



Cat[®] 450F

BACKHOE LOADER

FEATURES:

- **Operator Station** – Air suspension seat and ergonomic joystick controls provide a comfortable working environment.
- **Load Sensing Hydraulics** – Electronic pump control provides better pump response for improved hoe and loader productivity, performance and power management.
- **Superior Power** – Increased horsepower delivers greater pushing power, increased aggressiveness in hard bank and faster roading and hill climbing.
- **Ride Control** – Standard Ride Control provides a comfortable ride at all speeds, both on the job site and on the highway. System is designed to provide an improved ride whether the bucket is full or empty.
- **Versatility** – A wide array of Cat[®] Work Tools lets you do more jobs with one machine. A hydraulic thumb is also available. The hydraulic coupler makes work tool changes quick and easy.

Specifications

Engine

Engine Model	Cat C4.4 ACERT™	
Gross Power		
SAE J1995	107 kW	144 hp
ISO 14396	106 kW	142 hp
Rated Net Power @ 2,200 rpm		
SAE J1349	95 kW	127 hp
ISO 9249	96 kW	128 hp
EEC 80/1269	96 kW	128 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 J1995	31%	
Net Peak Torque @ 1,400 rpm – SAE J1329	536 N·m	396 lb·ft

- Engine meets U.S. EPA Tier 4 Interim/EU Stage IIIB emission standards.

Weights*

Operating Weight – Nominal	10 950 kg	24,141 lb
Operating Weight – Maximum	12 300 kg	27,115 lb
Cab, ROPS/FOPS	252 kg	556 lb
Air Conditioning	71 kg	157 lb
MP Bucket (1.1 m ³ /1.5 yd ³) with Fold-Over Forks	35 kg	78 lb
MP Bucket (1.1 m ³ /1.5 yd ³) without Fold-Over Forks	–125 kg	–276 lb
Extendible Stick	285 kg	628 lb

*Specifications shown are for machine equipped with 1.34 m³ (1.75 yd³) general purpose loader bucket, 610 mm (24 in) heavy duty backhoe bucket, 998 kg (2,200 lb) counterweight, 80 kg (176 lb) operator and full fuel tank.

450F Backhoe Loader

Transmission

AutoShift Transmission – Standard

Forward – 1st	6 km/h	3.7 mph
2nd	9.6 km/h	6 mph
3rd	20 km/h	12 mph
4th	27 km/h	17 mph
5th	40 km/h	25 mph
Reverse – 1st	6 km/h	3.7 mph
2nd	13 km/h	7.8 mph
3rd	27 km/h	17 mph

Axle Ratings

Front Axle, 4WD

Static	22 944 kg	50,582 lb
Dynamic	9178 kg	20,233 lb

Rear Axle

Static	23 250 kg	51,257 lb
Dynamic	9300 kg	20,503 lb

Hydraulic System

Type	Closed Center	
Pump Type	Variable Flow, Axial Piston	
Pump Capacity @ 2,200 rpm	190 L/min	50 gal/min
System Pressure – Backhoe	26 200 kPa	3,800 psi
System Pressure – Loader	24 483 kPa	3,550 psi

Steering

Type	Ackerman	
Power Steering	Hydrostatic	
Bore	85 mm	3.35 in
Stroke	236 mm	9.29 in
Rod Diameter	42 mm	1.65 in
Axle Oscillation	10°	
Turning Circle – 4WD (inner wheel not braked)		
Outside, Front Wheels	8.36 m	27'5"
Outside, Widest Loading Bucket	11.18 m	36'8"

