



# 446D

## Backhoe Loader



### Engine

Engine Model	Cat® 3114 DIT	
Gross Power (Caterpillar®)	82 kW	110 hp
Net Power (Caterpillar)	76 kW	102 hp

### Operating Weight

Nominal	8939 kg	19,666 lb
Maximum	11 500 kg	25,357 lb

### Backhoe

Dig Depth — Standard	5142 mm	16 ft 10 in
Dig Depth — E-Stick Extended	6457 mm	21 ft 2 in

# 446D Backhoe Loader

*Big power for big performance.*

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## Pilot Operated Controls

- ✓ Optional pilot operated joystick controls provide smooth modulation and are ergonomically designed for low effort control and operator comfort. As a result of this control design, legroom is increased and the rearward viewing area is greater. **pg. 4**

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## Loader Performance

- ✓ The loader delivers maximum lift and breakout forces, fast cycle times and high lift capacity. **pg. 5**

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## Backhoe Performance

- ✓ Superior bucket rotation and forces, an excavator-style backhoe boom and an optional extendible stick combine for high productivity levels. **pg. 6**

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## Operator Station

- ✓ The 446D operator environment is ergonomically designed to create a comfortable work area with easy-to-use machine controls that reduce operator fatigue, increase efficiency and productivity. **pg. 10**

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## Additional Features

Other benefits contribute to 446D efficiency and productivity. **pg. 12**

*When the job demands truly BIG power, the Cat 446D is ready. The most demanding backhoe loader jobs like road building and bridge work are just what the 446D is designed for.*





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### Work Tools

A wide range of rugged Caterpillar Work Tools are available to meet the needs of your job site applications.  
**pg. 7**

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### Power Train

Cat 3114 DIT engine is designed to meet demanding 446D requirements.  
**pg. 8**

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### Hydraulics

Power where you need it, when you need it, at any engine speed. **pg. 9**

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### Customer Support

Your Cat dealer offers a wide range of services that help you operate longer with lower costs. **pg. 13**



✓ *New Feature*

## Pilot Operated Controls

*Optional pilot operated joystick controls add excavator technology and ease of operation to the 446D. Low effort controls are easy to use, reduce operator fatigue and increase efficiency.*

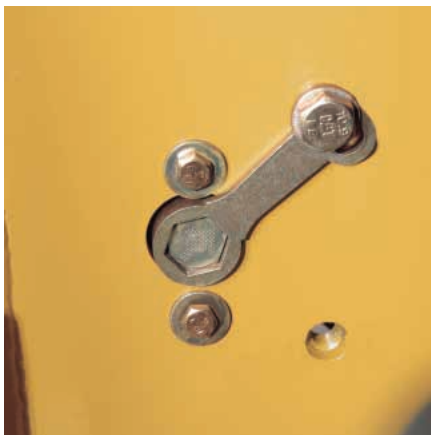


### **Pilot Operated Stabilizer Controls.**

Provide low effort and fine modulation control. The stabilizer controls are within easy reach of the operator when operating the backhoe.

**Pilot Control Pods.** Located on the left and right sides, the controls can move fore and aft and three stops are available for ergonomically correct positioning.

**Joystick Controls.** Optional pilot operated joystick controls add excavator technology and ease of operation to the 446D. Low effort controls are easy to use, reduce operator fatigue and increase efficiency.



**Pattern Changer Valve.** A standard pattern changer makes switching between backhoe and excavator control patterns as easy as moving a lever on the side of the machine.



## Loader Performance

*The loader delivers maximum lift and breakout forces, fast cycle times and high lift capacity.*

**Loader Linkage.** Step aboard a Cat 446D Backhoe Loader and see for yourself, hit the job with more power, superior breakout forces and smooth easy-on-the-operator hydraulics. The loader features increased lift and breakout forces for powerful performance. Loader work tools enhance machine utilization and provide versatility. Standard autoshift transmission, self-leveling and a return-to-dig system make operation easy and allow fast cycle times.



## Backhoe Performance

*Superior bucket rotation and forces, an excavator-style backhoe boom and an optional extendible stick combine for high productivity levels.*

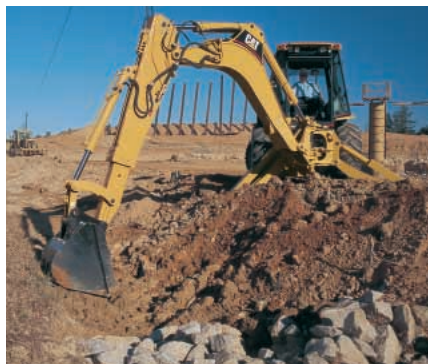


**Dig Forces.** The 446D boom, stick and bucket dig forces have increased about ten percent overall.

**Extendible Stick.** Dig deeper and reach further with the Caterpillar extendible stick. This optional backhoe attachment replaces the standard stick and increases reach and dig depth by approximately 1.2 meters (4 feet). The extendible stick uses eight self-lubricated, non-metallic wear pads which can be shimmed or replaced.

