

442E

Backhoe Loader



Cat® 3054C DIT Diesel Engine

Gross Power (SAE J1995) at 2200 rpm	74.5 kW/101 hp
Net Power (ISO 9249) at 2200 rpm	71 kW/97 hp

Cat® C4.4 Turbocharged Aftercooled Engine

Gross Power (SAE J1995) at 2200 rpm	74.5 kW/101 hp
Net Power (ISO 9249) at 2200 rpm	71 kW/97 hp

Operating Weight

7940-10 700 kg

Backhoe Digging Depth

Stick	Standard	Extendable
SAE Maximum	4575 mm	5828 mm
Maximum	5247 mm	6459 mm

Cat® 442E Backhoe Loader

The Caterpillar® E-Series Backhoe Loader – The Next Generation

Pilot Hydraulic Joystick Controls

Excavator style Pilot Hydraulic Joystick Controls are fitted as standard to both the Loader and Hoe controls on all 442E Backhoe Loaders. The low effort controls are easy to use, reduce operator fatigue, and greatly improve visibility to the rear. Benefits include:

- Pod mounted with multi-positioning
- Ergonomic, low effort joysticks
- E-Stick thumb control on hoe joystick
- In-cab Pattern Changer as standard
- MP/Auxiliary controls on Loader joystick

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Caterpillar Work Tools

Caterpillar work tools have been designed around the performance and demands of the whole E-Series range.

- Provides maximum versatility for all jobsite applications.
- All loader tools fully compatible with previous generation machines. Hoe tools are compatible with D-Series.

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Operator Station

The E-Series Cab offers an improved operator environment, with increased visibility, ergonomics and comfort. The pod-mounted joystick controls offer increased comfort, control and versatility.

- Pod mounted joystick controls
- Automotive style finish
- Stylish and functional curved glass maximizes space within the cab
- Excellent 360° visibility
- Improved HVAC performance
- Air Suspension seat
- Low effort well placed controls
- Plenty of personal storage space
- Exceptional operator comfort
- Cab options

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Backhoe Versatility and Performance

- Excavator style backhoe reaches over obstacles, for easier, faster truck loading in confined spaces
- Increased digging depth
- Increased Stick and Bucket forces
- Industry leading 205° High Rotation Linkage gives excellent clamping and straight wall trenching
- Extending outer section ensures maximum wear protection on the E-stick
- Optional Quick Coupler for maximum versatility

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Caterpillar's 442E – The Next Generation

Developed with over 20 years in the Backhoe Loader industry, the 442E is designed to exceed customer expectations.

More performance, versatility and comfort than ever before gives the 442E the edge needed in a harsh and competitive environment. Along with you, it's up to the challenge.

See your Cat dealer and try out The Next Generation of Backhoe Loaders from Caterpillar.



Power train

The 442E now has 40 kph roading speed as standard. Available with the Power-Shuttle or optional Autoshift transmission, it provides all the performance needed.

- Standard 3054C DIT engine (74.5 kW) or Cat C4.4 engine (74.5 kW)
 - Engines meet EU directive 97/68/EC Stage II emissions regulations or EU emissions directive 2004/26/EC Stage IIIA emissions regulations
 - Durable gear driven water pump
 - Parts commonality with other Cat machines
 - Single fuel filter/water separator for lower servicing costs
 - Single location access to service refill points
 - Optional All Wheel Steer
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Load Sensing, Flow Sharing Hydraulic System

- Flow-sharing hydraulic valves give improved implement control exactly where it is needed
 - Load sensing hydraulics provide full implement force, at any engine speed
 - Cat exclusive high pressure XT hose
 - O-ring face seals for reliability
- pg. 12**

Serviceability

- Improved fully opening hood provides greater access to engine compartment
 - Wear Pad adjustment design on Stabilizers and E-Stick for quick, easy maintenance
- pg. 13**

Other Special Features

- Standard All Wheel Drive for maximum rimpull and improved loader performance
 - Differential Lock for improved traction in poor conditions
 - Stackable counterweights for tuneable machine balance
 - 160 liter fuel tank, for extended operating time
 - Optional Ride Control System for improved ride when carrying loads in the loader bucket
 - All Wheel Braking feature, standard on the 442E, providing increased braking performance
- pg. 4**

Loader Versatility

The Cat Parallel Lift Loader.

- Divergent lift arms and low profile hood for maximum visibility to the tool
 - Robust design reduces torsional flex when lifting heavy objects
 - Standard Return To Dig
 - Excellent Work tool versatility
 - Optional hydraulic quick coupler
 - Standard self levelling
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Complete Customer Service

Your Caterpillar dealer offers a complete machine aftercare service, such as Customer Support Agreements, and can tailor your purchase to exactly suit your needs. Your dealer can also offer competitive finance packages to ensure that you can plan everything to enable the best return on your new asset. **pg. 13**



Features

Customer driven improvements are designed into the 442E.