Service Refill Capacities

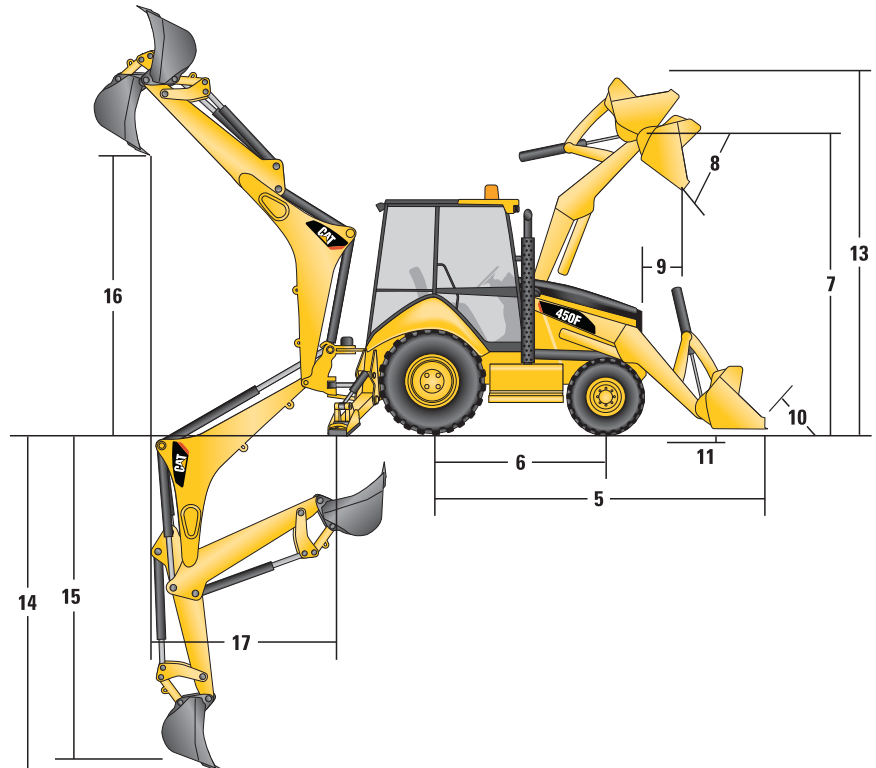
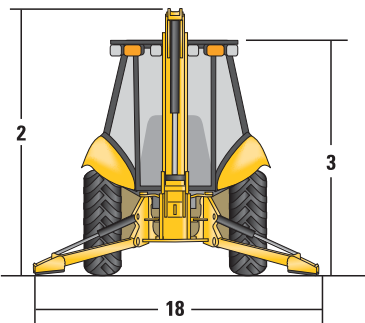
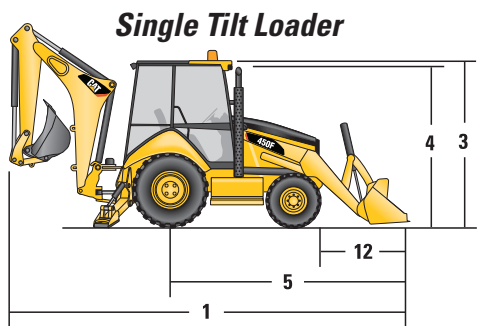
Cooling System with Air Conditioning	20 L	5.3 gal
Fuel Tank	165 L	44 gal
Engine Oil with Filter	8.5 L	2.2 gal
Transmission – Auto Shift	21 L	5.6 gal
Rear Axle Planetaries	19 L	5 gal
Front Axle, 4WD	11 L	2.9 gal
Front Axle, Planetaries	0.8 L	0.2 gal
Hydraulic System	100 L	26.5 gal
Hydraulic Tank	50 L	13.2 gal

- Requires ultra-low sulfur fuel \leq 15 ppm fuel sulfur

Tires

Comes standard with Firestone front/rear tires:

