



444E

Backhoe Loader

CAT®

Cat® 3054C DIT Diesel Engine

Gross Power (SAE J1995) at 2200 rpm	75 kW/102 hp
Net Power (ISO 9249) at 2200 rpm	73 kW/99 hp
Operating Weight	8810-10 700 kg

Backhoe Digging Depth

Standard Stick	
SAE Maximum	4673 mm
Maximum	5379 mm
Extendible Stick	
SAE Maximum	5923 mm
Maximum	6561 mm

Cat® 444E Backhoe Loader

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

Equal Size Tires

The 444E is equipped with Equal Size Tires as standard, giving excellent performance in soft underfoot conditions common to many worksites, for example agriculture. EST offers many unique advantages over non-EST BHL's.

- Improved flotation on soft ground
- Greater loader lift capability
- 1.3 m³ loader bucket
- More stable roading characteristics
- Less soil compaction
- More lift height

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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 all new 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 maximises 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
- 3 Cab options

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Backhoe Versatility and Performance

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

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AccuGrade

AccuGrade-integrated backhoe survey system option, designed by Cat to give accurate trench depth and grade guidance.

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Caterpillar's 444E – The Next Generation

Developed with over 20 years in the Backhoe Loader industry, the 444E is designed to exceed customer expectations.

More performance, versatility and comfort than ever before gives the 444E 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



Powertrain

The 444E has 40 kph roading speed as standard. The proven Cat 3054C engine delivers 99 hp net. Coupled with the Powershuttle or optional Autoshift transmission, it provides all the performance needed.

- Standard 3054C DIT engine (73 kW)
 - Engines meet EU directive 97/68/EC Stage II 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
 - Standard All Wheel Steer
- pg. 14**

Load Sensing, Flow Sharing Hydraulic System

- New 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. 15**

Serviceability

- New improved fully opening hood provides greater access to engine compartment
 - New Wear Pad adjustment design on Stabilizers and E-Stick for quick, easy maintenance
- pg. 16**

Pilot Hydraulic Joystick Controls

Excavator style Pilot Hydraulic Joystick Controls are fitted as standard to both the Loader and Hoe controls on all 444E Backhoe Loaders. The low effort controls are easy to use, reduce operator fatigue, and greatly improve visibility to the rear. Benefits include:

- Pod mounted for multi-positioning
 - Ergonomic, low effort joysticks
 - E-Stick thumb control on hoe joystick (if option is fitted)
 - In-cab Pattern Changer as standard
 - MP/Auxiliary controls on Loader joystick
- pg. 6**

Loader Versatility

The Cat Parallel Lift Loader.

- Powerful loader breakout force
 - 1.3 m³ loader bucket
 - 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. 17**



Features

Customer-driven improvements are designed into the 444E.

Lower Operating Costs

The 444E has improved Stabiliser 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 444E 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 444E 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.

Pattern Changer

The 444E has a standard in-cab backhoe pattern changer, allowing operators to choose between either Backhoe ISO, or Excavator SAE control patterns. This is now located within reach of the operator, ensuring the 444E will suit either type of backhoe operation.

187 Litre Fuel Tank

Responding to customers needs, the 444E is designed with a large 187 litre fuel tank. Along with the efficient Cat engine and hydraulic system, this ensures longer periods between fill ups and less inconvenience.

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 immobiliser 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.

Product Link

Product Link is a satellite machine positioning and information system which is available in two variants – PL121 SR and PL321 SR. The PL121 SR version enables machine tracking and HMU working hours feedback. The more advanced PL321 SR offers these features plus some machine diagnostic feedback. This system allows the owner to see where the machine is at all times, and enables preventative maintenance to be scheduled in advance. A valuable tool, particularly in Rental fleets.



Electro-Deposition Coating

Your 444E 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 444E will stay looking good for longer, ensuring optimum resale value.

Equal Size Tires (EST)

The 444E EST characteristics offer more jobsite opportunities for the operator

Improved Flotation

The 444E can operate in work areas that push the limits of standard unequal size tire machines. The high flotation and lower ground pressure offered by the tires allows the machine to work in very poor underfoot conditions, such as Greenfield construction sites, agricultural applications such as farm maintenance. This machine can get to areas which are off limits to a lot of other type of machine.

Increased Loader Performance

The 444E has excellent lift height, which coupled with the larger bucket and powerful breakout forces, enable the 444E to perform high productivity loading duties, such as hopper charging, bulk material transfer, grading and loading.