Lower Operating Costs

The 442E has improved Stabilizer and E-Stick wear pad adjustment. Exterior wear pad adjustment ensures easy maintenance of the stabilizer and E-Stick, lowering operating costs. This equates to less machine downtime and more convenience for the operator.

All Wheel Braking

All Wheel Braking is standard on all 442E Backhoe loaders. When driving in two wheel drive, applying the brakes engages four wheel drive, maximising brake effectiveness. Releasing the brakes returns the transmission to two wheel drive. This is particularly useful when roading. This effective system works well in hazardous, slippery or steep surfaces. Braking modes are controlled by the All Wheel Drive Switch.

Improved Weight Distribution

The 442E has been designed with improved weight distribution. The new design coupled with a slightly longer wheelbase ensures optimal balance and handling, particularly when roading. This is achieved with no loss in turning circle.

Excavator Control Pattern Changer

The 442E has an in-cab backhoe pattern changer as standard, allowing operators to choose between either ISO, or SAE control patterns. This is located within reach of the operator, ensuring the 432E will suit either type of backhoe operation.

160 Liter Fuel Tank

Responding to customer needs, a large 160 liter fuel tank, along with the efficient Cat engine and hydraulic system, this ensures longer periods between fill ups and less inconvenience.

Increased Rimpull

The 442E is equipped with a larger torque converter. This increases rimpull, which equates to improved loading characteristics, which in turn offers more productivity.

Caterpillar Immobilizer System

Machine theft has serious repercussions for your business, such as loss of business, higher insurance costs and inconvenience. The all new Cat Immobilizer System is a diesel engine immobilizer system, designed to provide theft protection. The system meets Thatcham approval and PTAG attack time requirements and a premium discount may be available from certain Insurance companies (see your Cat dealer for details). The system uses the same key but has a one touch pad for easy disarming.

Electro-Deposition Coating

Your 442E has been protected by an undercoat of electro-deposited (E-Coat) primer, which completely seals each metallic component and offers a superlative degree of protection from damage and corrosion. Coupled with the high solids polyurethane top coat, your 442E will stay looking good for longer, ensuring optimum resale value.



Pilot Operated Joystick Controls

Standard on the 442E, Pilot controls reduce fatigue, improve visibility and increase versatility.

Joystick Controls

Excavator style joystick controls provide smooth modulation and are ergonomically designed for low effort control and operator comfort. The location of the controls naturally position the operator comfortably into the back of the seat. The loader joystick features optional multi function controls and the RH hoe joystick features a thumb operated extendable stick control, eliminating pedals on the floor.

Pattern Changer

The 442E has a standard hoe pattern changer within the cab. This allows the operator to choose between backhoe and excavator patterns, with an easy push of a switch.

Stabilizer Controls

Pilot operated, remote Stabilizer controls are available with optional Auto-Up feature, reducing cycle times and improving visibility to the rear.

Multi Position Joystick Pods

The joysticks are pod-mounted, allowing multiple positions, fore and aft for the controls. This allows the operator to move forward when excavating close to the rear of the machine, and have a clear view to the trench.

Visibility

With no rear console impeding vision, the operator has an unobstructed view to the working area.



Operator Station

The E-Series cab. Comfort, Visibility, Style-Designed in!



The 442E Cab is Designed with Today's Operator in Mind

The E-Series cab is designed to provide maximum comfort, ease of operation, and overall style for today's demanding operator. The design incorporates curved glass for improved interior space and visibility, and the cab is widened for better performance when turning from one mode of operation to the other. Cab comfort is enhanced with the first-class Cat air suspension seat designed to reduce fatigue.

An easy to open single rear piece window provides the operator with excellent ventilation and superb visibility.

The rear wash/wipe unit cleans a large area of the new screen to ensure visibility of the working area when working in wet or dusty conditions.

Excellent ergonomics ensure that all controls are within easy reach of the operator, and tinted glass is standard in all cabs.

Other features such as standard air-ride seat and remote Stabilizer controls, large adjustable vents throughout the cab, and clear gauges provide the operator with an operating environment designed to maximize comfort and productivity.



Vibration

Caterpillar understands that backhoe loaders work in some of the harshest environments. By controlling normal machine vibrations caused by these harsh conditions, operator efficiency and productivity are improved. The 442E has features, both standard and optional, that reduce vibration.

HVAC System

The 442E benefits from an optional, more powerful air conditioning system, which, with its new improved ventilation flow to the operator, ensures the operator stays cool. The ventilation also provides plenty of demisting/defrosting/ heating capability.

Work Lights

The 442E has adjustable front and rear Work lights. This allows the operator to direct the light wherever needed, providing maximum illumination to the work area.

Cab Air Filter

The 442E has an easy access cab air filter, situated within the RH rear fender. The cab air intake is positioned on the central post, high up to minimize dust intake into the air filter.

