

# 434E Mechanical Backhoe Loader



<b>Cat® 3054C DIT Diesel Engine</b>	<b>Standard</b>	<b>Optional</b>
Gross Power (SAE J1995) at 2,200 rpm	68.5 kW/93 hp	74.5 kW/101 hp
Net Power (ISO 9249) at 2,200 rpm	65 kW/89 hp	71 kW/97 hp
<b>Cat® C4.4 Turbocharged After Cooled Engine</b>	<b>Standard</b>	<b>Optional</b>
Gross Power (SAE J1995) at 2,200 rpm	70 kW/95 hp	74.5 kW/101 hp
Net Power (ISO 9249) at 2,200 rpm	67 kW/91 hp	71 kW/97 hp
Operating Weight	8370-10 700 kg	

## **Backhoe Digging Depth**

<b>Standard Stick</b>	
SAE Maximum	4364 mm
Maximum	4919 mm
<b>Extendable Stick</b>	
SAE Maximum	5357 mm
Maximum	5863 mm



## 434E Mechanical Features

### Versatility

*Being easily adaptable to work with a variety of Cat Work Tools ensures high machine utilization on any working site.*

### Performance

*Class leading all around performance and ease of operation ensures high levels of efficiency and maximum productivity.*

### Comfortable Operator Station

*Spacious and quiet, this world-class environment enables the operator to productively focus on the task at hand with the minimum of effort.*

### Service

*Caterpillar's principles of design and manufacturing techniques provide maximum uptime with outstanding durability and service life.*

### Value

*With excellent performance, reliability, durability, quality and residual values the Cat Backhoe Loader provides the owner with a prudent investment decision.*



## Contents

Features . . . . .	3
Equal Size Tires . . . . .	4
Work Station . . . . .	5
Operator Comfort . . . . .	6
Loader Versatility . . . . .	7
Backhoe Performance . . . . .	8
Hydraulics . . . . .	9
Work Tools . . . . .	10
Power Train . . . . .	11
Serviceability . . . . .	12
Customer Support . . . . .	12
Specifications . . . . .	13
Standard and Optional Equipment . . . . .	18

**Cat 434E – A highly productive Backhoe Loader developed with over 20 years experience in the Backhoe Loader industry, the 434E is designed to exceed customer expectations. More performance, versatility and comfort than ever before gives the 434E 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.**

# Features

Customer driven improvements are designed into the 434E Mechanical.



## **Lower Operating Costs**

The 434E has an adjustment system that is simple to adjust ensuring easy maintenance of the Stabilizer and E-Stick a wear pads. This means less machine downtime and more convenience for the operator providing low operating costs.

## **All Wheel Braking**

All Wheel Braking is standard on all 434E Backhoe loaders. When driving in two wheel drive, applying the brakes engages four wheel drive. Releasing the brakes returns the transmission to two wheel drive. This effective system works well in hazardous, slippery or steep surfaces. Braking modes are controlled by an easily accessible All Wheel Drive Switch improving braking effectiveness and helps reduce tire wear.

## **Improved Weight Distribution**

The 434E has been designed with improved weight distribution. The design coupled with a slightly longer wheelbase ensures optimal balance and handling, particularly when roading. This is achieved with no loss in turning circle.

## **Large Fuel tank**

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

## **Cat Immobilizer System**

Machine theft has serious repercussions for your business, such as loss of business, higher insurance costs and inconvenience. The 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 434E has been protected by an undercoat of electrodeposited (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 434E will stay looking good for longer, ensuring optimum resale value.

## **Excavator controls**

The 434E Mechanical is offered with a choice of excavator controls: Backhoe (SAE), Excavator (ISO) or Universal controls (X pattern). This ensures the 434E Mechanical will suit any type of operator.





# Equal Size Tires

Characteristics which offer more job site opportunities for the operator.



## **Improved Flotation**

The 434E 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 and agricultural applications such as farm maintenance. This machine can get to areas which are off limits to a lot of other type of machine increasing productivity and machine utilization.