### **High Rotation Backhoe Linkage.**

The new 446D backhoe linkage provides superior rotation and eliminates the need to change pin position when moving from loading trucks to vertical wall trenching.

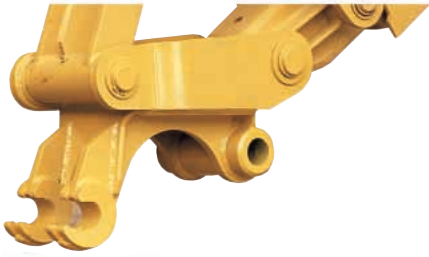


**Backhoe Boom.** The excavator-style boom features box section fabrication with internal stiffeners for superior strength, balance and weight distribution. The curved design provides additional clearance over obstacles while digging a trench or truck loading. The narrow boom enhances the viewing area to the bucket and trench throughout the entire operating range.



## Work Tools

*A wide range of rugged Caterpillar Work Tools are available to meet the needs of your job site applications.*



**Optional Quick Coupler.** For greater machine versatility, the optional hydraulic quick coupler is available from your Cat dealer and allows the operator to choose from a wide range of tools.



### 446D Work Tools.

#### Loader Work Tools

- General Purpose Bucket
- Multi Purpose Bucket
- Side Dump Bucket
- Light Material Bucket
- Loader Forks
- Broom

#### Backhoe Work Tools

- Vibratory Plate Compactor
- Heavy Duty Bucket
- Extreme Service Bucket
- Hydraulic Hammer

## Power Train

*Cat 3114 DIT engine is designed to meet demanding 446D requirements.*



**Caterpillar 3114 DIT Engine.** The Cat 3114 DIT (Direct Injection Turbocharged) engine is designed to meet demanding 446D requirements. High-tech components reduce sound levels and improve fuel efficiency. Cast oil-pan provides high impact resistance and added block strength. Spin-on filters allow for quick, clean maintenance.

**Caterpillar Autoshift Transmission.** The 446D backhoe loader is fitted with an autoshift transmission as standard equipment. The autoshift function automatically matches gears with grade and load conditions.



**Power Train.** Designed for strength, performance, and versatility. Easy, on-the-go shifting between all gears, two- and all-wheel drive. A single lever controls both direction and speed for improved operator efficiency.

**Front Axle.** Large diameter, double-acting steering cylinder resists bending and is well protected.

**Heavy-Duty Main Frame.** Fully welded, one-piece frame absorbs stress and minimizes shock loads to the power train.

**Brakes.** Fully enclosed, hydraulic, multiple discs.



## Hydraulics

*Our closed-center, variable displacement, load-sensing hydraulic system provides high power where you need it, when you need it.*

**Hydraulic System.** The load sensing, variable flow hydraulic system senses work demand and adjusts flow and pressure to match. This allows full hydraulic forces at any engine speed for delicate jobs in tight areas.

**Hydraulic Pump.** Closed centered implement valves, with pressure compensation for reduced lever effort, signal hydraulic system requirements to a control valve located on the pump. This valve controls the pump to deliver the flow and pressure necessary to fulfill the implement demands.



**XT™-3 ES hoses.** Improved bend radius and abrasion resistance provide reliable long life in the toughest conditions. Made of four overlapping, insulated wire spiral wraps bonded together for durability, XT™-3 ES (Enhanced Spiral) hoses exceed SAE certification standards. The hose routing protects them from work damage, and hose failure downtime is substantially reduced. XT-3 ES hoses combined with Caterpillar couplings and O-ring face seal fittings provide a leak-free system.

**Clamps and Bushings.** Metal clamps with rubber bushings are used at hose attachment points to eliminate metal-to-metal contact and increase wear life.



## Operator Station

*The 446D operator environment is ergonomically designed to create a comfortable work area with easy-to-use machine controls that reduce operator fatigue, increase efficiency and productivity.*



*Deluxe Cab shown with Pilot Operated Controls*



**Operator Comfort.** The 446D operator station incorporates years of cab design innovations to maximize operator productivity. The optional pilot operated controls allow more legroom and a spacious work environment.

**ROPS Canopy.** Includes air suspension vinyl seat, tilt steering wheel, 12-volt power supply, phone clip, left side storage space with a lockable compartment, drink holders and floor mats.

**Deluxe Cab.** The ultimate in operator comfort, the deluxe cab includes all standard amenities plus a deluxe, nine-way adjustable air suspension seat; pilot operated stabilizer controls with individual auto-up feature; additional system monitoring including a voltmeter and service indicators for fuel water separator, engine air cleaner and hydraulic filters.

**HVAC System.** The heating, ventilation and air conditioning system main components are located near the floor. New ducting to the rear improves air circulation, increases defrost capabilities and provides exceptional air flow to the operator.

**Tilt Wheel.** The standard tilt steering wheel allows more space for ease of access and exiting the cab. The operator can choose the most comfortable steering position.