Cab Mounts

The cab shell is attached to the frame with resilient mounts, reducing vibration and sound.

Cab Options

The 442E is available in 2 cab options, providing the best choices to suit individual operator needs. There is a standard and deluxe cab available. See pg. 22 for details.

Cat Air Suspension Seat

The major interface between the machine and the operator is optimal, and the Cat air suspension seat is an excellent asset to the E-Series cab design. The seat is designed to move in an arc around the foot pedals, ensuring the operator doesn't have to compensate for pedal distance as the seat moves up and down.

Backhoe Performance

The 442E has greater dig depth, higher forces and an improved design for increased performance.



Excavator-style Backhoe

The instantly recognizable Cat excavator boom has more than just good looks – it outperforms straight boom designs too. Whether close-up truck loading on a single road carriageway, or digging over obstacles such as walls, the excavator boom outperforms the rest. Combine this versatility with the powerful breakout forces, the controllability of the load-sensing, flow-sharing hydraulic system, and you have one of the best Backhoes' in the industry. The boom is a narrow design, ensuring maximum visibility to the work tool.

All New Extendable Stick

The 442E is available with an extendable stick which provides the operator with increased dig depth and reach, increasing productivity. Redesigned with the sliding outer section, this design keeps the wear pads out of the dirt, extending adjustment intervals. When adjustment is necessary, the externally accessible wear pad design takes minutes to adjust, without the need to disassemble the E-Stick. The sliding outer E-Stick design allows excellent material clamping with the hoe bucket.

Slider Frame and Swing Frame

The 442E is designed to make necessary maintenance easy to perform. The E-Series cast slider frame has exterior lock clamps, with no backhoe disassembly needed when servicing. The Swing Frame/Boom Foot pins have replaceable bushings in the bores.

Caterpillar Cushion Swing Option

The 442E is equipped with Cat Cushion Swing System, which enables very fast trenching by damping the boom oscillation down when returning to trench with the hoe.

Increased Depth

The 442E has an increased digging depth, further increasing the productivity and versatility of this machine.

Increased Performance

The boom and stick have redesigned geometry and higher stick forces, which equates to improved digging performance. Bucket forces are up 8%, and Stick forces are increased by a considerable 15%, making the 442E one of the best excavating BHL's in the industry.

Caterpillar Work Tools

Enhance the versatility of your 442E with a wide choice of tools on offer to suit your needs.

Backhoe Buckets

Cat offers a huge variety of hoe buckets to meet your requirements, including:

- Standard Duty Bucket. Used in easy to penetrate, low impact, moderately abrasive soils.
- Heavy Duty Bucket. Used for digging fragmented rock, frozen ground and highly abrasive materials.
- Extreme Service Bucket. Used in highly abrasive, high impact soil.
- High Capacity Bucket. Same durable construction as the HD bucket, but longer tip radius provides increased fill capacity.

Durability

Caterpillar backhoe buckets offer superior durability with the following features:

- Thick cutting edges.
- DRS (Diagonal Retention System) means easier replacement of pin on teeth and greater strength.
- Thick wear material on the side plates for better reinforcement and less wear.
- ID plate on all buckets showing part number, GET sizes and machine compatibility.

Sizes

The E-Series offers a full range of sizes, from a 9"/228 mm Cribbing bucket for cable trenching right up to large capacity 36"/914 mm buckets for mass excavation.

Quick Coupler – Loader and Hoe

A hydraulic quick coupler is available for the Loader, and a mechanical quick coupler option is available for the Hoe. For operators who require fast tool changes, both quick coupler options can save a lot of time, money and effort.

Hydro-Mechanical Work Tools

Caterpillar has designed a range of hydro-mechanical tools carefully matched to the machine for optimum performance, including:



Hoe

- H70/90 Hydraulic Hammers
- Auger
- Vibratory Plate Compactor
- Cold Planer

Loader

- Angle Broom
- Pickup Sweeper

Please see your Cat dealer for the full range of tools available for particular machine combination.

Loader Versatility

The 442E Loader now has even greater performance.



Powerful Loader Performance

The 442E Parallel Lift Loader offers self levelling as standard, ensuring faster loading cycles. Available with either a General Purpose or Multi Purpose bucket, the 442E can be matched to your needs precisely. As ever, the work tool visibility is excellent with the narrow sloping hood and divergent loader arms allowing a clear line of site to the bucket edges. The large torque tube means the torsional stiffness, needed when picking up irregular shaped heavy objects. The new arms have been redesigned to further loader performance.

Joystick Control

The loader joystick is ergonomically placed for operator comfort, and controls the multi-purpose bucket, auxiliary hydraulics, and All Wheel Steer when these options are fitted.

Ride Control

Caterpillar's proven Ride Control system is an option designed to reduce machine pitching and bouncing giving operators a smooth ride in all applications, including load and carry, roading, or simply moving around the jobsite. An accumulator acts as a shock absorber to reduce machine pitching and provide a smoother ride over rough terrain. The system is engaged by a switch on the front console.