## **Increased Loader Performance**

The 434E has excellent lift height, which coupled with the large bucket and powerful breakout forces, enable the 434E to perform high productivity loading duties, such as hopper charging, bulk material transfer, grading and loading.

## **Tire Options**

The 434E is available with either 24" or 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 434E is equipped with AWS system, enabling 2WS, Circle Steer, or Crab Steer to be selected providing an excellent turning circle and good maneuverability for working in confined working areas.



# Work Station

The E-series cab. Comfort, Visibility, Style – Designed In!

The 434E Cab is designed with today's operator in mind. The E-Series cab is designed to provide maximum comfort, ease of operation and with modern styling meets the requirements of today's demanding operator. The design incorporates curved glass for improved interior space and visibility. A wide cab provides a spacious environment for better performance when turning the seat from one mode of operation to the other. Cab comfort is enhanced with the first-class Cat air suspension seat, reducing fatigue.

An easy to open single rear piece window provides the operator with excellent ventilation and superb visibility. The rear wiper easily cleans a large area of the rear screen to ensure excellent 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 remote stabilizer controls, large adjustable vents throughout the cab, and clear gauges provide the operator with a comfortable operating environment designed to reduce operator fatigue and increase productivity.



# Operator Comfort

The working environment has been designed with the operator in mind.



## 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 434E has features, both standard and optional, that reduce vibration.

## Operator Controls

Optimal cab ergonomics are vital to assist the operator in their quest for best productivity. Pressure compensated, well placed levers ensure low efforts and good controllability for maximum productivity.

## HVAC System

The 434E benefits from an optional, powerful air conditioning system, which with good ventilation to the operator, ensures the operator stays cool in the highest of working temperatures. The ventilation system also provides plenty of demisting, defrosting and heating capability.

## Work Lights

The 434E has adjustable front and rear work lights. This allows the operator to direct the light wherever needed, providing maximum illumination to the work area whatever the ambient light conditions.

## Cab Air Filter

The 434E has an easy access cab air filter, situated within the right hand rear fender. The cab air intake is positioned high up to minimize dust intake into the air filter.

## Cab

The 434E is available in 2 cab options, providing the best choices to suit individual operator needs.

## Cab Mounts

The cab is attached to the mainframe with resilient mounts, reducing vibration and sound providing the operator with an all around comfortable working environment.

## Cat Suspension Seat

The major interface between the machine and the operator is optimal, and the Cat air suspension seat provides the operator with a comfortable working platform to ensure high levels of productivity with the minimum of fatigue.





# Loader Versatility

The 434E Loader now has even greater performance.

## **Powerful Loader Performance**

The 434E Parallel Lift Loader offers self levelling as standard, ensuring faster loading cycles. Designed with performance in mind the 434E has high breakout forces enabling the operator to easily fill the bucket in toughest of ground conditions while also providing safe lifting of any palletized load. Available with either a General Purpose or Multi Purpose bucket, the 434E can be matched to your needs precisely. Work tool visibility is excellent with the narrow sloping hood and divergent loader arms allowing a clear line of sight to the bucket edges. A large torque tube provides torsional stiffness, needed when grading or picking up irregular shaped heavy objects with the loader bucket.

## **Loader Control**

The loader Control Lever is ergonomically placed for operator comfort, and controls the multi-purpose bucket and auxiliary hydraulics 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 434E 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 automatically when lowering the arms. By the time the loader arms have been lowered to ground level, the bucket is in the correct position ready for the next load.



# Backhoe Performance

The E-Series Backhoe improves performance and serviceability.



## Excavator-style Backhoe

The Cat excavator style boom has more than just good looks. Whether close-up truck loading on a single road carriageway, or digging over obstacles such as walls, the excavator boom outperforms the rest. Combine the versatility with the powerful breakout forces, the controllability of the load sensing, flow-sharing hydraulic system and the 434E is capable of producing high levels of productivity with the minimum of operator effort. The boom is a narrow design, ensuring maximum visibility to the work tool.