**Air-Suspension Seat.** Utilizes an air adjustment mechanism for a greater operating range and more comfortable ride. By pressing a button, the seat can be tailored to support differing body weights. Adjustable seat height accommodates all operators. The Deluxe cab seat also features an adjustable back support, lumbar support, seat cushion extension, seat cushion tilt as well as vertical and angle adjustable armrests.



**Operator Controls.** The Cat 446D backhoe loader provides smooth, precise control, and ease-of-operation.



**Machine Controls.** The 446D has two choices of backhoe controls available. You can choose mechanical backhoe controls in either the Ford or Dynahoe control pattern, or pilot controls that are switchable between backhoe and excavator patterns based on operator preference with the simple, included, pattern changer.

**Ride Control System.** Provides a smooth ride in all applications, reduces machine loping while roading and provides better material retention during load and carry operations while greatly increasing operator comfort. A nitrogen accumulator added to the loader lift circuit cushions the system and engages with the flip of a switch.

**Rear Window.** The redesigned rear window features a heavier hinge structure and positive latch mechanism to hold the window in the open position.

## Additional Features

*Other benefits contribute to 446D efficiency and productivity.*



**Fuel Tank.** Large capacity tank located on the frame's left side is lockable and includes a replaceable, bolt-on step.

**Tool and Battery Box.** Spacious, convenient and secure tool storage location.

**Finish Protected Components.** All 446D Backhoe Loaders are assembled with components already topcoat painted or plated. This new process improves the appearance of the machine while enhancing the overall quality of each component, providing 100% protective coverage.

**New Work Lights.** New adjustable work lights are wider spread to the corners for improved night performance.

**Stabilizer Guards.** Now available from the factory for cylinder protection in demolition applications.

**Standard Secondary Steering.** New steering unit provides secondary steering as standard. This back-up system allows steering control in the event of loss of power or hydraulic flow.



## Customer Support

*Cat dealer services help you operate longer with lower costs.*

**Machine Selection.** Make detailed comparisons of the machines under consideration before purchase. Cat dealers can estimate component life, preventative maintenance cost and the true cost of lost production. You can also customize the machine that is right for you. Go on-line anytime to review the full range of features and options available using the Build and Quote applications on your dealer's website or [www.Cat.com](http://www.Cat.com).

**Purchase.** Look at the total package. Consider the financing options available as well as day-to-day operating costs. Look at dealer services that can be included in the cost of the machine to yield lower equipment owning and operating costs.

**Customer Support Agreements.**

Cat dealers offer a variety of product support agreements and work with customers to develop a plan that best meets specific needs. These plans can cover the entire machine, including work tools, to help protect the customer's investment.

**Product Support.** You will find nearly all parts at our dealer parts counter. Cat dealers use a worldwide computer network to find in-stock parts to minimize machine downtime. Save money with genuine Cat Reman parts. You receive that same warranty and reliability as new products, but with a cost savings of 40 to 70 percent.

**Operation.** Improving operating techniques can boost your profits. Your Cat dealer has training videos, literature and other ideas to help you increase productivity.



**Maintenance Services.** Choose from your dealer's range of maintenance services when you purchase your machine. Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as S·O·S<sup>SM</sup> and Coolant Sampling and Technical Analysis help you avoid unscheduled repairs.

**Replacement.** Repair, rebuild or replace? Your Cat dealer can help you evaluate the cost involved so you can make the right choice.

## Engine

Engine Model	Cat 3114 DIT	
Gross Power (Caterpillar)	82 kW	110 hp
SAE J1995	81 kW	109 hp
Net Power (Caterpillar)	76 kW	102 hp
SAE J1349	75 kW	101 hp
ISO 9249	76 kW	102 hp
ISO 1585	76 kW	102 hp
EEC 80/1269	76 kW	102 hp
DIN 70020	107 ps	
Bore	105 mm	4.13 in
Stroke	127 mm	5 in
Displacement	4.4 L	268 in <sup>3</sup>
Net Torque Rise @ 1400 rpm	32.6 %	
Net Peak Torque @ 1400 rpm	455 N•m	336 lb ft

- The following ratings apply at 2200 rpm when tested under the specified conditions for the specified standard.
- Net peak torque rise meets SAE J1349.

## Weights

Operating Weight		
Nominal	8939 kg	19,666 lb
Maximum	11 500 kg	25,357 lb

- Standard machine with 1.1 m<sup>3</sup> (1.5 yd<sup>3</sup>) general purpose loader bucket, 610 mm (24 in) standard duty backhoe bucket, 80 kg (176 lb) operator and full fuel tank.