Return to Dig

Your 442E is equipped with a standard Return To Dig system. This system reduces loading cycle times by bringing the loader bucket back to the dig position with an easy pull of the lever. By the time the loader bucket is at ground level, the bucket is angled correctly for the next load or cut.

Hydraulic Quick Coupler Option

The 442E is available with an optional quick coupler, allowing greater loader versatility with a wide range of Caterpillar work tools.

Power Train

442E has a 40 kph transmission as standard-less time on the road, more time on the jobsite.



Optional Auto-Shift Transmission

Work faster with the optional Auto-Shift transmission. The Auto-Shift transmission provides automatic shifting between five forward and three reverse gears. There is no floor mounted shift lever, so the operator has more floor space and better access through the right hand door.

40 kph Power-Shuttle Transmission

The 442E comes equipped with 40 kph Power-Shuttle transmission, improving roading speed and providing better spacing between gear ratios. It utilizes a constant mesh, synchronized, four speed system. The forward/reverse lever on the steering column is placed for easy direction changes on the move, and the gear selection is from the floor mounted shift lever.

Large Torque Converter

The 442E has a larger torque converter, which equates to more rimpull, improving loading performance considerably.

Optional All Wheel Steer

The 442E is available with AWS, enabling 2WS, Circle Steer, Crab Steer and Independent Rear Steering for those tight situations. This makes the machine far more manoeuvrable in tight work areas. The unique Independent Rear Steering ensures even greater manoeuvrability.

Caterpillar Engine

The 442E is available with either the 3054C turbocharged engine that meets Stage II emission regulation EU Directive 97/68/EC or the C4.4 turbocharged aftercooled engine that meets Stage IIIA EU emission Directive 2004/26/EC. All engines are reliable 4 cylinder, 4 stroke direct injection diesel engines equipped with standard glow plug starting for optimum cold weather performance. This provides reliable starting performance down to -18 C. All engines feature a reliable gear driven water pump and a durable poly vee front end auxiliary drive belt that is automatically tensioned for longer life reducing operating costs.

Air Filter

A dry type axial seal air cleaner with automatic integrated dust ejection provides more efficient pre-separation. Rolled air filters allow consistent linear air flow with reduced installation space.

Axles and Brakes

The Caterpillar rear axle is an enclosed design with a wet multi-plate Kevlar braking system. This system is oil immersed and self adjusting, and allows operation in the harshest environments. The system has dual brake pedals for split braking in tight corners.

Hydraulics

Load sensing, flow-sharing system matches power and flow supply to demand – where you need it, when you need it.



Hydraulic Performance

It's rare that you'll be working at full production 100% of the time, so why should the machine be working flat out, using more fuel, making more noise, and increasing wear? The 442E has a load-sensing, closed center hydraulic system, which closely matches power and flow to the demand needed by the implements. So whether you're in full trenching mode, or delicately digging around services, you are in control. In applications such as loading and carrying, speed is important, and system will match the flow needed to get the job done quickly and efficiently. As there is minimal demand on the system unless needed, there are less parasitic hp losses and more power available for rimpull – providing better loading and roading.

Flow Sharing Valves

The 442E also features flow-sharing hydraulic valves, ensuring the correct flow of oil reaches the implement cylinders, providing greater control and eliminating oil starvation when operating multiple functions.

Hardware

The 442E is equipped with a highly efficient variable displacement piston pump, Cat's XT hoses and O-ring face seal fittings, ensuring a robust system. XT hose is constructed from four over-lapping wire spiral wraps, ensuring excellent durability and resistance to damage from pressure spikes and hydraulic pulsing.

Serviceability

Lower operating costs mean a better return on your bottom line.

Reduced Maintenance

The 442E is equipped with a flip open hood, allowing access to all check/fill points, air cleaner, washer bottles, visual indicators etc. The E-Series carries on the tradition with sealed for life axle oscillation, driveshaft universal joints, trunnions etc. Daily maintenance, which can be a chore for the busy operator, is kept to a minimum on the 442E.

Boom and Stick Design

The Boom and Stick design allows all wear adjustment to be done with Stick in-situ, using a simple wedge adjustment mechanism – no dismantling to shim the wear pads. The Stabilizer legs are also externally adjustable, reducing machine down time and inconvenience.

Cat Filters

All Cat filters are vertically mounted for spill free servicing and reduced oil contamination. They are also low micron filters, filtering even tiny particles from the oil and keeping the engine, transmission and hydraulic system running smoothly for years.

Scheduled Oil Sampling

Your Cat dealer will be able to provide the Caterpillar Scheduled Oil Sampling (S•O•S™) service. This enables your dealer to analyze wear before problems arise, so that premature failure can be avoided, and corrective action can take place to reduce costs and downtime.



