

Matching system power to job site demands.

Load Sensing Hydraulics

Closed center hydraulic system matches pressure and flow to application demand. Whether you're in full trenching mode or digging around delicate services, you remain in control. In applications such as production trenching where speed is important, the system will provide the flow needed to get the job done quickly and efficiently. The load sensing hydraulic system provides:

- Better fuel efficiency
- Electronically controlled
- Quieter operation
- Reduced component wear
- Cooler hydraulic temperatures
- Full forces at any engine speed

Flow Sharing Valves

Specifically tuned hydraulic valves allows for the multifunction of hydraulic components, without machine manipulation. Hydraulic fluid is shared between implements so that operation isn't interrupted.

Hydraulic Lines

Combination two way and one way flow hydraulic lines add versatility to the machine. By simply changing the lever position, the machine can efficiently run either style hydro mechanical tool.

Economy Mode

Cat Backhoe Loaders are able to reduce engine speed to 1,900 rpm while maintaining superior hydraulic power and performance.



Loader Performance

Powerful front loader.

Front loader arms deliver more reach, dump height and breakout. Choose the loader linkage that suits your application:

Powerful Single Tilt Loader Linkage

- Delivers strong lift and breakout forces for a solid performance in backfilling and truck loading applications with pin-on buckets.
- Optional third function hydraulics are now operated by an ergonomically designed thumb roller.
- The operator can now engage the differential lock with a press of a button on the loader lever for added machine control.

Integrated Toolcarrier (IT) loader linkage (optional) provides high breakout forces with parallel lift for efficient loading and material handling:

- The versatile integrated toolcarrier comes with a standard hydraulic quick coupler and can use a wide range of Cat Work Tools for a variety of applications.
- The single lever IT loader control provides fine modulation of hydraulic work tools. A thumb roller operates auxiliary hydraulic functions on work tools such as multi purpose buckets, brooms and other attachments.
- The IT loader lever provides additional machine control by offering the Forward, Neutral and Reverse control switch at the operator's fingertips.

Backhoe Performance

Superior digging forces.

Boom

The excavator-style boom is built for optimum performance and durability. The curved design provides added clearance when digging over obstacles or loading trucks. The narrow boom enhances the viewing area to the bucket and the trench throughout the operating range. More robust swing casting and double clevis design improves durability and reliability.

Stick

Serrated edges on the stick provide improved material clamping for clearing and demolition applications. The optional extendible stick (E-stick) increases reach and dig depth by approximately 1.2 m (4 ft).

Programmable Auxiliary Flow Control

- Three auxiliary settings for two auxiliary functions
- Accessed through the gauge cluster, operators can match the hydraulic flow of the machine to a work tool attachment

Thumbs

Thumb mounting provisions are standard on every Cat Backhoe Loader for added machine versatility. Cat hydraulic thumbs are available for even greater versatility. Mechanical thumbs are also available through your Cat dealer.



Work Tools

Do more jobs with one machine.







Backhoe Work Tools

Increase the versatility of your machine with the large selection of backhoe attachments:

- Buckets – Standard Duty, Heavy Duty, Heavy Duty Rock, Soil Excavation, Coral and Ditch Cleaning
- Cold Planers
- Hammers
- Augers
- Rippers
- Thumbs (mechanical and hydraulic)
- Vibratory Plate Compactors
- Quick Couplers

Loader Work Tools

A wide range of loader attachments is available including:

- Buckets – General Purpose, Multi Purpose, Side Dump and Light Material
- Angle Blades
- Brooms
- Rakes
- Forks
- Material Handling Arms
- Snow Plows

IT Loader Quick Coupler

The quick coupler allows fast and easy connection to work tools. Mechanical work tools can be changed in less than 30 seconds from the comfort of the operator station.

Backhoe Quick Coupler

Manual or hydraulic backhoe couplers make rear tool exchange quick and easy. New Cat dual lock coupler has a self-adjusting wedge design to ensure a tight fit. It also features a safety lock that automatically engages.

Serviceability

Easy maintenance helps keep your machine working.



Minimize Your Downtime

Convenient service features make maintenance easy, reducing your downtime:

- Hinged cooling pack provides easy access
- Tilt up hood provides easy, convenient access to all engine check points
- Engine side panels remove easily without the use of tools
- Cat Product Link™ system (optional) provides remote reporting of machine location and operating system parameters

Customer Support

Unmatched support makes the difference.

Renowned Dealer Support

From helping you choose the right machine to knowledgeable ongoing support, Cat dealers provide the best in sales and service.

- Preventive maintenance programs and guaranteed maintenance contracts
- Best-in-class parts availability
- Operator training to help boost your profits
- Genuine Cat Remanufactured parts



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 9249	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 – SAE J1349	46%	
Net Peak Torque @ 1,400 rpm	436 N·m	322 lb-ft

- Engine meets Tier 4 Final emission standards.
- Net power ratings apply at 2,200 rpm when tested under the specified conditions for the specified standard.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- Based on standard air conditions of 25° C (77° F) and 99 kPa (29.32 in) in dry barometer.
- Used 35° API gravity fuel having an LHV of 42 780 kJ/kg (18,390 BTU/lb) when used at 30° C (89° F) (reference a fuel density of 838.9 g/L [7.001 lb/gal]).
- No derating required up to 3000 m (9,843 ft).
- Net torque rise meets SAE J1349.
- Net peak power ratings apply at conditions specified above.