## Backhoe

Dig Depth		
Standard	5142 mm	16 ft 1 in
E-Stick Retracted	5207 mm	17 ft 1 in
E-Stick Extended	6457 mm	21 ft 2 in
Reach from Swing Pivot		
Standard	6636 mm	21 ft 9 in
E-Stick Retracted	6697 mm	22 ft
E-Stick Extended	7890 mm	25 ft 11 in
Bucket Rotation	190°	
Bucket Dig Force		
Standard	75.4 kN	16,950 lb
E-Stick Retracted	72.2 kN	16,230 lb
E-Stick Extended	72.2 kN	16,230 lb
Stick Dig Force		
Standard	50.8 kN	11,430 lb
E-Stick Retracted	50.1 kN	11,260 lb
E-Stick Extended	36.8 kN	8,230 lb
Stick Lift @ 1219 mm (4 ft)		
Standard	6224 kg	13,724 lb
E-Stick Retracted	5551 kg	12,240 lb
E-Stick Extended	2561 kg	5,648 lb
Loading Height		
Standard	4392 mm	14 ft 5 in
E-Stick Retracted	4395 mm	14 ft 5 in
E-Stick Extended	5068 mm	16 ft 7 in
Loading Reach		
Standard	2092 mm	6 ft 10 in
E-Stick Retracted	2004 mm	6 ft 7 in
E-Stick Extended	3187 mm	10 ft 5 in

## Operating Specifications — Backhoe

Turning Circle: outside		
Front Wheels	8.8 m	28 ft 10 in
Widest Loading Bucket	11.4 m	37 ft 3 in
2WD Turning radius		
Braked	8.8 mm	28 ft 1 in
Not Braked	8.8 mm	28 ft 1 in
4WD Turning radius		
Braked	11.4 mm	37 ft 4 in
Not braked	11.4 mm	37 ft 4 in



## Loader

Bucket Capacity — General Purpose	1.15 m <sup>3</sup>	1.5 yd <sup>3</sup>
Bucket Width — General Purpose	2434 mm	96 in
Dump Height @ Max Angle	2720 mm	8 ft 11 in
Dump Reach @ Max Angle	855 mm	2 ft 9 in
Dig Depth	153 mm	6 in
Lift Capacity @ Full Height	4351 kg	9,572 lb
Bucket Breakout Force	61.7 kN	13,838 lb

## Hydraulic System

Circuit Type	Closed-center
Pump Capacity (@ 2200 rpm)	178 L/min 47 gal/min
System Pressure	24 500 kPa 3,550 psi
Pump Type	Variable-flow, axial piston, load sensing, closed center system
Steering Type	Front Wheel
Power Steering	Hydrostatic
Brake System	Fully enclosed, hydraulic, multiple disk

## Power Train

Auto-Shift, Forward 1st	5.6 kph	3.5 mph
Forward 2nd	8.9 kph	5.5 mph
Forward 3rd	11.6 kph	7.2 mph
Forward 4th	18.8 kph	11.7 mph
Forward 5th	31.5 kph	19.6 mph
Auto-Shift, Reverse 1st	5.6 kph	3.5 mph
Reverse 2nd	11.6 kph	7.2 mph
Reverse 3rd	20.6 kph	12.8 mph

- Auto-Shift 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 21L × 24 rear tires.

## Service Refills

Cooling System, A/C	30 L	7.9 gal
Fuel Tank	125 L	33 gal
Engine Oil w/Filter	11 L	2.9 gal
Transmission, 2WD, Auto Shift	26 L	6.9 gal
Rear Axle	31 L	8.2 gal
Front Axle		
AWD	9.3 L	2.5 gal
Planetaries	0.8 L	0.21 gal
Hydraulic System	154 L	41 gal
Hydraulic Tank	57 L	15.1 gal

## Standards

- |            |                               |
|------------|-------------------------------|
| Cab — ROPS | SAE J394, SAE J1040, ISO 3471 |
|------------|-------------------------------|
- ROPS (Rollover Protective Structure) offered by Caterpillar for this machine meets ROPS criteria SAE J394, SAE J1040 and ISO 3471.
- |             |                            |
|-------------|----------------------------|
| Cab — Sound | ANSI/SAE J1166 is 81 dB(A) |
|-------------|----------------------------|
- |             |                      |
|-------------|----------------------|
| Cab — Sound | SAE J88, is 76 dB(A) |
|-------------|----------------------|
- The exterior sound pressure level for the standard machine measured at a distance of 15 meters (49.2 feet) per test procedures specified in SAE J88, mid gear moving operation is 76 dB(A).
  - The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures defined in ANSI/SAE J1166 is 81dB(A) for the standard cab offered by Caterpillar, when properly installed and maintained, tested with the doors and windows closed.

- |        |                        |
|--------|------------------------|
| Brakes | SAE J1473 and ISO 3450 |
|--------|------------------------|
- Meets SAE J1473 and ISO 3450 requirements.
  - Completely enclosed and sealed, hydraulic, multiple discs.
  - Inboard, oil-immersed, hydraulically actuated, multiple discs on final drive input shaft.
  - Self adjusting.
  - Foot-operated brake pedals can be interlocked for roading.
  - Parking/secondary brakes are independent of the service brake system. Parking brake is mechanically applied by a hand lever located in the operator station.

## Axles

- Rear axle: heavy-duty, fixed axle with inboard planetary reduction and differential lock.
- Front 2WD axle: Trunnion mounted, fabricated axle with 11° oscillation each direction from center line. Includes easy access remote grease fittings.
- Front AWD axle: Trunnion mounted, cast axle with 11° oscillation each direction from center line. Limited Slip Differential and easy access remote grease fittings are standard.