## Performance

Designed with performance in mind the 434E excavator has high stick and bucket breakout forces enabling the operator to easily dig in toughest of ground conditions.

## Extendable Stick

The 434E is available with an extendable stick that increases dig depth and reach capability increasing the machines versatility and utilization. A sliding inner section design keeps the wear pads out of the dirt, extending adjustment and replacement intervals. When wear pad adjustment is necessary the adjustment bolts are easy to access taking minutes to adjust, without the need to disassemble the E-Stick. Auxiliary lines, for operating work tools, have been routed so that they are protected from damage when working in the narrowest of trenches.

## Slider Frame and Swing Frame

The 434E 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.

## Cat Cushion Swing

The 434E is equipped with Cat Cushion Swing, which enables very fast trenching by damping the boom oscillation down when returning to trench with the backhoe.







# Hydraulics

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

## Flow Sharing Valves

The 434E 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, such as grading with the backhoe.

## Hardware

The 434E is equipped with a highly efficient variable displacement piston pump. Reliable high performance hydraulic hose is constructed from two strong steel braided layers and O-ring face seal fittings provides a robust system ensuring excellent durability and resistance to damage from pressure spikes and hydraulic pulsing.

## 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 434E has a load-sensing, closed center hydraulic system, which closely matches power and flow to the demand needed by the job in hand. So whether you're in full trenching mode, or delicately digging around services, you are in total control.

In applications such as loading and carrying, speed is important, and the 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 power losses enabling more power to be available for rimpull – providing better loading and roading performance increasing productivity.



# Work Tools

Enhance the versatility of your 434E, with a wide choice of tools on offer to suit your needs.



## Backhoe Buckets

Caterpillar offers a huge variety of backhoe buckets to meet your requirements, including:

- Standard Duty Bucket. Used in easy to penetrate, low impact, moderately abrasive materials.
- 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

Cat backhoe buckets offer superior durability with the following features:

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

## Sizes

Work tools are available in a full range of sizes, from a 228 mm Cribbing bucket for cable trenching, a range of Ditch Cleaning buckets, right up to large capacity 914 mm buckets for mass excavation.

## Quick coupler – Loader and Backhoe

A hydraulic quick coupler is available for the loader, and a mechanical quick coupler option is available for the backhoe. 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:

- | Backhoe                     | Loader           |
|-----------------------------|------------------|
| • H65 Hydraulic Hammer      | • Angle Broom    |
| • Auger                     | • Pickup Sweeper |
| • Vibratory Plate Compactor |                  |
| • Cold Planer               |                  |

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





# Power Train

434E has a 40 km/h transmission as standard – less time on the road, more time on the job site.

## **Cat Engine**

The 434E is available with either the 3054C turbocharged engine that meets Stage II emission regulation EU Directive 97/68/EC or the C4.4 turbocharged after cooled engine that meets Stage IIIA EU emission Directive 2004/26/EC. A choice of power rating enables the performance of the machine to be matched to customer needs. All engines are reliable 4 cylinder, 4 stroke direct injection diesel engines equipped with standard glow plug for optimum cold weather performance.

This provides reliable starting performance down to  $-18^{\circ}$  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 air cleaner with an integral pre-cleaner and automatic integrated dust ejection system extends the life of the air filter life when working in dusty conditions reducing service time and costs.

## **Axles and Brakes**

The heavy duty Cat 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 for good maneuverability in confined working areas.

## **40 km/h Power-Shuttle Transmission**

The 434E comes equipped with 40 km/h 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 level on the steering column is placed for easy direction changes on the move, and the gear selection is from the floor mounted shift lever.

## **Diff-Lock**

A manually operated differential lock in the rear axle is fitted as standard providing maximum traction in adverse ground conditions.

## **Optional Power Shift Transmission**

The optional power shift transmission enables the correct gear to be selected more easily than a conventional power shuttle transmission reducing fatigue and increasing productivity. Hydraulic clutch pack modulation provides smooth take up providing the operator with a more comfortable drive over all types of terrain. The power shift transmission provides manual selection of four forward and three reverse gears. 5th gear is automatically selected to achieve the maximum road speed of 40 km/h. There is no floor mounted shift lever, so the operator has more floor space and improved access through the right hand door.