Transmission

Power Shuttle Transmission – Standard		
Forward – 1st	5.4 km/h	3.4 mph
Forward – 2nd	9.0 km/h	5.6 mph
Forward – 3rd	21 km/h	13 mph
Forward – 4th	40 km/h	25 mph
Reverse – 1st	5.4 km/h	3.4 mph
Reverse – 2nd	9.0 km/h	5.6 mph
Reverse – 3rd	21 km/h	13 mph
Reverse – 4th	40 km/h	25 mph
AutoShift Transmission – Optional		
Forward – 1st	5.8 km/h	3.6 mph
Forward – 2nd	9.3 km/h	5.7 mph
Forward – 3rd	12 km/h	7 mph
Forward – 4th	19 km/h	12 mph
Forward – 5th	26 km/h	16 mph
Forward – 6th	40 km/h	25 mph
Reverse – 1st	5.8 km/h	3.6 mph
Reverse – 2nd	12 km/h	7.6 mph
Reverse – 3rd	28 km/h	17 mph
AutoShift Transmission with Lock-up Torque Converter – Optional		
Forward – 1st	5.8 km/h	3.6 mph
Forward – 2nd	9.3 km/h	5.7 mph
Forward – 3rd	12 km/h	7 mph
Forward – 4th	19 km/h	12 mph
Forward – 5th	23 km/h	14 mph
Forward – 5th LUC	25 km/h	15 mph
Forward – 6th	40 km/h	25 mph
Forward – 6th LUC	40 km/h	25 mph
Reverse – 1st	5.8 km/h	3.6 mph
Reverse – 2nd	12 km/h	7.6 mph
Reverse – 3rd	28 km/h	17 mph

- AutoShift automatically shifts between second gear and highest selected gear.
- Forward/reverse electric power shuttle is controlled by a conveniently placed, hand operated lever that provides instant direction changes between forward and reverse through power hydraulic clutches.
- Torque converter free-wheel clutch allows the converter stator to free-wheel during high speed, low torque conditions such as roading.
- Single-stage, 2.63:1 stall ratio.
- Travel speeds of two wheel drive backhoe loader at full throttle when equipped with 19.5 × 24 rear tires.

420F2/420F2 IT Specifications

Weights*

Operating Weight – Minimum	7726 kg	17,033 lb
Operating Weight – 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 m³/1.3 yd³) (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 0.96 m³ (1.25 yd³) general purpose loader bucket, 610 mm (24 in) heavy duty backhoe bucket, 115 kg (255 lb) counterweight, 80 kg (176 lb) operator and full fuel tank.

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"

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
Axle Oscillation	10 Degrees	

- 4WD and 2WD axles are pendulum mounted and permanently sealed and lubricated, requiring no daily maintenance. Also features double-acting steering cylinder with 52° steering angle for increased maneuverability.

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

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

* Must meet the requirements outlined in ISO 22241.
- Requires ultra-low sulfur fuel </= 15 ppm fuel sulfur.

Tires

Choices listed as combination of front/rear tires:
- Front: 11L-16 (12 ply) F-3/Rear: 19.5L-24 (12 ply) R4 ATU
- Front: 12.5/80-18 (12 ply) 1-3/Rear: 19.5L-24 (12 ply) ATU
- Front: 12.5/80-18 NHS (12 ply) 1-3/Rear: 21L-24 (16 ply) R4 ATU
- Front: 340/80R 18/Rear: 19.5L-24 (12 ply) R4 ATU
- Front: 340/80R 18/Rear: 500/70R 24 RT

Standards

Brakes	SAE J/ISO 3450; ISO 3450 1996
Cab – ROPS	SAE J1040 MAY94; ISO 3741 1994
Cab – FOPS	SAE J/ISO 3449 APR98 LEVEL II and ISO 3449: 1992 LEVEL II
Cab – Sound	ANSI/SAE J1166 OCT98 is 79 dB(A)
Exterior Sound	SAE J188 JUN86 is 76 dB(A)