## Tires

Front 2WD Standard Size	14.5/75 - 16.1
2WD Ply Rating	10
Front AWD Standard Size	12.5 - 20, R4 (10 ply)
AWD Ply Rating	10
AWD Optional Size	15 - 19.5 and Optional Ply (12 ply)
Rear 2WD Standard Size	21L - 24, R4
2WD Ply Rating	12
Rear AWD Standard Size	21L - 24, R4
AWD Ply Rating	12

## Engine Power Rating Conditions

- Based on standard air conditions of 25° C (77° F) and 99 kPa (29.32 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 (86° F) (reference a fuel density of 838.9 g/L [7.001 lb/gal]).
- No derating required up to 2286 m (7,500 ft).

## Engine Features

- Direct injection fuel system with an individual, adjustment free unit injector for each cylinder.
- Cam-turned and tapered, aluminum-alloy, three-ring, oil cooled pistons. Connecting rods are also tapered.
- Uniflow cylinder-head design eliminates crossover manifold piping and features internal fuel, oil and water passages.
- Deep-skirted, cast cylinder block and induction-hardened, forged crankshaft. Steel camshaft is fully journaled at every block bulkhead. Oscillating roller followers and short pushrods for precision engine timing. Two alloy-steel valves per cylinder.
- Direct-electric, 12-volt starting aid and charging system with a 90-amp alternator and 100-amp hour batteries.



## Machine Dimensions

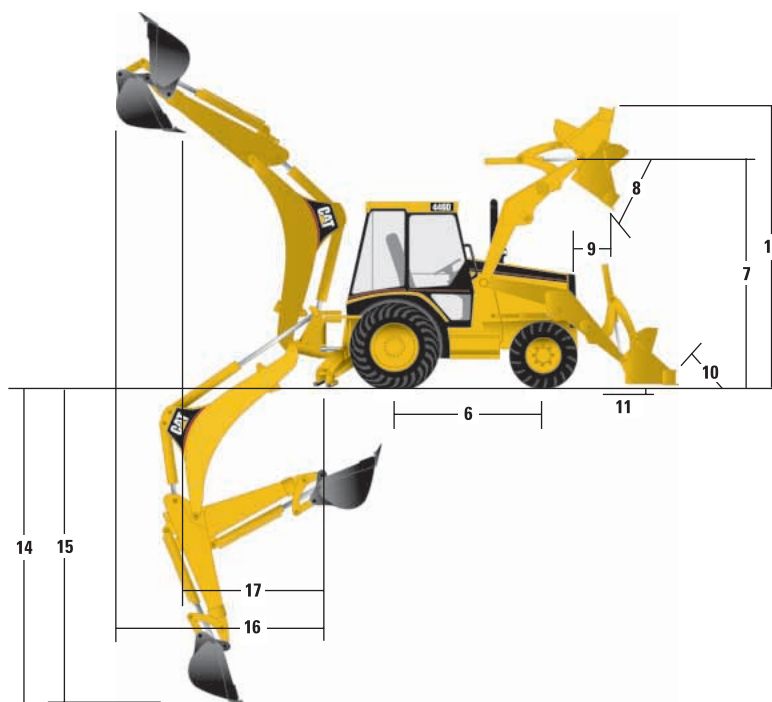
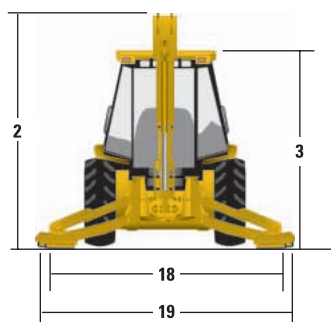
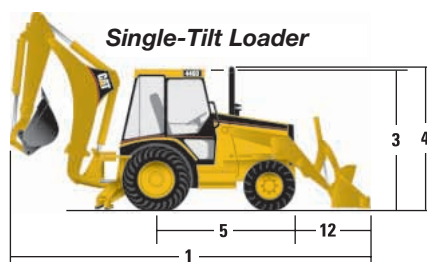
		Single-Tilt Loader		
		General Purpose (1.15 m <sup>3</sup> /1.5 yd <sup>3</sup> )	General Purpose (1.34 m <sup>3</sup> /1.75 yd <sup>3</sup> )	Multi Purpose (1.25 m <sup>3</sup> /1.63 yd <sup>3</sup> )
(1)	Overall transport length	7952 mm/26 ft 1 in	7990 mm/26 ft 3 in	7948 mm/26 ft 1 in
	Overall length (loader on ground)	7895 mm/25 ft 11 in	7955 mm/26 ft 1 in	7878 mm/25 ft 10 in
(2)	Overall transport height (standard stick)	4182 mm/13 ft 9 in	4182 mm/13 ft 9 in	4182 mm/13 ft 9 in
	Overall transport height (extendible stick)	4182 mm/13 ft 9 in	4182 mm/13 ft 9 in	4182 mm/13 ft 9 in
	Overall width	2477 mm/8 ft 2 in	2477 mm/8 ft 2 in	2477 mm/8 ft 2 in
(3)	Height to top of cab/canopy	2899 mm/9 ft 6 in	2899 mm/9 ft 6 in	2899 mm/9 ft 6 in
(4)	Height to top of exhaust stack	2960 mm/9 ft 9 in	2960 mm/9 ft 9 in	2960 mm/9 ft 9 in
	Height to loader hinge pin (transport)	578 mm/23 in	578 mm/23 in	578 mm/23 in
	Ground clearance (minimum)	332 mm/1 ft 1 in	332 mm/1 ft 1 in	332 mm/1 ft 1 in
(5)	Rear axle centerline to front grill	2752 mm/9 ft	2752 mm/9 ft	2752 mm/9 ft
	Front wheel tread gauge	1970 mm/6 ft 6 in	1970 mm/6 ft 6 in	1970 mm/6 ft 6 in
	Rear wheel tread gauge	1800 mm/5 ft 11 in	1800 mm/5 ft 11 in	1800 mm/5 ft 11 in
(6)	Wheelbase 2WD/AWD	2233 mm/7 ft 4 in	2233 mm/7 ft 4 in	2233 mm/7 ft 4 in