Tire Options

The 444E is equipped with 28" tires, in bias or radial ply variants. This allows the correct choice of tire to suit any application or budget.

Standard All Wheel Steer (AWS)

The machine is equipped with standard AWS, giving the machine an excellent turning circle and good manoeuvrability in tight spaces. AWS offers Circle Steer, Crab Steer and Independent Rear Manoeuvring modes.



Pilot Operated Joystick Controls

Standard on the 444E, 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 an optional thumb operated Extendable stick control, eliminating pedals on the floor.

Pattern Changer

The 444E has a standard hoe pattern changer within the cab. This allows the operator to choose between Caterpillar and Excavator patterns, with an easy push of a switch.

Stabilizer Controls

Pilot operated, remote stabiliser 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 three locked 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.



Loader Versatility

The 444E Loader now has even greater performance.

Powerful Loader Performance

The 444E Parallel Lift Loader has very powerful bucket and loader breakout force, giving faster cycle times and less effort. It also offers self levelling as standard, ensuring faster loading cycles. Available with either a 1.3 m³ General Purpose or Multi Purpose bucket, the 444E 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 provides torsional stiffness, needed when picking up irregular shaped heavy objects, in the loader bucket, or when grading with the loader. The large front tires provide increased stability when heavy loading. 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, when these options are fitted. All Wheel Steer control is located on the loader joystick.

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 444E is available 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 444E is available with an optional quick coupler, allowing greater loader versatility with a wide range of Caterpillar work tools.



Caterpillar AccuGrade – Integrated Backhoe Survey System

Reduce costs, while improving productivity, safety and control with AccuGrade.

AccuGrade-Integrated Backhoe Survey System

The Caterpillar AccuGrade system has been designed to eliminate labour intensive manual trench grade/depth checking, normally performed on site either by the operator himself, or additional labour. It is an operator guidance tool. It can improve backhoe productivity considerably, and can save the operator money through increased accuracy. Reducing material needed to fill the trench also has a positive effect on the environment. For operators working under tight deadlines, AccuGrade can help the operator work faster and with more efficiency.

When excavating, or grading banks and trenches, the AccuGrade system ensures perfect synchronisation between operator and machine, ensuring accurate cuts, perfect grades and faster cycle times.

The intuitive layout and controls make it easy for the operator to set his digging parameters and the Advisor screen provides the feedback to ensure the operator excavates to those parameters.

AccuGrade Options

AccuGrade Ready – Includes in-cylinder sensors, main wiring harness and component mounting hardware. This option is designed so that one Advisor screen can be swapped around a fleet of machines, as needed.

AccuGrade BHL Site Reference System – A fully functional system, including in-cab Advisor screen, inclinometer, swing sensor and installed software

Summary of Benefits

- Reduce jobsite labour, saving considerable expense
- Offers greater comfort, as the operator doesn't need to leave the cab
- Accurate excavation reduces infill material and removal of excess excavated material
- Accurate trenches mean less trench finishing work, or undercut trenches
- More productive, operator can work more efficiently with less disruptions
- Improved safety, as human labour is not checking grade or depth in the working area of the machine
- Integrated and factory installed. Integrated design ensures that there are no external components to damage on the machine, and this system is designed specifically for the Cat BHL

Work Tool Compatibility

The AccuGrade system can be configured to work with any of the current D/E series hoe buckets and couplers. Additional customer buckets can be programmed in, via the Advisor screen. The system will have a Favourites List, allowing the customer to quickly scroll through the ten most used work tools, for easy changes.

Advisor Hardware

The Advisor screen is the interface between the operator and the AccuGrade system. It comprises a visual display LCD screen, which guides the operator to work to set parameters using a combination of audible and visual warnings, including a grade/depth target line with bucket symbol, showing the operator where his bucket position is relative to his desired cut. It is removable for added security, and is transferable between other BHL's that are fitted with the AccuGrade Ready system. The Advisor screen is intuitive for all operators, allowing the machine to be used effectively in multi operator sites and Rental fleets.



Operator Station

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



The 444E Cab is Designed with Today's Operator in Mind

The all new E-Series cab is designed to provide maximum comfort, ease of operation, and overall style for today's demanding operator. The new 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.

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 stabiliser 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 444E has features, both standard and optional, that reduce vibration.