Engine Features

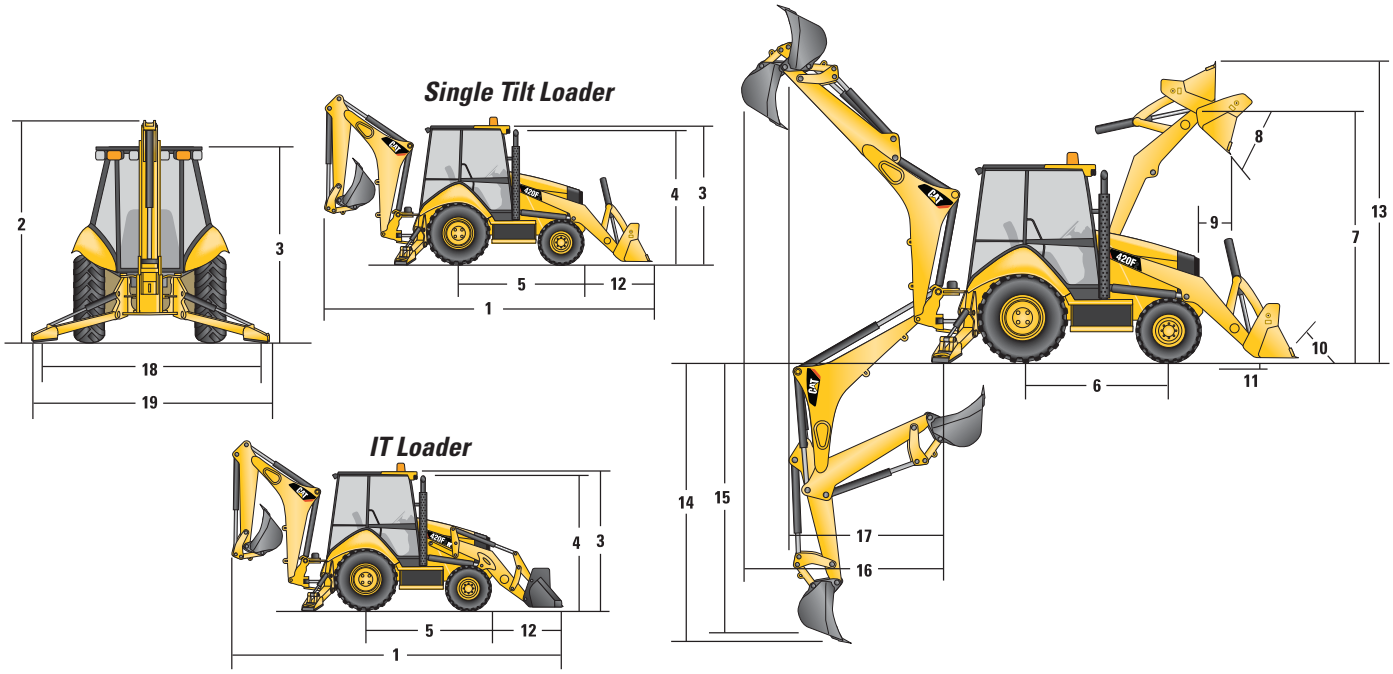
- Regeneration is passive and does not require any input from the operator or disrupt work.
- Three-ring pistons made of lightweight, silicon/aluminum alloy for strength and maximum thermal conductivity.
- Forged chrome/molybdenum-steel crankshaft with crankshaft with either induction hardened or nitrocarburized journals.
- Front and rear crankshaft oil seals are “lip” type Viton and PTFE designs featuring an integral dust lip.
- Heat resistant, silicone-chrome steel intake and STELLITE-faced exhaust valves provide long life.
- Cylinder block is high strength, cast iron alloy of deep skirt, monobloc design for increased strength and long life.
- Cylinder head is high strength, cast iron alloy construction with extra duty wall and deck thickness. Intake and exhaust ports are precision cast to promote optimum gas flow.
- Direct injection fuel system provides accurate fuel delivery; remote mounted electric lift pump improves serviceability.
- Dry-type axial seal air cleaner with integral precleaner, automatic dust ejection system, and filter condition indicator.
- Direct electric, 12-volt starting and charging system with 880 CCA Group 31 maintenance free battery.
- Standard glow plug starting aid system for efficient cold weather starting.
- High contact ratio/gear train, peripheral fixed isolation top cover and open deck block design reduce bare engine noise.
- Higher low end torque for better engine/machine performance.
- Engine is equipped with electric fuel priming pump.

Brakes

Features:

- Brakes meet the following standards: SAE J1473 and ISO 3450 requirements.
- Self-adjusting, completely enclosed and sealed.
- Foot operated brake pedals can be interlocked for roading.
- Parking/secondary brakes are independent of the service brake system. Parking brake is mechanically applied through an adjustable hand lever located on the right console.