## Loader Bucket Dimensions and Performance

		Single-Tilt Loader		
		General Purpose (1.15 m <sup>3</sup> /1.5 yd <sup>3</sup> )	General Purpose (1.34 m <sup>3</sup> /1.75 yd <sup>3</sup> )	Multi Purpose With Cutting Edge
	Capacity (SAE) rated	1.1 m <sup>3</sup> /1.5 yd <sup>3</sup>	1.3 m <sup>3</sup> /1.75 yd <sup>3</sup>	1.2 m <sup>3</sup> /1.63 yd <sup>3</sup>
	Width	2434 mm/8 ft	2434 mm/8 ft	2534 mm/8 ft 4 in
	Lift capacity	4351 kg/9592 lb	4217 kg/9296 lb	4039 kg/8905 lb
	Breakout	61.7 kN/13,868 lb	56.7 kN/12,744 lb	62.8 kN/14,105 lb
(7)	Maximum hinge pin height	3479 mm/11 ft 5 in	3479 mm/11 ft 5 in	3479 mm/11 ft 5 in
(8)	Dump angle at full height	45°	45°	45°
	Dump height at maximum angle	2720 mm/8 ft 11 in	2678 mm/8 ft 11 in	2727 mm/8 ft 11 in
(9)	Dump reach at full height	855 mm/34 in	897 mm/35 in	820 mm/32 in
(10)	Maximum bucket rollback at ground level	41°	41°	41°
(11)	Digging depth	153 mm/6 in	153 mm/6 in	172 mm/7 in
	Maximum grading angle	104°	104°	101°
	Width of dozer cutting edge	N/A	N/A	2441 mm/8 ft
(12)	Grill to bucket cutting edge, carry position	1684 mm/6 ft 6 in	1723 mm/6 ft 8 in	1680 mm/6 ft 6 in
(13)	Maximum operating height	4405 mm/14 ft 5 in	4502 mm/14 ft 9 in	4406 mm/14 ft 5 in
	Jaw opening maximum	N/A	N/A	1055 mm/3 ft 5 in
	Weight	533 kg/1176 lb	579 kg/1278 lb	907 kg/2000 lb