# Serviceability

Lower operating costs mean a better return on your asset.

## Reduced Maintenance

The 434E 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 434E.

## 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 Stabilizers legs are also externally adjustable, reducing machine downtime 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 the 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 Cat S•O•S<sup>SM</sup>. 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.



# Customer Support

Low operating costs with your dealers 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 a Cat Reman facility, using genuine parts and skilled technicians. Reman parts are guaranteed for 1 year.





# 434E Mechanical Specifications

Engine	Cat 3054C*	C4.4**
Aspiration	Turbocharged	Turbocharged
Rated power (standard)	2,200 rpm	2,200 rpm
Gross – SAE J1995	68.5 kW/93 hp	70 kW/95 hp
Net – ISO 9249	65 kW/89 hp	67 kW/91 hp
Net – 80/1269/EEC	65 kW/89 hp	67 kW/91 hp
Rated power (optional)	2,200 rpm	2,200 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 1,400 rpm		
70 kW/95 hp	—	30%
68.5 kW/93 hp	33%	—
74.5 kW/101 hp	26%	23%
Peak torque rise at 1,400 rpm		
70 kW/95 hp	—	395 Nm
68.5 kW/93 hp	395 Nm	—
74.5 kW/101 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 flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- Engine will operate up to a maximum altitude of 3000 m.

\* Stage II EU Emission Directive 97/68/EC. For less regulated countries.

\*\* Stage IIIA EU Emission Directive 2004/26/EC. For regulated countries.

## 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.
- Poly vee front end and auxiliary drive belt that is automatically tensioned for long life reducing operating costs.
- 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 torque at low engine speeds for better machine performance.
- Dry type, axial seal air cleaner with automatic, integrated dust ejection providing more efficient preseparation.
- Direct electric 12 volt starting and charging system with 750 CCA group 31 maintenance free battery.

## 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 19° steering angle for increased maneuverability.
- All Wheel Steer.
- 24" or 28" Equal Size Tires

## All Wheel Steering

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

- Two wheel steer mode
- Circle-steer mode
- Crab steer

Type	Hydrostatic	
Power Steering	Front	Rear
Cylinder, one (1) double-acting (AWD)		
Bore	85 mm	85 mm
Stroke	48 mm	63 mm
Rod diameter	42 mm	42 mm
Turning circle		
Two wheel steer	16 550 mm	
Circle-steer	11 770 mm	

## 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 brake pedals can be interlocked for roading.
  - Parking/secondary brakes are independent of the service brake system. Parking brake is mechanically applied through a hand lever located in the right side console.
- Meets ISO 3450:1996 requirements.

# 434E Mechanical Specifications

## Service Refill Capacities

	Liters
Cooling system	25.0
Fuel tank	160.0
Engine with oil filter	7.6
Transmission	
AWD	18.5
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	14.0
Wheel end/Final drive (volume per side)	0.7
Hydraulic system	79/99
Hydraulic tank	40

## 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	125 l/min at 2200 rpm
System pressure	227 bar

## 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 prevents 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 placed, hand operated lever provides instant direction changes between forward and reverse through power hydraulic clutches.

### Torque convertor

Single stage, 2.64 stall ratio

### Travel Speeds

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

	Power Shuttle (standard)	Power Shift (optional)
	km/h	km/h
Forward		
1st	6	5
2nd	9	9
3rd	18	18
4th	40	25
5th	—	38
Reverse		
1st	6	5
2nd	9	11
3rd	18	24
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.