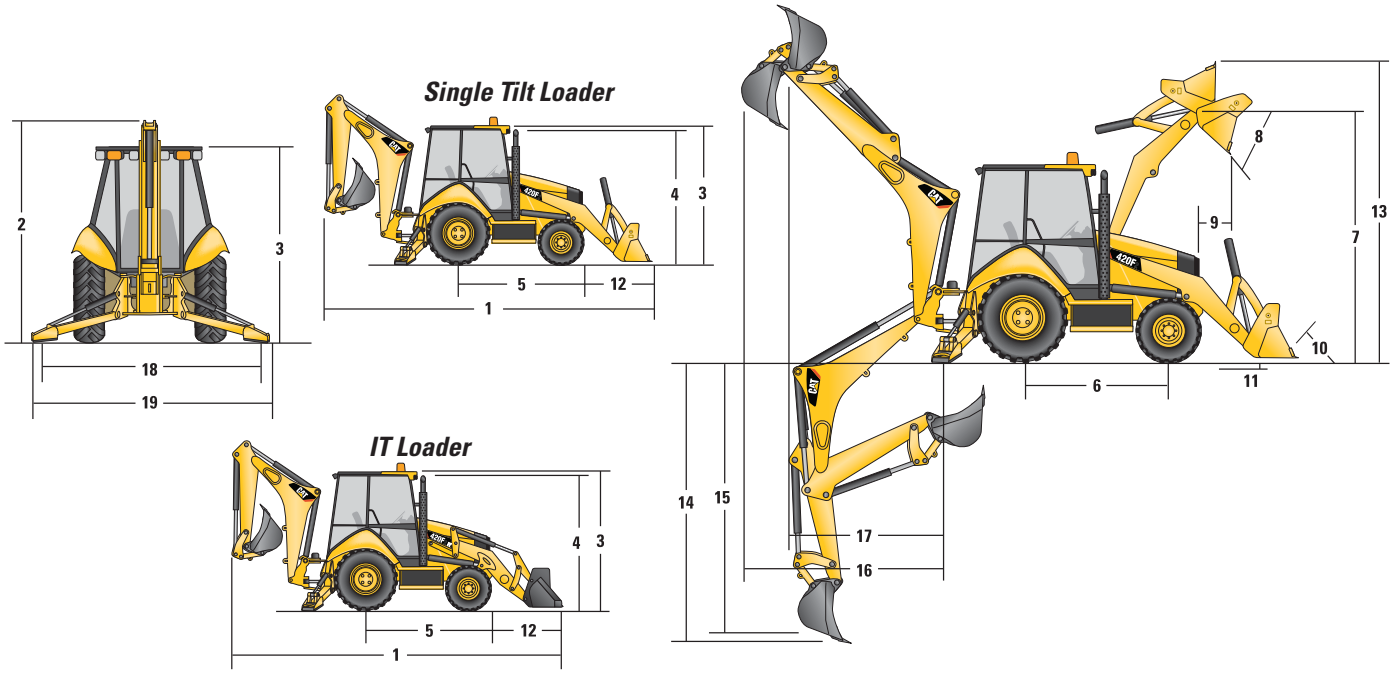
Machine Dimensions



		Single Tilt Loader									
		General Purpose (0.96 m³/1.25 yd³)		General Purpose (1.0 m³/1.31 yd³)		General Purpose (1.1 m³/1.4 yd³)		Multi Purpose (1.0 m³/1.31 yd³)		Multi Purpose (1.1 m³/1.4 yd³)	
1	Overall Transport Length	7169 mm	23'6"	7136 mm	23'5"	7208 mm	23'8"	7133 mm	23'5"	7133 mm	23'5"
	Overall Length (loader on ground)	7141 mm	23'5"	7096 mm	23'3"	7161 mm	23'6"	7059 mm	23'2"	7059 mm	23'2"
2	Overall Transport Height – Standard Stick	3577 mm	11'9"	3577 mm	11'9"	3577 mm	11'9"	3577 mm	11'9"	3577 mm	11'9"
	Overall Transport Height – Extendible Stick	3631 mm	11'11"	3631 mm	11'11"	3631 mm	11'11"	3631 mm	11'11"	3631 mm	11'11"
	Overall Width	2322 mm	7'7"	2322 mm	7'7"	2322 mm	7'7"	2322 mm	7'7"	2322 mm	7'7"
3	Height to Top of Cab/Canopy	2819 mm	9'3"	2819 mm	9'3"	2819 mm	9'3"	2819 mm	9'3"	2819 mm	9'3"
4	Height to Top of Exhaust Stack	2744 mm	9'0"	2744 mm	9'0"	2744 mm	9'0"	2744 mm	9'0"	2744 mm	9'0"
	Height to Loader Hinge Pin (transport)	381 mm	1'3"	381 mm	1'3"	297 mm	1'0"	432 mm	1'5"	432 mm	1'5"
	Ground Clearance (minimum)	294 mm	1'0"	294 mm	1'0"	294 mm	1'0"	294 mm	1'0"	294 mm	1'0"
5	Rear Axle Centerline to Front Grill	2705 mm	8'10"	2705 mm	8'10"	2705 mm	8'10"	2705 mm	8'10"	2705 mm	8'10"
	Front Wheel Tread Gauge	1895 mm	6'3"	1895 mm	6'3"	1895 mm	6'3"	1895 mm	6'3"	1895 mm	6'3"
	Rear Wheel Tread Gauge	1714 mm	5'7"	1714 mm	5'7"	1714 mm	5'7"	1714 mm	5'7"	1714 mm	5'7"
6	Wheelbase 2WD/AWD	2200 mm	7'3"	2200 mm	7'3"	2200 mm	7'3"	2200 mm	7'3"	2200 mm	7'3"

Dimensions and performance specifications shown are for machines equipped with 12.5/80-18 SGL front tires, 19.5L-24 IT525 rear tires, ROPS canopy, standard stick with 610 mm (24 in) standard duty bucket, 0.96 m³ (1.25 yd³) loader bucket and standard equipment unless otherwise specified.

Machine Dimensions



		IT Loader with Quick Coupler					
		General Purpose (0.96 m³/1.25 yd³)		General Purpose (1.15 m³/1.5 yd³)		Multi Purpose (1.0 m³/1.31 yd³)	
1	Overall Transport Length	7282 mm	23'11"	7279 mm	23'11"	7211 mm	23'8"
	Overall Length (loader on ground)	7289 mm	23'11"	7287 mm	23'11"	7197 mm	23'7"
2	Overall Transport Height – Standard Stick	3577 mm	11'9"	3577 mm	11'9"	3577 mm	11'9"
	Overall Transport Height – Extendible Stick	3631 mm	11'11"	3631 mm	11'11"	3631 mm	11'11"
	Overall Width	2322 mm	7'7"	2322 mm	7'7"	2322 mm	7'7"
3	Height to Top of Cab/Canopy	2819 mm	9'3"	2819 mm	9'3"	2819 mm	9'3"
4	Height to Top of Exhaust Stack	2744 mm	9'0"	2744 mm	9'0"	2744 mm	9'0"
	Height to Loader Hinge Pin (transport)	396 mm	1'4"	391 mm	1'3"	386 mm	1'3"
	Ground Clearance (minimum)	294 mm	1'0"	294 mm	1'0"	294 mm	1'0"
5	Rear Axle Centerline to Front Grill	2705 mm	8'10"	2705 mm	8'10"	2705 mm	8'10"
	Front Wheel Tread Gauge	1895 mm	6'3"	1895 mm	6'3"	1895 mm	6'3"
	Rear Wheel Tread Gauge	1714 mm	5'7"	1714 mm	5'7"	1714 mm	5'7"
6	Wheelbase 2WD/AWD	2200 mm	7'3"	2200 mm	7'3"	2200 mm	7'3"

Dimensions and performance specifications shown are for machines equipped with 12.5/80-18 SGL front tires, 19.5L-24 IT525 rear tires, ROPS canopy, standard stick with 610 mm (24 in) standard duty bucket, 0.96 m³ (1.25 yd³) loader bucket and standard equipment unless otherwise specified.