## Backhoe Dimensions and Performance

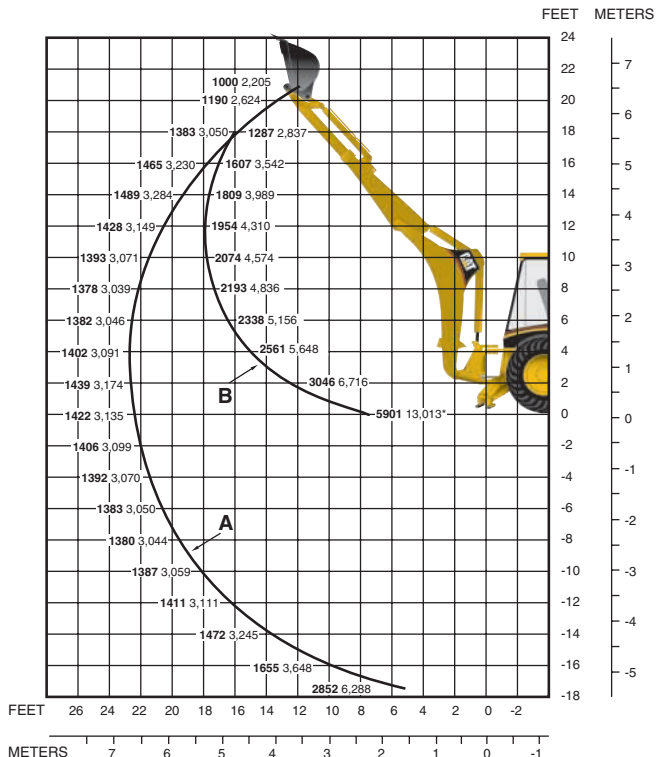
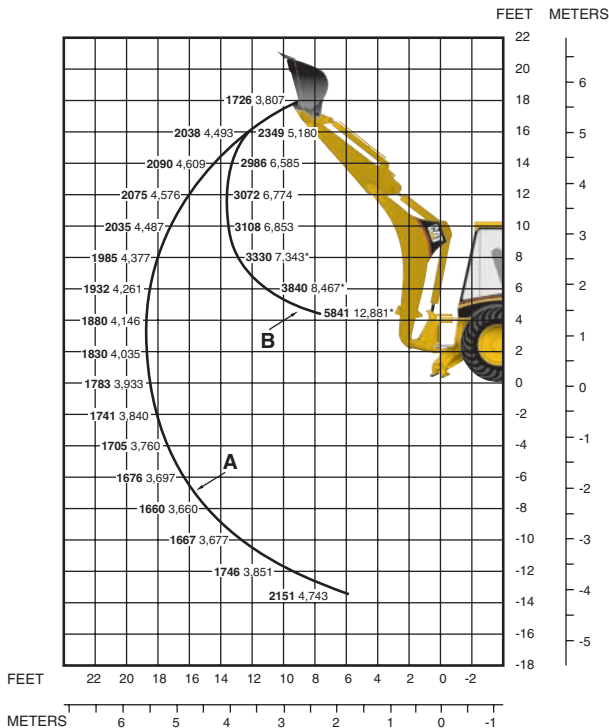
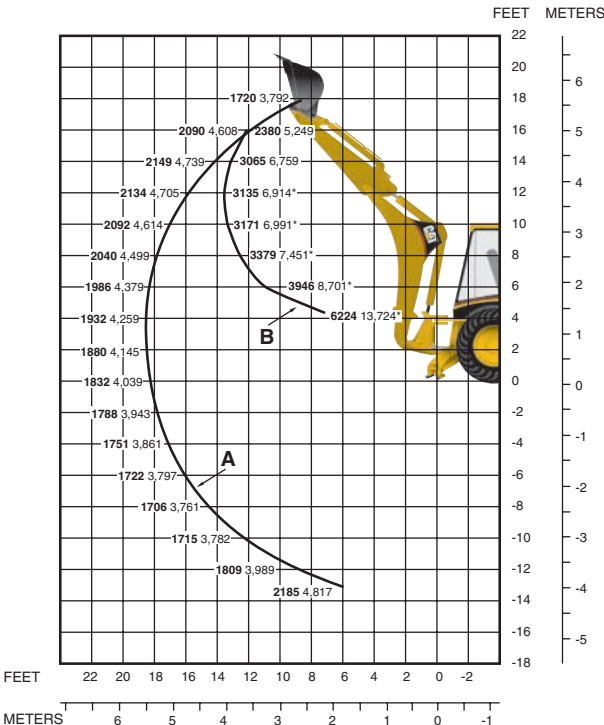
	Standard Stick	Extendible Stick Retracted	Extendible Stick Extended
(14) Digging depth SAE (max)	5142 mm/16 ft 10 in	5207 mm/17 ft 1 in	6457 mm/21 ft 2 in
(15) Digging depth (2 ft) flat bottom	5097 mm/16 ft 8 in	5175 mm/17 ft	6424 mm/21 ft 1 in
Reach from rear axle centerline at ground line	7867 mm/25 ft 10 in	7930 mm/26 ft	9121 mm/29 ft 11 in
(16) Reach from swing pivot at ground line	6636 mm/21 ft 9 in	6697 mm/22 ft	7890 mm/25 ft 11 in
Maximum operating height	6524 mm/21 ft 5 in	6653 mm/21 ft 10 in	7536 mm/24 ft 9 in
Loading height	4392 mm/14 ft 5 in	4395 mm/14 ft 5 in	5068 mm/16 ft 7 in
(17) Loading reach	2092 mm/6 ft 10 in	2004 mm/6 ft 7 in	3187 mm/10 ft 5 in
Swing arc	180°	180°	180°
Bucket rotation	190°	187°	187°
(18) Stabilizer spread, operating position (center of pad)	3614 mm/11 ft 10 in	3614 mm/11 ft 10 in	3614 mm/11 ft 10 in
(19) Stabilizer spread, operating position (outside edge of pad)	4084 mm/13 ft 5 in	4084 mm/13 ft 5 in	4084 mm/13 ft 5 in
Stabilizer spread, transport position	2477 mm/8 ft 2 in	2477 mm/8 ft 2 in	2477 mm/8 ft 2 in
Bucket dig force	75.4 kN/16,950 lb	72.95 kN/16,400 lb	72.95 kN/16,400 lb
Stick dig force	50.8 kN/11,430 lb	50.08 kN/11,260 lb	36.8 kN/8275 lb
Leveling angle (maximum slope on which machine will make a vertical cut)	13°	13°	13°



Dimensions and performance specifications shown are for machines equipped with 14.5/75-16.1 (10 PR) front tires, 21L-24 (12 PR) rear tires, ROPS canopy, standard stick with 24-inch heavy-duty bucket, and 1.5 yd<sup>3</sup> loader bucket and standard equipment unless otherwise specified.