# 434E Mechanical Specifications

## Weights

Standard single tilt loader, with  
1.15 m<sup>3</sup> general purpose loader bucket,  
610 mm standard duty backhoe bucket,  
80 kg operator and a full fuel tank.

	kg
Operating weight (range)	8370 – 10 700
Standard machine weight	8460
ROPS canopy	-260
Autoshift	50
Air conditioning	48
All wheel drive	106
Multi purpose bucket 1.15 m <sup>3</sup>	
With fold-over forks	950
Without fold-over forks	791
Extendable stick (excludes front counterweight)	230
Counterweights	
Base	115
Stackables – One	235
Stackables – Max	485

## Minimum Counterweight Recommendations:

Power train AWD	
General purpose	250
Multi purpose	Base
Multi purpose with fold-over forks	Base
Extendable stick	
Power train AWD	
General purpose	485
Multi purpose	235
Multi purpose with fold-over forks	115

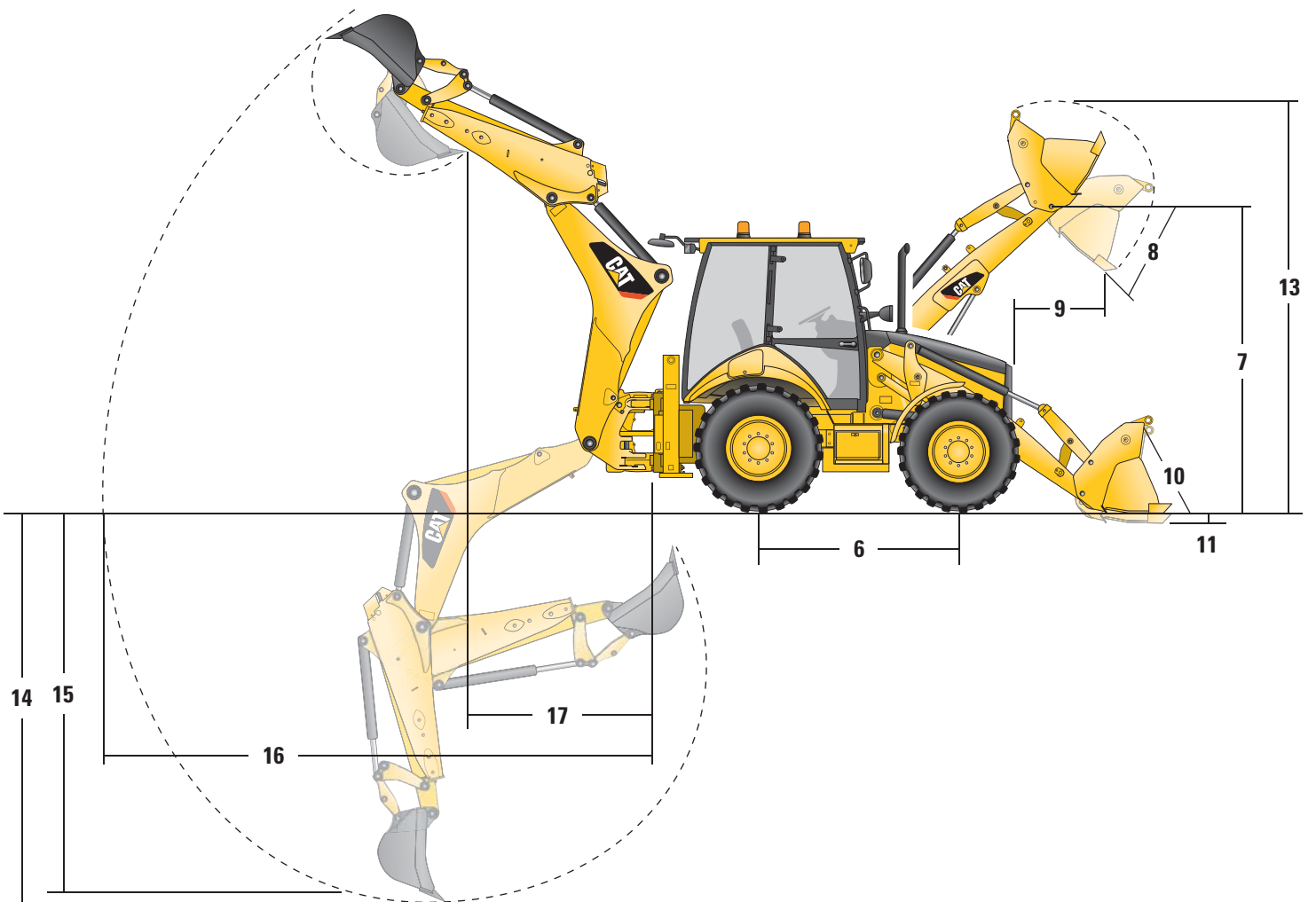
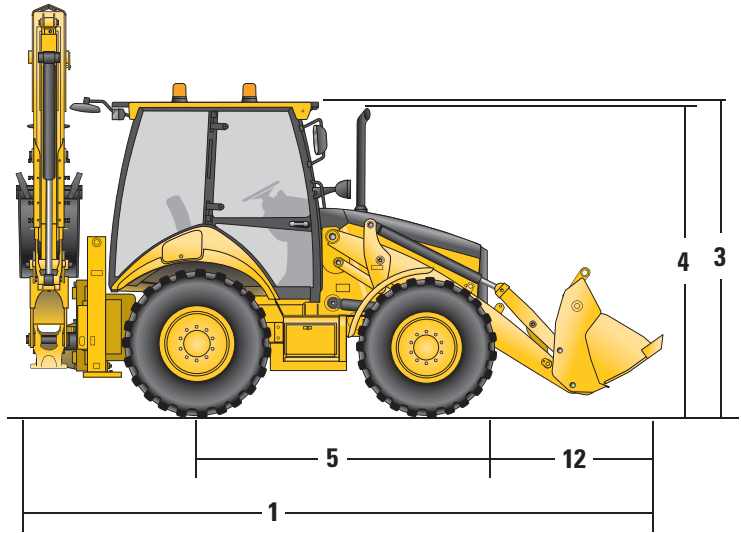
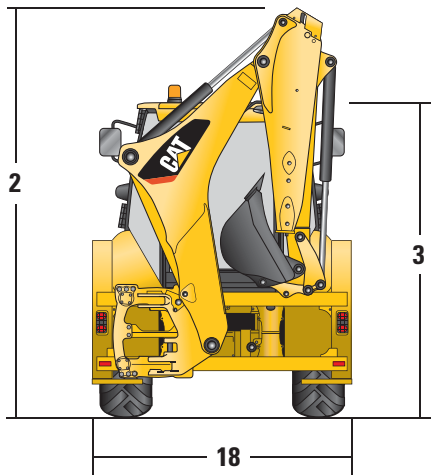
## Cab Features