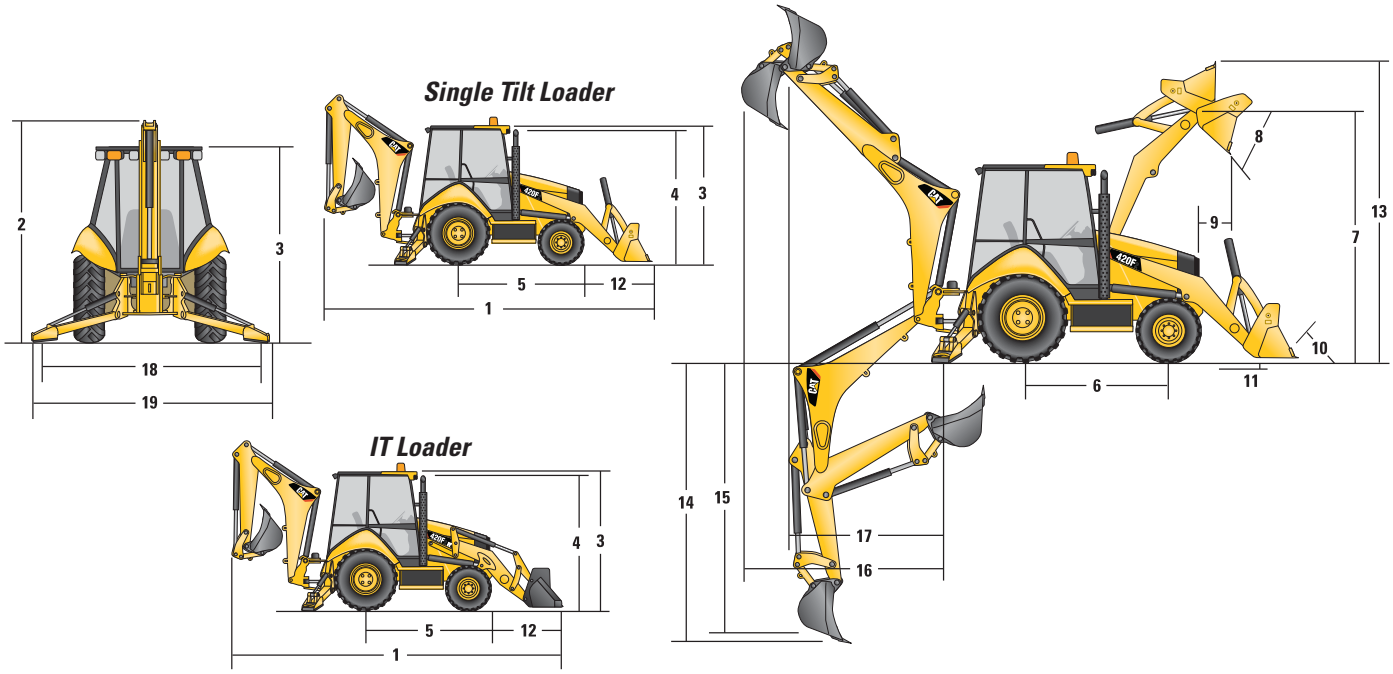
Loader Bucket Dimensions and Performance

		Single Tilt Loader									
		General Purpose (0.96 m³/1.25 yd³)		General Purpose (1.1 m³/1.4 yd³)		General Purpose (1.15 m³/1.5 yd³)		Multi Purpose (1.0 m³/1.3 yd³)		Multi Purpose (1.1 m³/1.4 yd³)	
	Capacity (SAE rated)	0.96 m³	1.25 yd³	1.1 m³	1.4 yd³	1.15 m³	1.5 yd³	1.0 m³	1.3 yd³	1.1 m³	1.4 yd³
	Overall Bucket Width	2262 mm	89"	2262 mm	89"	2406 mm	95"	2279 mm	90"	2425 mm	95"
	Lift Capacity at Maximum Height	3283 kg	7,237 lb	3216 kg	7,090 lb	3196 kg	7,046 lb	3097 kg	6,828 lb	3068 kg	6,764 lb
	Lift Breakout Force	49 809 N	11,197 lbf	49 275 N	11,077 lbf	49 099 N	11,037 lbf	49 019 N	11,020 lbf	48 771 N	10,964 lbf
	Tilt Breakout Force	50 190 N	11,283 lbf	51 236 N	11,518 lbf	51 128 N	11,494 lbf	57 555 N	12,938 lbf	57 408 N	12,905 lbf
7	Maximum Hinge Pin Height	3474 mm	11'5"	3474 mm	11'5"	3474 mm	11'5"	3474 mm	11'5"	3474 mm	11'5"
8	Dump Angle at Full Height	44°		44°		44°		44°		44°	
	Dump Height at Maximum Angle	2746 mm	9'0"	2723 mm	8'11"	2723 mm	8'11"	2798 mm	9'2"	2798 mm	9'2"
9	Dump Reach at Maximum Angle	808 mm	2'8"	773 mm	2'6"	773 mm	2'6"	716 mm	2'4"	716 mm	2'4"
10	Maximum Bucket Rollback at Ground Level	37°		38°		38°		38°		38°	
11	Digging Depth	83 mm	3"	123 mm	5"	123 mm	5"	110 mm	4"	110 mm	4"
	Maximum Grading Angle	112°		113°		113°		116°		116°	
	Width of Dozer Cutting Edge	N/A		N/A		N/A		2262 mm	7'5"	2406 mm	7'11"
12	Grill to Bucket Cutting Edge, Carry Position	1487 mm	4'11"	1525 mm	5'0"	1525 mm	5'1"	1451 mm	4'9"	1451 mm	4'9"
13	Maximum Operating Height	4355 mm	14'3"	4395 mm	14'5"	4395 mm	14'5"	4404 mm	14'5"	4404 mm	14'5"
	Jaw Opening Maximum	N/A		N/A		N/A		790 mm	2'7"	790 mm	2'7"
	Bucket Jaw Clamping Force	N/A		N/A		N/A		55 700 N	12,521 lbf	55 700 N	12,521 lbf
	Weight (does not include teeth or forks)	451 kg	994 lb	473 kg	1,043 lb	493 kg	1,087 lb	745 kg	1,642 lb	774 kg	1,706 lb