Complete Customer Support

Lower operating costs with your dealer's excellent services and options.

Customer Support Agreements (CSA's)

Your Cat dealer can offer a comprehensive range of CSA's which can be individually tailored to suit your finances and requirements. Dealers can offer a range of options from a full Preventative Maintenance with S•O•S™ package to a Parts Only CSA. Protect your valuable investment and know exactly what your monthly payments will be to help you run your business.

Finance

Have you explored the range of options available from your dealer to finance your machine? They can offer a selection of attractive packages tailored exactly to your requirements.

Machine Selection

Your dealer can help guide you with your machine purchase decision, based on your requirements and help keep operating costs to a minimum. Is the machine you have in mind exactly the best for your job, or could other attachments be more suitable?

Operating Techniques

Your dealer can advise operating techniques for your machine which will minimize wear and tear, maximize productivity, and lower owning and operating costs.



Remanufactured components (Reman)

Sometimes, the most cost effective way to repair the machine is with remanufactured components. Reman components are rebuilt to original specification at Cat's Reman facility, using genuine parts and skilled technicians. Reman parts are guaranteed for 1 year

Engine

Caterpillar 3054C or C4.4 engine.

	Stage II EU Emission Directive 97/68/EC*	Stage IIIA EU Emission Directive 2004/26/EC**
Engine	CAT 3054C Turbocharged	C4.4 Turbocharged after cooled
Rated Power (standard)	2200 rpm	2200 rpm
Gross – SAE J1995	74.5 kW/101 hp	74.5 kW/101 hp
Net – ISO 9249	71 kW/97 hp	71 kW/97 hp
Net – 80/1269/EEC	71 kW/97 hp	71 kW/97 hp
Net Torque Rise at 1400 rpm	26%	23%
Peak Torque Rise at 1400 rpm		
74.5 kW/95 hp	408 Nm	400 Nm
Bore	105 mm	105 mm
Stroke	127 mm	127 mm
Displacement	4.4 liter	4.4 liter

- All engine horsepower (hp) are metric including front page.
- Net power advertised is the power available at the fly wheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- Engine will operate up to a maximum altitude of 3000 m

Features

- Three ring pistons made of lightweight silicon/aluminium alloy for strength and maximum thermal conductivity.

- Forged, chrome/molybdenum-steel crankshaft with nitro-carbonized journals.
- Front and rear crankshaft oil seals are ‘lip’ type Viton and PTFE designs featuring an integral dust lip.
- Heat resistant silicon-chrome steel intake and STELLITE faced exhaust valves are used for long engine 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 head thickness. Intake and exhaust ports are precision cast to promote optimum gas flow.
- Direct injection fuel system provides accurate fuel delivery. Self priming electric lift pump for improved cold start capability. One filter fuel system for reduced maintenance costs.
- High low engine torque for better machine performance.
- Dry type, axial seal air cleaner with automatic, integrated dust ejection providing more efficient pre-separation.
- Direct electric 12 volt starting and charging system with 750 CCA group 31 maintenance free battery.
- Poly vee front end and auxiliary drive belt that is automatically tensioned for long life reducing operating costs.

* For less regulated countries

** For regulated countries

Hydraulic System

Load-sensing, closed center system.

Variable flow, closed center, load-sensing system provides full hydraulic force to cutting edges at all engine speeds. Provides low fuel consumption and low effort controls.

Type

Closed-center

Pump type

Variable-flow, axial-piston

Pump capacity 156 lpm at 2200 rpm

System pressure 249 bar

Brakes

Fully enclosed, hydraulic, multiple discs.

Features

- Inboard oil immersed, hydraulically actuated multiple Kevlar discs on final drive input shaft.
- Completely enclosed and sealed.
- Self adjusting.
- Foot operated dual pedals can be interlocked for roading.
- Parking/secondary brakes are independent of the service brakes. Parking brake is mechanically applied through a hand lever in the right hand side console.

Meets ISO 3450:1996 requirements.

Operator Station

ROPS/FOPS is standard.

ROPS (Roll Over Protective Structure) offered by Caterpillar for this machine meets ROPS criteria ISO 3471:1994 and FOPS (Falling Objects Protective Structure) criteria ISO 3449:1992.

All Wheel Steer Option

Fully hydrostatic steering.

Full hydrostatic steering controlled by a hand metering unit. There are three operator-selected modes to maximize machine manoeuvrability:

- Two wheel steer mode
- Circle-steer mode
- Independent rear-manoeuvring mode

Secondary steer system available to meet roading regulations in various countries and to meet ISO 5010.

Type	Front wheel	
Power Steering	Hydrostatic	
Cylinder, one (1)	double-acting	
	Front	Rear
Bore	65 mm	85 mm
Stroke	120 mm	63 mm
Rod diameter	36 mm	42 mm

Turning Circle

Two wheel steer	10 840 mm
Circle-steer	9360 mm
Independent rear-manoeuvring	9200 mm

Transmission

Caterpillar Power-shuttle or optional Autoshift transmission.