HVAC System

The 444E benefits from a new, 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 444E 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 444E 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 444E is available in 3 cab options, providing the best choices to suit individual operator needs. There is a basic, 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 new 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. The suspension seat is designed to meet the ISO 7096 specification to help maximize operator comfort.

Backhoe Performance

The new E-Series Backhoe improves performance and serviceability



Excavator-style Backhoe

The instantly recognisable 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 444E is available with the all new, improved extendable stick. Redesigned with the sliding outer section, this design keeps the wear pads out of the dirt, extending adjustment intervals. When adjustment is necessary, the accessible wear pad design takes minutes to adjust, without the need to disassemble the E-Stick. The sliding outer design allows excellent material clamping abilities whereby the E-Stick can still be retracted with a full bucket.

New Slider Frame and Swing System

The 444E is designed to make necessary maintenance easy to perform. The new 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 System

The 444E is available with Cat Cushion Swing System, which enables very fast trenching by damping the boom oscillation down when returning to trench with the hoe.

Increased Dig Depth

The 444E 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. Higher Bucket and Stick forces are designed to complement the new boom/stick geometry, making the 444E one of the best excavating BHL's in the industry.



Caterpillar Work Tools

Enhance the versatility of your 444E 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.



Power Train

444E 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 444E comes equipped with 40 kph Power-Shuttle transmission, improving road speed and providing better spacing between gear ratios. It utilises a constant mesh, synchronised, 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.

Larger Torque Converter

The 444E has a larger torque converter, which equates to more rimpull, improving loading performance considerably.

Standard All Wheel Steering (AWS)

The 444E is equipped 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 3054C Engine

The 444E is equipped with the standard 3054C DIT engine (73 kW). The 4 cylinder, 4 stroke direct injection diesel engine is equipped with standard glow plug starting for optimal cold weather performance. This provides reliable starting performance down to -26°C. The engine features a reliable gear driven water pump, for improved durability. All Caterpillar backhoe engines conform to EU directive 97/68/EC Stage II emission regulations.

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 new 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 444E 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.

New Flow Sharing Valves

The 444E also features new 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, such as when grading with the backhoe.

Hardware

The 444E 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 asset.



Reduced Maintenance

The 444E is equipped with a new 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 new 444E.

Boom and Stick Design

The all new 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 Stabiliser 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•SSM) 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 turbo, direct injection, four cylinder diesel engine.

Rated Power	2200 rpm
Gross – SAE J1995	75 kW/102 hp
Net – ISO 9249	73 kW/99 hp
Net – 80/1269/EEC	73 kW/99 hp
Net Torque Rise at 1400 rpm	31%
Bore	105 mm
Stroke	127 mm
Displacement	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.
- No de-rating required up to 3000 m.
- Meets Stage II EU Emission Directive 97/68/EC.

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.

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.

Axles

Standard All Wheel Drive and All Wheel Steer

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 50° steering angle for increased maneuverability.
- All Wheel Steer.
- Equal Size Tires.

All Wheel Steer

Fully hydrostatic steering.

Full hydrostatic steering controlled by a hand metering unit. There are three operator-selected modes to maximise 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	85 mm	85 mm
Stroke	48 mm	63 mm
Rod diameter	42 mm	42 mm

Turning Circle

Two wheel steer	19 370 mm
Circle-steer	12 940 mm
Independent rear-manoeuvring	11 960 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 tires.

	Power Shuttle (standard)	Autoshift (optional)
Forward	kph	kph
1st	6	6
2nd	10	9
3rd	20	20
4th	40	27
5th		41
Reverse		
1st	6	6
2nd	10	9
3rd	20	20
4th	40	