		IT Loader with Quick Coupler					
		General Purpose (0.96 m³/1.25 yd³)		General Purpose (1.15 m³/1.5 yd³)		Multi Purpose (1.0 m³/1.31 yd³)	
	Capacity (SAE rated)	0.96 m³	1.25 yd³	1.15 m³	1.5 yd³	1.0 m³	1.31 yd³
	Overall Bucket Width	2262 mm	89"	2406 mm	95"	2279 mm	90"
	Lift Capacity at Maximum Height	3716 kg	8,193 lb	3655 kg	8,050 lb	3448 kg	7,601 lb
	Lift Breakout Force	51 085 N	11,484 lbf	50 555 N	11,365 lbf	49 678 N	11,168 lbf
	Tilt Breakout Force	46 314 N	10,411 lbf	46 106 N	10,365 lbf	50 380 N	11,325 lbf
7	Maximum Hinge Pin Height	3490 mm	11'5"	3490 mm	11'5"	3490 mm	11'5"
8	Dump Angle at Full Height	44°		44°		44°	
	Dump Height at Maximum Angle	2679 mm	8'9"	2680 mm	8'10"	2745 mm	9'0"
9	Dump Reach at Maximum Angle	869 mm	2'10"	868 mm	2'10"	814 mm	2'8"
10	Maximum Bucket Rollback at Ground Level	40°		40°		39°	
11	Digging Depth	105 mm	4"	105 mm	4"	95 mm	4"
	Maximum Grading Angle	110°		110°		112°	
	Width of Dozer Cutting Edge	N/A		N/A		2262 mm	7'5"
12	Grill to Bucket Cutting Edge, Carry Position	1600 mm	5'3"	1597 mm	5'3"	1529 mm	5'0"
13	Maximum Operating Height	4407 mm	14'6"	4477 mm	14'8"	4480 mm	14'8"
	Jaw Opening Maximum	N/A		N/A		790 mm	2'7"
	Bucket Jaw Clamping Force	N/A		N/A		55 700 N	12,521 lbf
	Weight (does not include teeth or forks)	447 kg	985 lb	481 kg	1,060 lb	724 kg	1,596 lb

Dimensions and performance specifications shown are for machines equipped with 12.5/80-18 SGL front tires, 19.5L-24 IT525 rear tires, ROPS canopy, standard stick with 610 mm (24 in) standard duty bucket, 0.96 m³ (1.25 yd³) loader bucket and standard equipment unless otherwise specified.

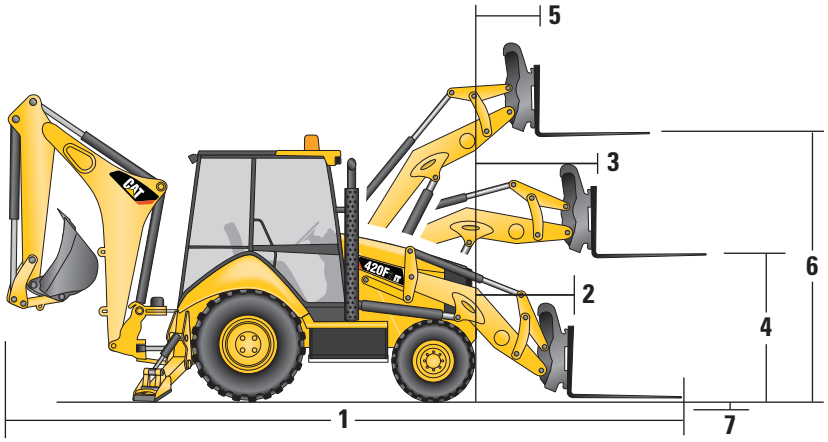
Backhoe Dimensions and Performance



		Standard Stick		E-Stick Retracted		E-Stick Extended	
14	Digging Depth, SAE (maximum)	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 lb	43 402 N	9,757 lb	31 682 N	7,122 lb

Dimensions and performance specifications shown are for machines equipped with 12.5/80-18 SGL front tires, 19.5L-24 IT525 rear tires, ROPS canopy, standard stick with 610 mm (24 in) standard duty bucket, 0.96 m^3 (1.25 yd^3) loader bucket and standard equipment unless otherwise specified.