RH opening door with opening window	√
LH opening door with opening window	√
2 rear side fixed windows	√
Standard 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	√
Sun visor	√
Steering wheel knob	√
Vandal guard	√
Cab heater	√
Cab air conditioning	optional
Seat belt (50 mm)	√

## Canopy Features

Glazed front screen and wiper	√
LH storage console	√
8 working lights	√
Standard air suspension seat	√
Floor mat	√
Tilt steering column	√
Vandal guard	√
Rear view mirror	√
Individual display gauges	√
Seat belt (50 mm)	√

# 434E Mechanical Specifications





# 434E Mechanical Specifications

## Machine Dimensions

		General Purpose	Multi Purpose	Multi Purpose with Forks
1	Overall length (loader on ground) S-Stick	mm	6120	6099
	Overall length (loader on ground) E-Stick	mm	6120	6099
	Overall transport length S-Stick	mm	6120	6105
	Overall transport length E-Stick	mm	6120	6105
2	Overall transport height S-Stick	mm	3623	3623
	Overall transport height E-Stick	mm	3647	3647
	Overall width (standard)	mm	2368	2368
3	Height to top of cab/canopy	mm	2801	2801
4	Height to top of exhaust stack	mm	2733	2733
	Height to loader hinge pin (transport)	mm	402	402
	Ground clearance (minimum)	mm	325	325
5	Rear axle centerline to front grill	mm	2743	2743
	Front wheel tread gauge	mm	1914	1914
	Rear wheel tread gauge	mm	1914	1914
6	Wheel based (AWD)	mm	2200	2200