Operator Station

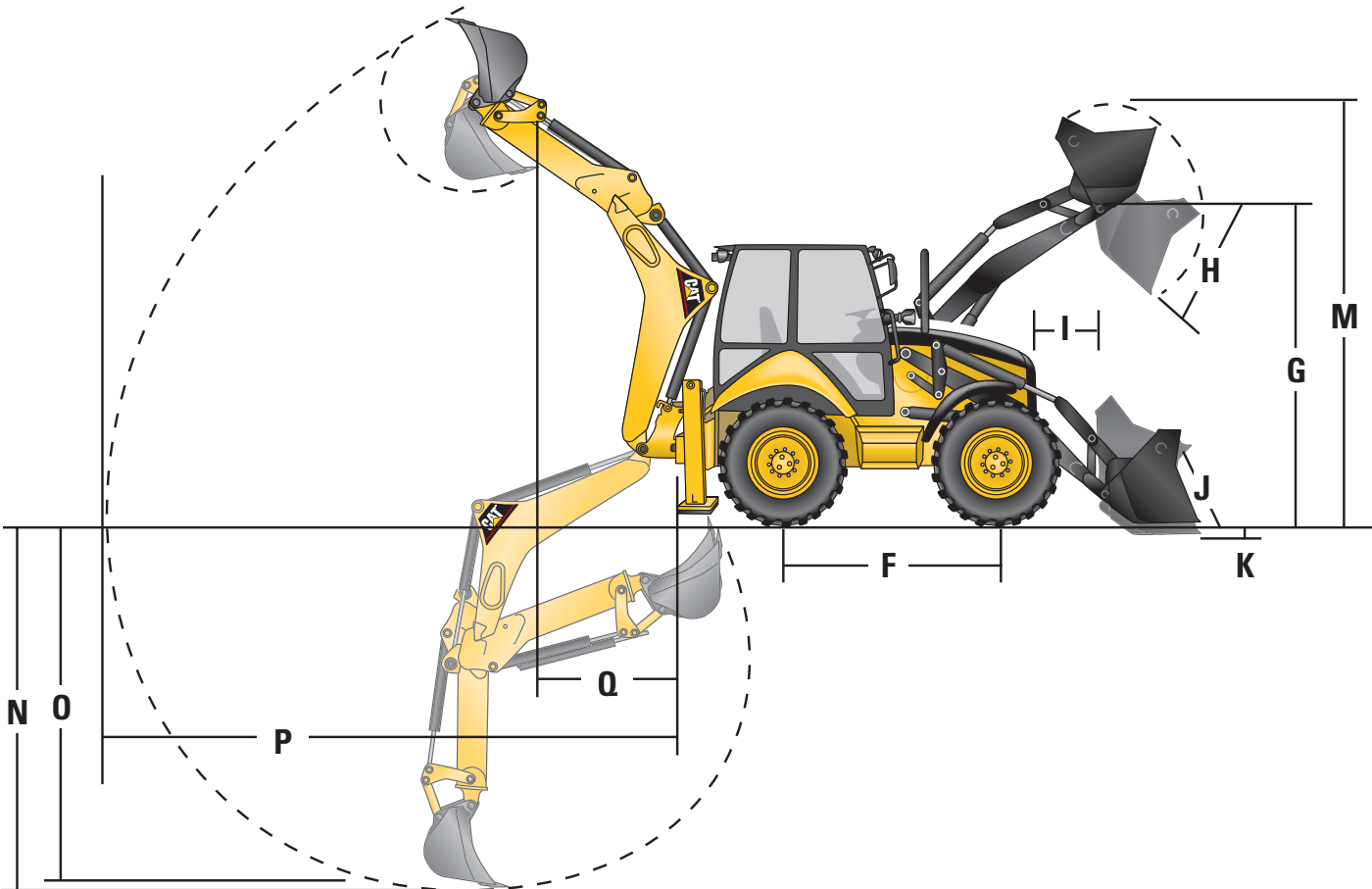
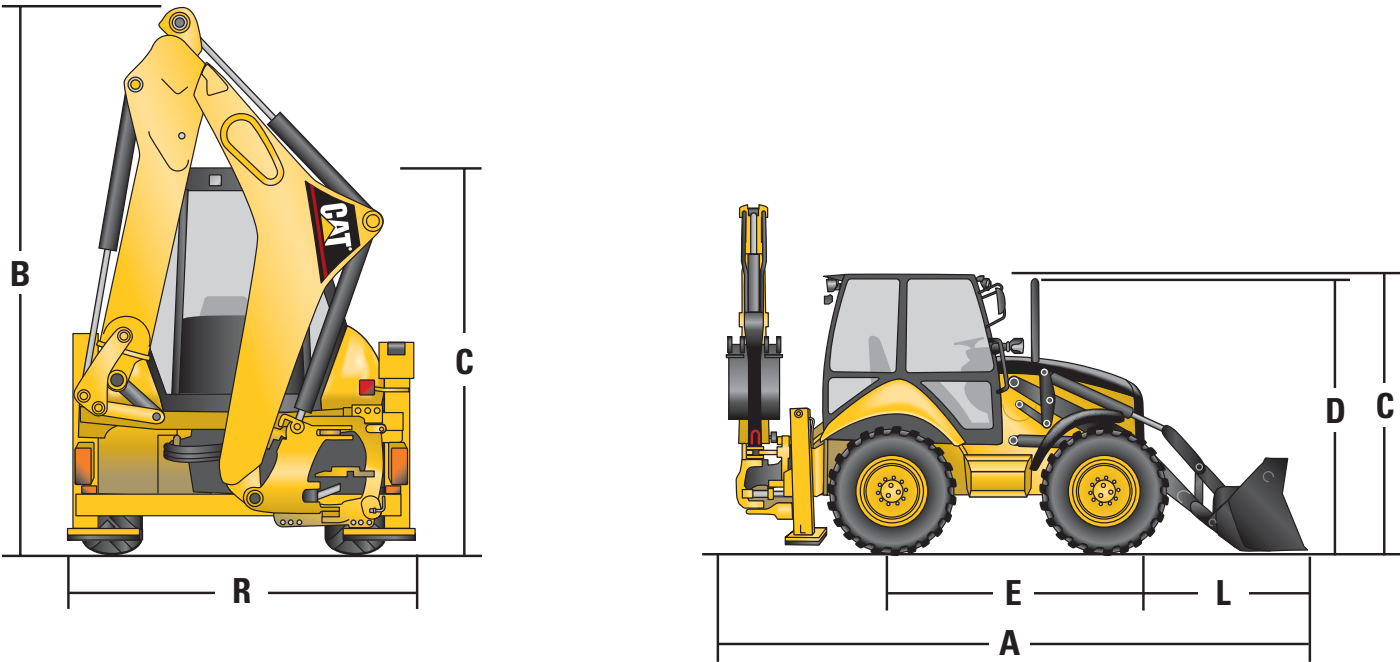
ROPS/FOPS is standard.