The standard Power-shuttle transmission provides four speed forward and reverse, full synchromesh in all gears. Constant mesh gears on all ratios permit on the go shifting of all gears up or down. Neutral start provision prevent starting while shuttle is engaged. Torque converter free wheel clutch allows the converter stator free wheel during high speed, low load conditions such as roading.

Transmission disconnect

Hand operated power disconnect for easy, on the go shifting and full engine rpm when in the loading cycle.

Forward/Reverse electric power shuttle

Conveniently places, hand operated lever provides instant direction changes between forward and reverse through power hydraulic clutches.

Torque converter

Single stage 2.4 stall ratio.

Travel Speeds

Travel speeds of All Wheel Drive backhoe loader at full throttle, when equipped with 16.9 x 28 rear tires.

	Power Shuttle (standard)	Auto-shift (optional)
	kph	kph
Forward		
1st	6	6
2nd	10	10
3rd	20	20
4th	41	27
5th		42
Reverse		
1st	6	6
2nd	10	10
3rd	20	20
4th	41	

Axles

Standard All Wheel Drive.

Features

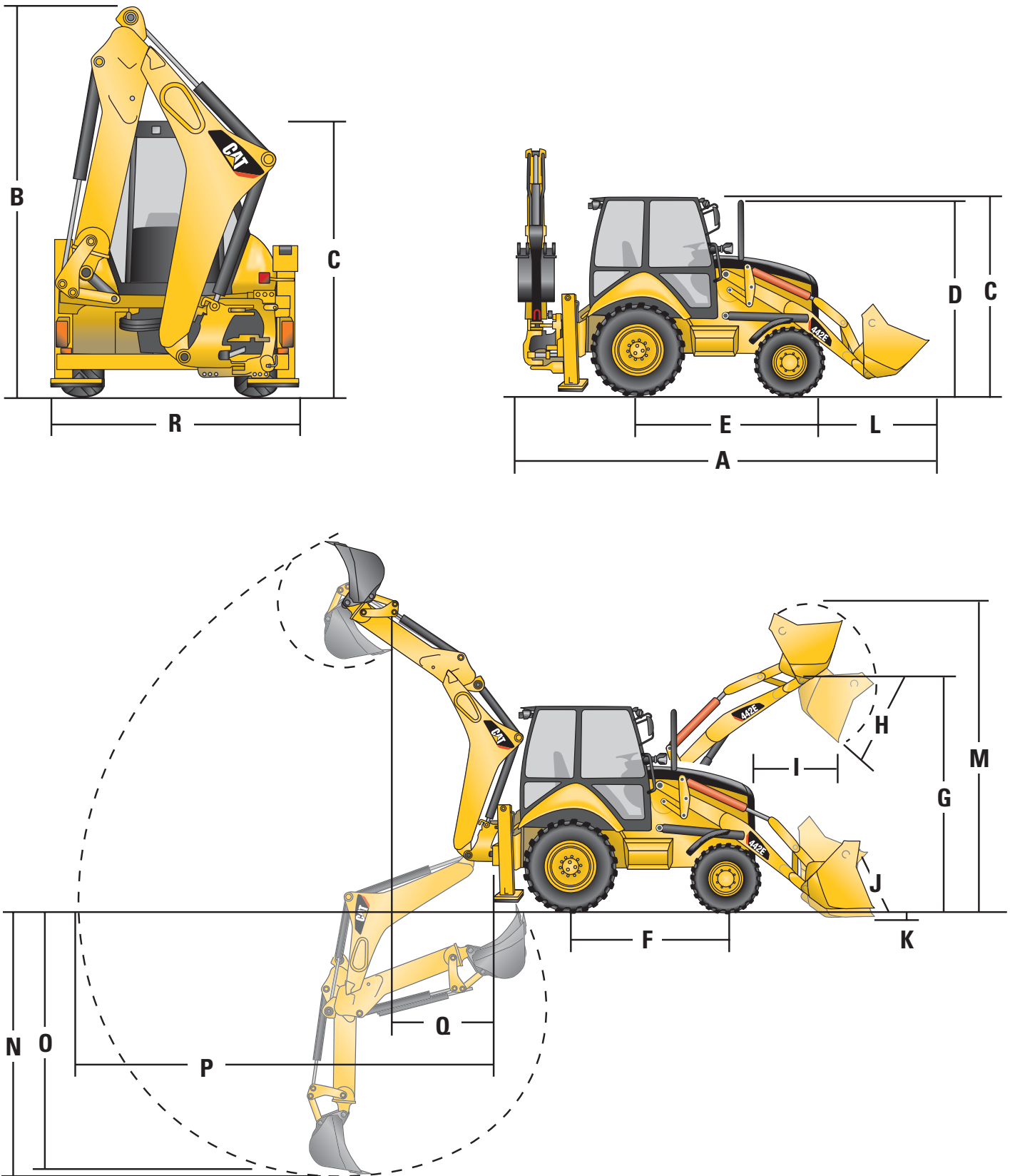
- Heavy duty rear axle with self adjusting inboard brakes, optional differential lock, and final drive.
- All Wheel Drive (AWD) is engaged by front console panel switch or by brake pedal during all wheel braking operation. AWD can be engaged on the go, under load, in any gear, forward or reverse. AWD has outer final drives for easy maintenance.
- AWD is pendulum mounted and permanently sealed and lubricated, requiring no daily maintenance. Also features double acting steering cylinder with 52° steering angle for increased maneuverability.
- Optional All Wheel Steer.