## Dimensions and Performance – Loader Bucket

		General Purpose	Multi Purpose	Multi Purpose with Forks
	Capacity (SAE rated)	m <sup>3</sup>	1.15	1.15
	Width	mm	2434	2434
	Lift capacity at maximum height	kg	3259	3043
	Breakout force	kN	56	55
	Tipping load at bucket load point	kg	5974	5596
7	Maximum hinge pin height	mm	3442	3442
8	Dump angle at full height		45°	45°
	Dump height at maximum angle	mm	2666	2681
9	Dump reach at maximum angle	mm	903	889
10	Maximum bucket rollback at ground level		41°	41°
11	Digging depth	mm	229	229
	Maximum grading angle	mm	107°	107°
	Width of dozer cutting edge	mm	—	2434
12	Grill to bucket cutting edge, carry position	mm	1575	1560
13	Maximum operating height	mm	4339	4409
	Jaw open maximum	mm	—	864
	Bucket jaw clamping force	kN	—	56
	Weight (not including teeth)	kg	438	744

## Dimensions and Performance – Backhoe

			Extendable Stick		
			Standard Stick	Retracted	Extended
14	Digging depth, SAE maximum	mm	4364	4368	5357
	Digging depth, maximum	mm	4919	4920	5863
15	Digging depth, 610 mm flat bottom, SAE maximum	mm	4321	4325	5319
	Digging depth, 610 mm flat bottom, maximum	mm	4890	4893	5839
16	Reach from swing pivot at ground line	mm	5660	5666	6590
	Loading height	mm	3759	3854	4398
	17 Loading reach	mm	1769	1688	2586
	Swing arc		180°	180°	180°
	Bucket rotation		205°	205°	205°
	18 Stabilizer width	mm	2368	2368	2368
	Bucket dig force	kN	63	63	63
	Stick dig force	kN	35	36	26
	Total side shift travel	mm	1258	1258	1258

## Standard Equipment

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

Air cleaner, dry type, axial seal with pre-cleaner and filter condition indicator  
All Wheel Drive  
All Wheel Steer  
Alternator, 120-amp, 12 volt  
Antifreeze (to -37° C)  
Audible system fault alarm  
Backhoe, 4364 mm dig depth, side-shift, excavator-style backhoe  
Battery, maintenance free, 750 CCA  
Boom, transport lock  
Brace, lift cylinder  
Brakes, Kevlar disc, oil immersed  
Cat 3054C engine\* (68.5 kW) or Cat C4.4 engine\*\* (70 kW)  
Coat hook  
Electro-hydraulic slide frame lock  
Engine enclosure  
Fan, cooling and fan guard  
Fast reversing shuttle, all gears  
Flashing hazard, signal lights  
Floor mat, rubber

Front axle, pendulum mount  
Front grill with bumpers  
Front headlights  
Gauges: Coolant temperature, fuel level, tachometer, hour meter  
Ground line fuel fill with 187 liters capacity  
Grouser style stabilizer shoes  
High ambient cooler package  
Hydraulic oil cooler  
Indicators: Air cleaner service, brake on, engine coolant, hydraulic oil level sight gauge  
Instrument panel lights  
Intermittent front and rear wash/wipe  
Key start/stop with auxiliary position  
Lifting eye, backhoe (Non EU countries only)  
Lights, working (4 front, 4 rear)  
Load sensing, variable flow system with axial piston pump

Mirrors, external (2)  
Power receptacle, 12 V (2)  
Power steering, hydrostatic  
ROPS cab with heater, defroster, pressurizer and cab recirculating fan  
Seat belt, retractable (50 mm)  
Seat, air suspension with fabric seat cover  
Self canceling directional indicators  
Spin-on fuel, engine, hydraulic and transmission oil filters  
Starting system, thermal aid  
Stop and tail lights (2)  
Swing transport lock  
Tires (2 front, 2 rear)  
Torque convertor  
Throttles, hand and foot  
Transmission, four-speed synchromesh  
Transmission neutralizer switch  
Warning horn, front electric  
Working 8 lights  
Water separator