## Backhoe Lift Capacity



\*Indicates lift capacity is stability limited.

## Standard Equipment

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

Air cleaner	Hydraulic oil cooler
Alarm, back-up	Indicators — air cleaner service, brake on, engine coolant, hydraulic oil level, sight gauge, oil pressure
Alarm, audible system fault	Instrument panel lights
Alternator, 90-amp, 12-volt	Key start/stop system
Axle, pendulum mount (front)	Lights, working (4 front, 4 rear)
Backhoe, center pivot, excavator style	Loader, self-leveling, return-to-dig and transmission disconnect switch
Battery, maintenance-free, (2) 750 CCA	Mirror, rearview
Boom transport lock	Receptacle, 12-volt, internal and external
Brace, lift cylinder	Power steering, hydrostatic, with secondary steering
Brake, secondary parking	Radio installation kit
Brakes, oil disk, dual pedals, interlock	Rubber impact strips on radiator guard
Bucket level indicator	Seat belt, retractable (51 mm/2 in)
Canopy, ROPS/FOPS	Seat, air suspension with armrests
Coat hook	Stabilizer controls, pilot operated hydraulic
Coolant/Antifreeze, extended life	Stabilizer pads, flip-over
Counterweight, (454 kg/1,000 lb)	Starting system, thermal starting aid
Differential, Limited Slip	Steering wheel assist knob
Differential lock	Storage compartment, internal
Dome light (cab only)	Stop and tail lights (2)
Engine, Cat 3114 DIT	Swing transport lock
Engine enclosure	Tilt steering wheel
Face seals, O-ring	Tires:
Fan, suction and guard	front, Laborer, 14.5/75 × 16.1 10PR
Fast reversing shuttle, all gears	rear, 21L × 24 12PR
Filters, spin-on fuel, engine oil, transmission oil, water separator, hydraulic fluid	Toolbox, external, lockable
Flashing hazard/signal lights	Torque converter
Fenders, rear with cover	Throttles, hand and foot
Floor mat	Transmission, autoshift
Gauges — coolant temperature, fuel level, tachometer, hour meter, torque converter oil temperature	Transmission neutralizer switch
Grill, front with bumpers	Transport tie-downs
Ground line fuel fill	Vandalism protection, rotating console
Hydraulic hose, XT-3 ES	Warning horn, rear, electric



## Optional Equipment

With approximate change in operating weight (kg/lb).

Air Conditioning . . . . .	47/103	Mechanical Backhoe Controls . .	5/12	Radio installation kit . . . . .	3/7
Attachments, backhoe		Dynahoe pattern		Ride Control . . . . .	25/55
Heavy Duty Buckets		Ford pattern		Rotating beacon . . . . .	5/11
18 inch, 6.3 CFT . . . . .	173/381	Cab Deluxe . . . . .	304/670	Fixed mounted	
24 inch, 9.5 CFT . . . . .	208/459	Coolant, additional		Magnetic mounted	
30 inch, 12.4 CFT . . . . .	227/501	protection (–50° C/–58° F) . . . . .	0/0	Seat belt, 75 mm/3 in . . . . .	0/0
36 inch, 15.5 CFT . . . . .	254/561	Counterweight,		Starting aid, ether . . . . .	1/2
Extreme Service Buckets		682 kg/1,500 lb . . . . .	227/500	Stick, extendible . . . . .	300/660
24 inch, 5.7 CFT . . . . .	258/570	Cutting edge, bolt-on:		Teeth, loader bucket . . . . .	45/99
30 inch, 7.3 CFT . . . . .	286/630	Two piece . . . . .	70/154	Tires:	
Attachments, front loader		Guard: stabilizer, rock . . . . .	30/65	AWD:	
General-purpose buckets:		Hydraulic valves, backhoe:		15 - 19.5 12PR . . . . .	91/200
1.15 m³/1.5 yd³ . . . . .	609/1,342	Auxiliary valve . . . . .	8/18	12.5 - 20 10PR . . . . .	91/200
1.34 m³/1.75 yd³ . . . . .	664/1,464	Hydraulic valves, loader:		Vandalism protection: . . . . .	1/2
Multi-purpose bucket . . . .	890/1,962	3rd valve for GP, MP or		Gauge cover	
Axle, front:		Quick Coupler . . . . .	27/60	Padlocks	
All-wheel drive with		Hydraulic lines:		Hood lock	
driveshaft guard . . . . .	232/512	Auxiliary, 2-way lines			
Backhoe controls:		(to boom) . . . . .	10/22		
Pilot hydraulic joystick controls		Universal, 1-way lines			
with pattern changer . . . . .	27/60	(to stick) . . . . .	57/126		

Cab, Deluxe includes deluxe seat, auto-up stabilizers, voltmeter, and system monitors for plugged engine air filter, hydraulic filter and fuel/water separator.







# 446D Backhoe Loader

AEHQ5579 (2-04)

Replaces AEHQ3817-03

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