Service Refill Capacities

	Liters
Cooling System	
without heater	22.0
with heater	24.0
Fuel tank	160.0
Engine with oil filter	7.6
Transmission (Power shuttle)	
AWD	18.5
Transmission (Powershift)	
AWD	19.0
Rear Axle (Rigid)	
Center Housing	16.5
Center Housing Additive	0.5
Wheel End/Final Drive (volume per slide)	1.7

	Liters
Rear Axle (Steerable)	
Center Housing	16.0
Center Housing Additive	0.5
Wheel End/Final Drive (volume per side)	1.7
Front Axle (AWD)	
Center Housing	11.0
Wheel End/Final Drive (volume per side)	0.7
Hydraulic System (min/max)	79/99
Hydraulic Tank	38

Dimensions – Parallel Lift Loader



Machine Dimensions

		General Purpose	Multi Purpose	Multi Purpose with forks
A Overall length (loader on ground) S-Stick	mm	5809	5752	5752
Overall length (loader on ground) E-Stick	mm	5809	5752	5752
Overall transport length S-Stick	mm	5834	5810	5810
Overall transport length E-Stick	mm	5839	5814	5814
B Overall transport height S-Stick	mm	3914	3914	3914
Overall transport height E-Stick	mm	3939	3939	3939
Overall Width	mm	2368	2368	2368
C Height to top of cab/canopy	mm	2863	2863	2863
D Height to top of exhaust stack	mm	2779	2779	2779
Height to loader hinge pin (transport)	mm	403	429	429
Ground clearance (minimum)	mm	358	358	358
E Rear axle centerline to front grill	mm	2704	2704	2704
Front wheel tread gauge	mm	1915	1915	1915
Rear wheel tread gauge	mm	1713	1713	1713
F Wheel based (AWD)	mm	2200	2200	2200

Dimensions and Performance – Loader Bucket

		General Purpose	Multi Purpose	Multi Purpose with forks
Capacity (SAE rated)	m ³	1.0	1.03	1.03
Width	mm	2406	2406	2406
Lift capacity at maximum height	kg	3389	3219	3002
Breakout force	kN	51	55	54
Tipping load at bucket load point	kg	6891	6844	6659
G Maximum hinge pin height	mm	3340	3340	3340
H Dump angle at full height		45°	45°	45°
Dump height at maximum angle	mm	2634	2668	2668
I Dump reach at maximum angle	mm	795	724	724
J Maximum bucket rollback at ground level		39°	39°	39°
K Digging depth	mm	91	118	118
Maximum grading angle		112°	115°	115°
Width of dozer cutting edge	mm	-	2406	2406
L Grill to bucket cutting edge, carry position	mm	1505	1480	1480
M Maximum operating height	mm	4238	4264	4721
Jaw open maximum	mm	-	790	790
Bucket jaw clamping force	kN	-	61	61
Weight (not including teeth)	kg	428	611	844

Dimensions and Performance – Backhoe

		Standard Stick	Extendable Stick	
			Retracted	Extended
N Digging depth, SAE maximum	mm	4575	4686	5828
Digging depth, maximum	mm	5247	5355	6459
O Digging depth, 610 mm flat bottom, SAE maximum	mm	4552	4663	5805
Digging depth, 610 mm flat bottom, maximum	mm	5203	5309	6432
P Reach from swing pivot at ground line	mm	6022	6127	7222
Loading height	mm	4060	4016	4625
Q Loading reach	mm	1713	1887	2855
Swing arc		180°	180°	180°
Bucket rotation		205°	205°	205°
R Stabilizer width	mm	2368	2368	2368
Bucket dig force	kN	71	70	70
Stick dig force	kN	44	43	32
Total side shift travel	mm	1258	1258	1258

Weights

Standard parallel lift loader, with
1.0 m³ general purpose loader bucket,
610 mm standard duty backhoe bucket,
80 kg operator and a full fuel tank.