- 12-19.5 12 ply front tires
- 21L-24 16 ply rear tires



Machine Dimensions

	Single Tilt Loader					
	General Purpose (1.34 m ³ /1.75 yd ³)		Multi Purpose (1.15 m ³ /1.50 yd ³)		Multi Purpose with Forks (1.15 m ³ /1.50 yd ³)	
1 Overall Length (loader on ground)	7913 mm	26'0"	7786 mm	25'7"	7786 mm	25'7"
Overall Transport Length	7916 mm	26'0"	7826 mm	25'7"	7826 mm	25'7"
2 Overall Transport Height – Standard Stick	4143 mm	13'7"	4143 mm	13'7"	4143 mm	13'7"
Overall Transport Height – Extendible Stick	4159 mm	13'8"	4159 mm	13'8"	4159 mm	13'8"
Overall Width	2436 mm	8'0"	2436 mm	8'0"	2436 mm	8'0"
3 Height to Top of Cab/Canopy	2874 mm	9'5"	2874 mm	9'5"	2874 mm	9'5"
4 Height to Top of Exhaust Stack	2800 mm	9'2"	2800 mm	9'2"	2800 mm	9'2"
Height to Loader Hinge Pin (transport)	469 mm	1'6"	481 mm	1'7"	481 mm	1'7"
Ground Clearance (minimum)	322 mm	1'1"	322 mm	1'1"	322 mm	1'1"
5 Rear Axle Centerline to Front Grill	4494 mm	14'9"	4367 mm	14'4"	4367 mm	14'4"
Front Wheel Tread Gauge	2016 mm	6'7"	2016 mm	6'7"	2016 mm	6'7"
Rear Wheel Tread Gauge	1814 mm	5'11"	1814 mm	5'11"	1814 mm	5'11"
6 Wheelbase AWD	2200 mm	7'3"	2200 mm	7'3"	2200 mm	7'3"

Loader Bucket Dimensions and Performance

	Single Tilt Loader					
	General Purpose (1.34 m ³ /1.75 yd ³)		Multi Purpose (1.15 m ³ /1.50 yd ³)		Multi Purpose with Forks (1.15 m ³ /1.50 yd ³)	
Capacity (SAE rated)	1.34 m ³	1.75 yd ³	1.15 m ³	1.50 yd ³	1.15 m ³	1.50 yd ³
Overall Bucket Width	2434 mm	96"	2425 mm	95"	2425 mm	95"
Lift Capacity at Maximum Height	3570 kg	7,871 lb	3843 kg	8,473 lb	3708 kg	8,174 lb
Breakout Force	50 600 N	11,375 lb	60 889 N	13,688 lb	60 000 N	13,488 lb
7 Maximum Hinge Pin Height	3501 mm	11'6"	3501 mm	11'6"	3501 mm	11'6"
8 Dump Angle at Full Height	43°		43°		43°	
Dump Height at Maximum Angle	2666 mm	8'9"	2759 mm	9'1"	2759 mm	9'1"
9 Dump Reach at Maximum Angle	850 mm	2'9"	779 mm	2'7"	779 mm	2'7"
10 Maximum Bucket Rollback at Ground Level	40°		40°		40°	
11 Digging Depth	146 mm	6"	127 mm	5"	127 mm	5"
Maximum Grading Angle	106°		109°		109°	
Width of Dozer Cutting Edge	N/A		2406 mm	7'11"	2406 mm	7'11"
12 Grill to Bucket Cutting Edge, Carry Position	1665 mm	5'6"	1572 mm	5'2"	1572 mm	5'2"
13 Maximum Operating Height	4528 mm	14'10"	4561 mm	15'0"	4881 mm	16'0"
Jaw Opening Maximum	N/A		864 mm	2'10"	864 mm	2'10"
Bucket Jaw Clamping Force	N/A		39 800 N	8,947 lb	39 800 N	8,947 lb
Weight (does not include teeth or forks)	1043 kg	2,300 lb	957 kg	2,111 lb	1148 kg	2,530 lb

Backhoe Dimensions and Performance

	Standard Stick		E-Stick Retracted		E-Stick Extended	
	14 Digging Depth, SAE (max.)	5260 mm	17'3"	5260 mm	17'3"	6501 mm
15 Digging Depth, 610 mm (2 ft) Flat Bottom	5223 mm	17'2"	5223 mm	17'2"	6466 mm	21'3"
Reach from Rear Axle Centerline at Ground Line	7955 mm	26'1"	7955 mm	26'1"	9137 mm	30'0"
16 Reach from Swing Pivot at Ground Line	6704 mm	22'0"	6704 mm	22'0"	7886 mm	25'10"
Maximum Operating Height	6531 mm	21'5"	6531 mm	21'5"	7375 mm	24'2"
Loading Height	4440 mm	14'7"	4440 mm	14'7"	5194 mm	17'0"
17 Loading Reach	2100 mm	6'11"	2100 mm	6'11"	3112 mm	10'3"
Swing Arc	175°		175°		175°	
Bucket Rotation	198°		198°		198°	
18 Stabilizer Spread, Operating Position (outside)	4055 mm	13'4"	4055 mm	13'4"	4055 mm	13'4"
Stabilizer Spread, Transport Position	2451 mm	8'0"	2451 mm	8'0"	2451 mm	8'0"
Bucket Dig Force	78 938 N	17,746 lb	78 938 N	17,746 lb	78 938 N	17,746 lb
Stick Dig Force	52 401 N	11,780 lb	53 109 N	11,939 lb	40 074 N	9,009 lb