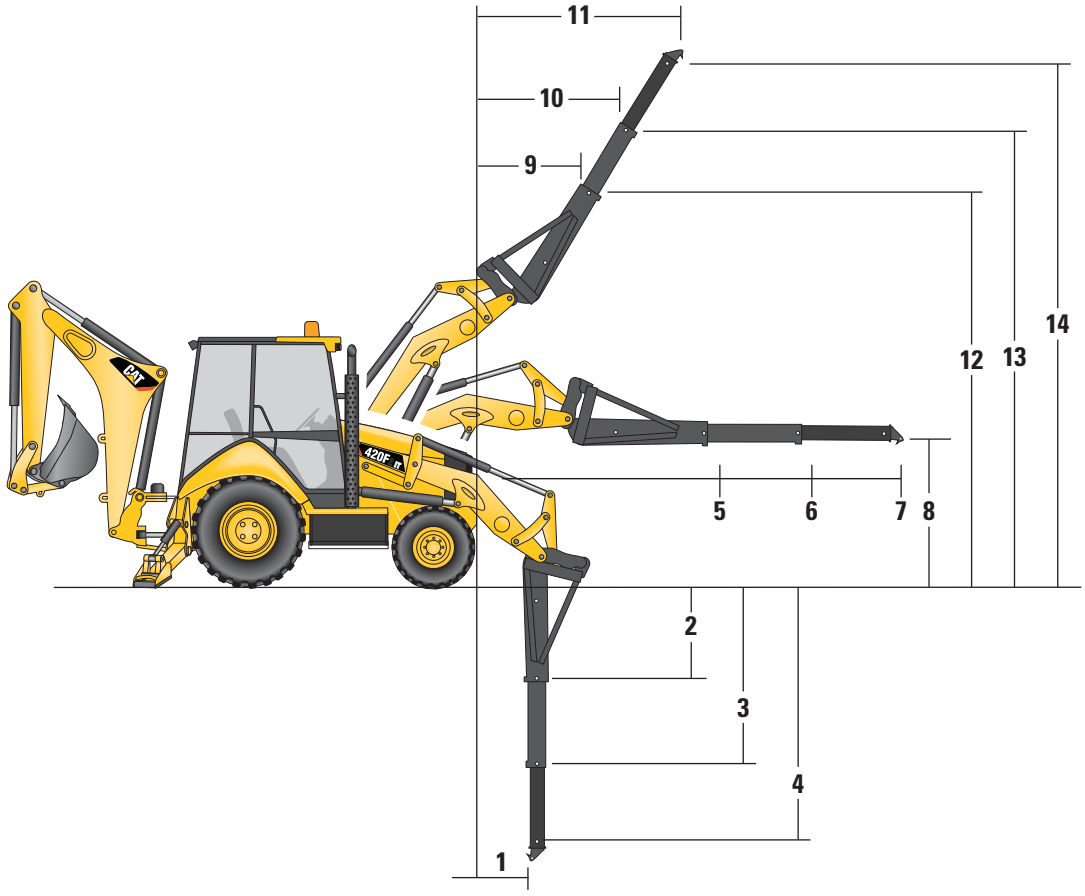
Dimensions with Forks



	Fork Tine Length	1070 mm/3'6"		1220 mm/4'0"		1370 mm/4'10"	
	Operating Load (SAE J1197)	2340 kg	5,159 lb	2263 kg	4,990 lb	2191 kg	4,829 lb
	SAE Load Center	535 mm	1'9"	610 mm	2'0"	685 mm	2'3"
	Operating Load (CEN 474-4)	2772 kg	6,111 lb	2749 kg	6,062 lb	2726 kg	6,009 lb
	CEN Load Center	500 mm	1'8"	500 mm	1'8"	500 mm	1'8"
1	Overall Length (forks on ground)	7681 mm	25'2"	7832 mm	25'8"	7980 mm	26'2"
2	Reach at Ground (from grill to heel of fork)†	938 mm	3'1"	939 mm	3'1"	937 mm	3'1"
3	Maximum Reach (from grill to heel of fork)†	1475 mm	4'10"	1475 mm	4'10"	1475 mm	4'10"
4	Fork Height at Maximum Reach	1588 mm	5'3"	1588 mm	5'3"	1587 mm	5'2"
5	Reach at Maximum Height (from grill to heel of fork)†	696 mm	2'3"	696 mm	2'3"	696 mm	2'3"
6	Maximum Fork Height	3410 mm	11'2"	3409 mm	11'2"	3408 mm	11'2"
7	Maximum Fork Depth (below ground level)	–6 mm	0'0"	–5 mm	0'0"	–8 mm	0'0"

Dimensions and performance specifications shown are for machines equipped with 12.5/80-18 SGL front tires, 19.5L-24 IT525 rear tires, ROPS canopy, standard stick with 610 mm (24 inch) standard duty bucket, and 0.96 m^3 (1.25 yd^3) loader bucket and standard equipment unless otherwise specified.

Dimensions with Material Handling Arm



Material Handling Arm Position		Retracted		Mid-Position		Extended	
	Operating Load (SAE J1197 and CEN 474-4)*	1056 kg	2,328 lb	674 kg	1,487 lb	495 kg	1,092 lb
	Overall Length, Maximum	8867 mm	29'1"	9864 mm	32'4"	10 864 mm	35'8"
1	Reach at Maximum Depth (from machine nose)	589 mm	1'11"	592 mm	1'11"	595 mm	1'11"
2, 3, 4	Maximum Depth	2532 mm	8'4"	3530 mm	11'7"	4530 mm	14'10"
5, 6, 7	Maximum Reach (from machine nose)	3184 mm	10'5"	4182 mm	13'9"	5182 mm	17'0"
8	Height at Maximum Reach	1101 mm	3'7"	1103 mm	3'7"	1106 mm	3'8"
9, 10, 11	Reach at Maximum Height (from machine nose)	1577 mm	5'2"	2164 mm	7'1"	2755 mm	9'0"
12, 13, 14	Maximum Height	4570 mm	15'0"	5377 mm	17'8"	6183 mm	20'3"

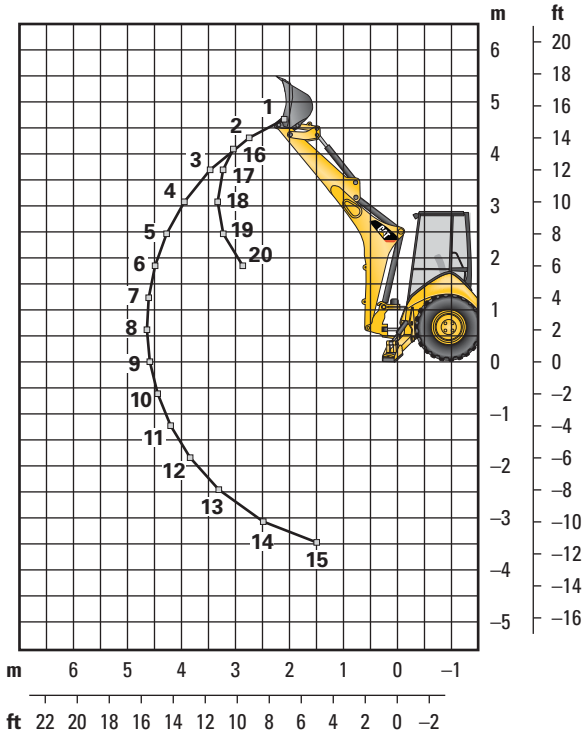
*Hydraulically limited.