	kg
Operating weight (range)	7940-10700
Standard machine weight	8692
ROPS canopy	-260
Autoshift	50
Air conditioning	46
Multi-purpose bucket 1.03 m ³	
With fold-over forks	835
Without fold-over forks	700
Extendable stick (excludes front counterweight)	279
Counterweights	
Base	115
Stackables – One	235
Stackables – Max	485
Minimum Counterweight Recommendations:	
Standard Stick	
General Purpose	235
Multi Purpose	115
Multi purpose with fold-over forks	Base
Extendable Stick	
General Purpose	485
Multi Purpose	235
Multi Purpose with fold-over forks	115

Cab Features

	Standard	Deluxe
RH opening door with opening window	✓	✓
LH opening door with opening window	✓	✓
2 rear side fixed windows	✓	
2 rear side opening windows		✓
Standard air suspension seat	✓	
Deluxe air suspension seat		✓
8 working lights	✓	✓
Floor mat	✓	✓
LH storage console	✓	✓
Tilt steering column	✓	✓
Exterior rear view mirror	✓	✓
Beacon socket (2)	✓	✓
Internal power socket	✓	✓
Radio ready headliner	✓	✓
Instrument cluster display gauge	✓	✓
Sun visor	✓	✓
Cat Contravision		✓
Steering wheel knob	✓	✓
Vandal guard	✓	✓
Cab heater	✓	✓
Cab air conditioning		✓
Auto-up Stabilizers		optional
Seat belt (50 mm)	✓	✓

Standard Equipment

Standard and optional equipment may vary. Consult your Caterpillar dealer for specifics.

Air cleaner, dry type, axial seal with pre-cleaner and filter condition indicator	Front axle, pendulum mount	Mirror, exterior, rearview, large
All Wheel Drive	Front grill with bumpers	Pilot stabilizer controls
Alternator, 120-amp, 12 volt	Front headlights	Power receptacle, 12 V (2)
Antifreeze (to -37°C)	Front and rear windshield wipers	Power steering, hydrostatic
Audible system fault alarm	Gauges: Coolant temperature, fuel level, tachometer, hour meter, torque convertor, oil temperature	ROPS cab with heater, defroster, pressurizer and cab recirculating fan
Backhoe, 4575 mm dig depth, side-shift, excavator-style backhoe, 2 lever control	Ground line fuel fill with 160 liters capacity	Seat belt, retractable (50 mm)
Battery, maintenance free, 750 CCA	Grouser style stabilizer shoes	Seat, air suspension with fabric or vinyl seat cover
Boom, transport lock	High ambient cooler package	Self canceling directional indicator
Brace, lift cylinder	Hydraulic oil cooler	Spin-on fuel, engine, hydraulic and transmission oil filters
Brakes, Kevlar disc, oil immersed	Indicators: Air cleaner service, brake on, engine coolant, hydraulic oil level sight gauge, oil pressure	Starting system, thermal aid
Caterpillar 3054C* (74.5 kW) or Caterpillar C4.4** (74.5 kW)	Instrument panel lights	Stop and tail lights (2)
Coat hook	Intermittent front and rear wash/wipe	Swing transport lock
Electro-hydraulic slide frame lock	Key start/stop with auxiliary position	Tires (2 front, 2 rear)
Engine enclosure	Left side doors with lock	Torque convertor
Fan, cooling and fan guard	Lifting eye, backhoe	Tilt steering column
Fast reversing shuttle, all gears	Lights, working (2 front, 2 rear)	Tool box, external
Flashing hazard, signal lights	Load sensing, variable flow system with axial piston pump	Throttles, hand and foot
Floor mat, rubber	Mirrors, external (2)	Transmission, four-speed synchromesh
		Transmission neutralizer switch
		Warning horn, front electric
		Water separator
		Working lights, 8

* Standard for less regulated countries, meets stage II EU Emission Directive 97/68/EC.

** Standard for regulated countries, meets stage IIIA EU Emission Directive 2004/26/EC

Optional Equipment

Optional equipment may vary. Consult your Caterpillar dealer for specifics.

Air conditioning	Guards	Seat belt 75 mm
Alarm, back up	AWD driveshaft	Stabilizer street pads
All Wheel Steer	Teeth (GP/MP)	Stick, extendable
Attachments, front loader	Rear lights, roading	Transport locks
General purpose bucket 1.0 m ³	Hydraulic valves, loader	Vandalism protection
Multi purpose bucket 1.03 m ³	3rd valve for GP/MP	Visor cab
1.03 m ³ with forks	Hydraulic valves (auxiliary)	
Attachments, backhoe buckets	Standard stick	
Quick Coupler (Mechanical)	Extendable stick	
Counterweights	Hydraulic lines	
Bumper	Hammer lines to stick	
Base	Quick disconnects	
Stackables	Lights	
Cutting edge, bolt on	Number plate, rear	
Single piece	Roading	
Two piece	Operators station	
Fenders, front, All Wheel Drive	Ride control	
	Rotating beacon	

442E Backhoe Loader

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Caterpillar dealer for available options.

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