## Optional Equipment

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

Air conditioning  
Alarm, back up  
Attachments, front loader  
  General purpose bucket 1.15 m<sup>3</sup>  
  Multi purpose bucket 1.15 m<sup>3</sup> or 1.15 m<sup>3</sup> with forks  
Attachments, backhoe buckets  
  Quick Coupler (mechanical)  
Cat 3054C DIT\* (74.5 kW) engine  
Cat C4.4\*\* (74.5 kW) engine  
Counterweights  
  Bumper  
  Base  
  Stackables  
Cutting edge, bolt on  
  Single piece  
  Two piece

Fenders, front  
Guards  
  AWD driveshaft  
  Teeth (GP/MP)  
  Rear lights, roading  
Hydraulic valves, loader  
  3rd valve for GP/MP  
Hydraulic valves (auxiliary)  
  Standard stick  
  Extendable stick  
Hydraulic lines  
  Hammer lines to stick  
Quick disconnects  
Lights  
  Number plate, rear  
  Roading

Mirror, exterior rearview, large  
Object handling installation, including lifting eye, boom and stick locks, audible and visual warning system  
Operators station  
  Canopy  
Power shift transmission  
Powered sideshift  
Ride control  
Rotating beacon  
Stabilizer street pads  
Stick, extendable  
Tilt steering wheel  
Tool box, external  
Transport locks  
Vandalism protection  
Visor cab

\* 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.



# Backhoe Loader E-Series

Complete product range.

<b>422E</b>	
<b>Engine Power (Gross)</b>	<b>56.6 kW/77 hp</b>
Control type	Mechanical
Steer mode	Two Wheel Steer
SAE maximum dig depth (standard stick)	4.2 m
Loader bucket capacity	1.0 m <sup>3</sup>
Loader breakout force	33 kN
Stick tearout force	35 kN
Bucket tearout force	63 kN
Hydraulic oil flow	125 l/min



	<b>428E</b>	<b>432E</b>	<b>442E</b>
<b>Engine Power (Gross)</b>	<b>68.5 kW/93 hp</b>	<b>68.5 kW/93 hp</b>	<b>74.5 kW/101 hp</b>
Control type	Mechanical	Pilot	Pilot
Steer mode	Two Wheel Steer	Two Wheel Steer	Two Wheel Steer
SAE maximum dig depth (standard stick)	4.2 m	4.4 m	4.6 m
Loader bucket capacity	1.0 m <sup>3</sup>	1.0 m <sup>3</sup>	1.0 m <sup>3</sup>
Loader breakout force	55 kN	55 kN	55 kN
Stick tearout force	35 kN	41 kN	46 kN
Bucket tearout force	63 kN	63 kN	63 kN
Hydraulic oil flow	125 l/min	156 l/min	156 l/min



	<b>434E Mechanical</b>	<b>434E Pilot</b>	<b>444E</b>
<b>Engine Power (Gross)</b>	<b>68.5 kW/93 hp</b>	<b>74.5 kW/101 hp</b>	<b>74.5 kW/101 hp</b>
Control type	Mechanical	Pilot	Pilot
Steer mode	Equal Size Wheel	Equal Size Wheel	Equal Size Wheel
SAE maximum dig depth (standard stick)	4.3 m	4.3 m	4.6 m
Loader bucket capacity	1.15 m <sup>3</sup>	1.15 m <sup>3</sup>	1.3 m <sup>3</sup>
Loader breakout force	56 kN	56 kN	55 kN
Stick tearout force	35 kN	41 kN	41 kN
Bucket tearout force	63 kN	63 kN	63 kN
Hydraulic oil flow	125 l/min	156 l/min	156 l/min



# 434E Backhoe Loader

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HEHB4296-01 (09-2010)