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.

Service Refill Capacities

	Liters		Liters
Cooling System		Rear Axle (Steerable)	
with air conditioning	15.9	Center Housing	16.0
Fuel tank	187.0	Center Housing Additive	0.5
Engine with oil filter	7.6	Wheel End/Final Drive (volume per slide)	1.7
Transmission		Front Axle (AWD)	
AWD	19.0	Planetaries	14.0
AWD (with boosted brakes)	20.0	Wheel End/Final Drive (volume per slide)	0.7
Transmission (Powershift)		Hydraulic System (min/max)	79/99
AWD	20.0	Hydraulic Tank	38
AWD (with boosted brakes)	20.5		

Dimensions – Parallel Lift Loader



Machine Dimensions		General Purpose	Multi Purpose	Multi Purpose with forks
A	Overall transport length	mm	6085	6115
	Overall length (loader on ground)	mm	6083	6113
	Overall transport length S-Stick	mm	6099	6119
	Overall transport length E-Stick	mm	6099	6117
B	Overall transport height (standard stick)	mm	3871	3871
	Overall transport height (extendible stick)	mm	3896	3896
	Overall width	mm	2322	2322
C	Height to top of canopy/cab	mm	2851	2851
D	Height to top of exhaust stack	mm	2908	2908
	Height to loader hinge pin (transport)	mm	397	393
	Ground clearance (minimum)	mm	375	375
E	Rear axle centerline to front grill	mm	2743	2743
	Front wheel tread gauge	mm	1914	1914
	Rear wheel tread gauge	mm	1914	1914
F	Wheel based (AWD)	mm	2200	2200

Dimensions and Performance – Loader Bucket		General Purpose	Multi Purpose	Multi Purpose with forks
	Capacity (SAE rated)	m ³	1.3	1.3
	Width	mm	2434	2434
	Lift capacity at maximum height	kg	3873	3524
	Breakout force	kN	64	60
	Tipping load at bucket load point	mm	6461	6091
G	Maximum hinge pin height	mm	3496	3496
H	Dump angle at full height	45°	45°	45°
	Dump height at maximum angle	mm	2720	2699
I	Dump reach at maximum angle	mm	848	869
J	Maximum bucket rollback at ground level	40°	40°	40°
K	Digging depth	mm	175	175
	Maximum grading angle	108°	107°	107°
	Width of dozer cutting edge	mm	–	2434
L	Grill to bucket cutting edge, carry position	mm	1499	1519
M	Maximum operating height	mm	4528	4520
	Jaw open maximum	mm	–	913
	Bucket jaw clamping force	kN	–	44
	Weight (not including teeth)	kg	462	809