Dimensions and performance specifications shown are for machines equipped with 12.5/80-18 SGL front tires, 19.5L-24 IT525 rear tires, ROPS canopy, standard stick with 610 mm (24 inch) standard duty bucket, and 0.96 m^3 (1.25 yd^3) loader bucket and standard equipment unless otherwise specified.

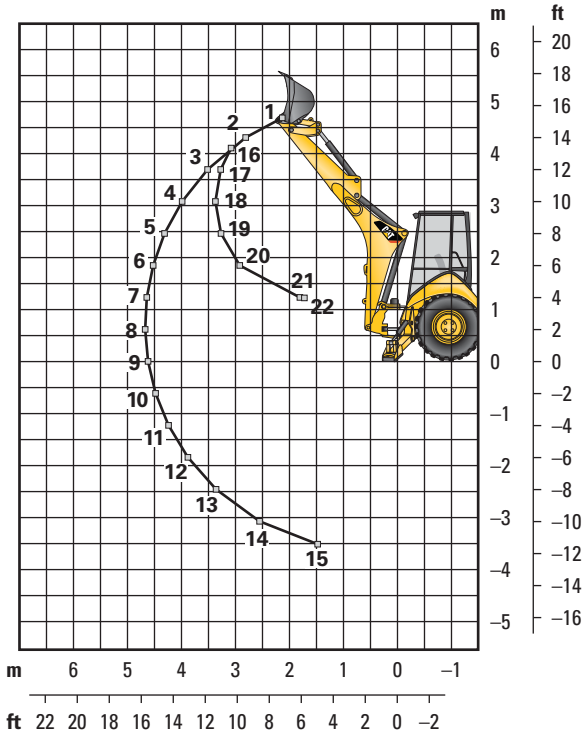
420F2/420F2 IT Specifications

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



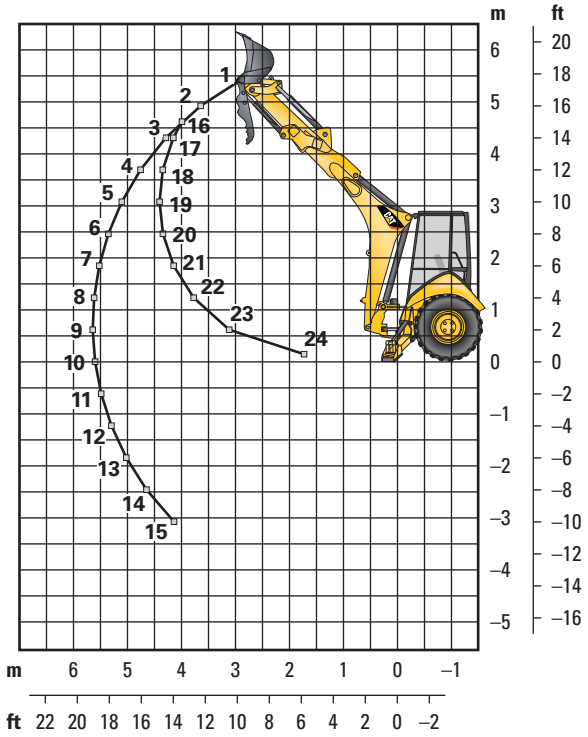
Cat 420F2/420F2 IT Extendible Stick – Retracted			
Boom Lifting		**kg**	**lb**
	1	1439	3,173
	2	1573	3,468
	3	1582	3,487
	4	1533	3,380
	5	1470	3,241
	6	1405	3,097
	7	1341	2,957
	8	1281	2,823
	9	1224	2,699
	10	1172	2,584
	11	1124	2,479
	12	1083	2,387
	13	1050	2,314
	14	1040	2,293
	15	1149	2,534
Stick 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.

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.

Counterweights

Minimum Counterweight Recommendations

Standard Stick

		Single-Tilt		IT Loader w/QC	
Loader Bucket	Power Train	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

		Single-Tilt		IT Loader w/QC	
Loader Bucket	Power Train	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	ft³	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	ft³	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	160	353	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	ft³	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	ft³	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	ft³	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	ft³	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	ft³	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

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

- Adjustable auxiliary controls, backhoe loader
- Air cleaner
- Alarm, back-up
- Alternator, 150 amp
- 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
- Engine, Cat C4.4 ACERT (Direct Injection Turbocharged), meets Tier 4 Final emission standards, selective catalyst 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: Eco mode active, water in fuel, remote dial throttle active, engine warning, warning lamp, emissions module malfunction, AESC active, low battery/charging system warning, high hydraulic oil temperature; LCD warnings: engine oil pressure, machine locked (if equipped), 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, oil life reset, DPF force regeneration, 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 Optional Equipment

Optional Equipment

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

- 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 (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, PL641I
- 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)
- Seat, heated
- 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.

Notes

Notes

Notes

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