Dimensions and performance specifications shown are for machines equipped with 15-19.5 12 ply front tires, 21K-24 16 ply rear tires, ROPS canopy, standard stick with 610 mm (24 in) standard duty bucket, 1.34 m³ (1.75 yd³) general purpose loader bucket and standard equipment unless otherwise specified.

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STANDARD EQUIPMENT

- Air cleaner
- Alarm, back-up
- Alternator, 150 ampere
- Audible system fault alarm
- Automatic Engine Speed Control (AESC)
- Battery, two maintenance-free, 880 CCA
- Battery disconnect switch
- 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 hook
- Coolant/antifreeze, extended life
- Cooling package, single plane
- Counterweight, bumper
- Diesel particulate filter, long life
- Dome light (cab only)
- Diagnostic port for engine, machine and gauge cluster Electronic Control Modules
- Differential lock
- Engine, Cat C4.4 ACERT (Direct Injection Turbocharged), meets U.S. EPA Tier 4 Interim/EU Stage IIIB emission standards
- Engine enclosure
- Face seals, O-ring
- Fan, suction and guard
- Fast reversing shuttle, all gears
- Fender, rear extensions
- Filters, spin-on: fuel, engine oil, transmission oil, water separator
- Filters, bowl and cartridge: hydraulic fluid
- Flashing hazards/signal lights
- Floor mat
- Four Wheel Drive
- Gauge Cluster:
 - Gauges: coolant temperature, fuel level, tachometer
 - LCD screen: hour meter, torque converter oil temperature, hydraulic oil temperature, operator settings, service mode diagnostics
- Ground level fuel fill
- Guard, fuel tank bottom
- Guards, stabilizer
- Hammer rest
- Hood lock
- Hydraulic hose, XT™
- Hydraulic oil cooler
- Hydraulic valve, hydrostatic steering
- Hydraulic valves, loader 2 function
- Hydraulic valves, backhoe 5 function
- Hydraulics, load sensing with variable displacement piston pump
- Indicators: air cleaner service, water separator service, engine coolant, oil pressure, hydraulic temperature, hydraulic bypass, torque converter temperature high, remote throttle, AESC, fuel level, charging, engine warning #1, engine warning #2, action lamp, wait to start
- Instrument panel lights
- Joystick controls: pilot operated, excavator-style with pattern changer
- Key start/stop system
- Lights, working (4 front, 4 rear)
- Loader, self-leveling, return-to-dig and transmission disconnect switch
- Loader, single tilt
- Lunch box and drink holder
- Mirror, rearview
- One-touch low idle
- Open circuit breather
- Pattern changer, in cab
- Power receptacle, 12 volt, 2 internal, 1 external
- Radio ready cab
- Ride Control
- Seat belt, retractable, 51 mm (2 in)
- Stabilizer shoes, reversible
- Steering knob
- Seat, air suspension, fabric or vinyl cover, with armrest
- Starting system, glow plugs
- Steering, hydrostatic
- Storage compartment, internal
- Stop and tail lights
- Swing transport lock
- Tilt steering wheel
- Tires
- Toolbox, external, lockable
- Torque converter
- Throttle, hand and foot, electronic
- Transmission, five speed, synchromesh
- Transmission neutralizer switch
- Transport tie-downs
- Vandalism locks
- Warning horn, electric

OPTIONAL EQUIPMENT

- Cab, deluxe with air conditioning
- 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
- Fenders, front with integral steps
- Hydraulic valves, loader (3rd valve for GP, MP or Quick Coupler)
- Hydraulic valves, backhoe 6 function
- Hydraulic lines, combined function auxiliary
- Machine Security System
- Product Link™
- Rotating beacon, magnetic mount
- Seat belt, 75 mm (3 in)
- Stick, extendible
- 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.

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AEHQ6928 (12-12)

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