Dimensions and Performance – Backhoe		Standard Stick	Extendible Stick	
			Retracted	Extended
N	Digging depth, SAE maximum	mm	4673	5923
	Digging depth, maximum	mm	5379	6561
O	Digging depth, 610 mm flat bottom	mm	4641	5891
P	Reach from swing pivot at ground line	mm	6063	7263
	Loading height	mm	4012	4577
Q	Loading reach	mm	1888	3030
	Swing arc	180°	180°	180°
	Bucket rotation	205°	205°	205°
R	Stabilizer width	mm	2368	2368
	Bucket dig force	kN	71	70
	Stick dig force	kN	44	32
	Total side shift travel	mm	1258	1258

Weights

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

	kg
Operating weight (range)	8810-10700
Standard machine weight	8898
ROPS canopy	-260
Autoshift	50
Air conditioning	48
Multi-purpose bucket 1.3 m ³	
With fold-over forks	1018
Without fold-over forks	858
Extendible 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
Extendible Stick	
General Purpose	485
Multi Purpose	235
Multi Purpose with fold-over forks	115

Total gross vehicle weight
not to exceed 10 700 kg.

Cab Features

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

Standard Equipment

Standard 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	Mirrors, external (2)
All Wheel Drive	Front grill with bumpers	Pilot stabilizer controls
All Wheel Steer	Front headlights	Power receptacle, 12 V (2)
Alternator, 120-amp, 12 volt	Front and rear windshield wipers	Power steering, hydrostatic
Antifreeze (to -37°C)	Gauges: Coolant temperature, fuel level, tachometer, hour meter, torque convertor, oil temperature	ROPS cab with heater, defroster, pressurizer and cab recirculating fan
Audible system fault alarm	Ground line fuel fill with 187 liters capacity	Seat belt, retractable (50 mm)
Backhoe, 4673 mm dig depth, side-shift, excavator-style backhoe, 2 lever control	Grouser style stabilizer shoes	Seat, air suspension with fabric or vinyl seat cover
Battery, maintenance free, 750 CCA	Hydraulic oil cooler	Spin-on fuel, engine, hydraulic and transmission oil filters
Boom, transport lock	Indicators: Air cleaner service, brake on, engine coolant, hydraulic oil level sight gauge, oil pressure	Starting system, thermal aid
Brace, lift cylinder	Instrument panel lights	Stop and tail lights (2)
Brakes, Kevlar disc, oil immersed	Key start/stop with auxiliary position	Swing transport lock
Caterpillar 3054C DIT (73 kW)	Left side doors with lock	Tires (2 front, 2 rear)
Coat hook	Lifting eye, backhoe	Torque convertor
Electro-hydraulic slide frame lock	Lights, working (2 front, 2 rear)	Throttles, hand and foot
Engine enclosure	Load sensing, variable flow system with axial piston pump	Transmission, four-speed synchromesh
Fan, cooling and fan guard		Transmission neutralizer switch
Fast reversing shuttle, all gears		Warning horn, front electric
Flashing hazard, signal lights		Water separator
Floor mat, rubber		

Optional Equipment

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

Air conditioning	Guards	Mirror, exterior rearview, large
Alarm, back up	AWD driveshaft	Operators station
Attachments, front loader	Teeth (GP/MP)	Canopy
General purpose bucket 1.3 m ³	Rear lights, roading	Ride control
Multi purpose bucket 1.3 m ³	High ambient cooler package	Rotating beacon
1.3 m ³ with forks	Hydraulic valves, loader	Seat belt 75 mm
Attachments, backhoe buckets	3rd valve for GP/MP	Stabilizer street pads
Quick Coupler (Mechanical)	Hydraulic valves (auxiliary)	Stick, extendible
Counterweights	Standard stick	Tilt steering column
Bumper	Extendible stick	Tool box, external
Base	Hydraulic lines	Transport locks
Stackables	Hammer lines to stick	Vandalism protection
Cutting edge, bolt on	Quick disconnects	Visor cab
Single piece	Lights	
Two piece	Number plate, rear	
Fenders, front, All Wheel Drive	Roading	
	Working, 8 lights	

444E Backhoe Loader

HEHB3128 (11/2005) hr

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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