

422F2

Backhoe Loader



Cat® 3054C DIT Diesel Engine

Gross Power ISO 14396

Net Power ISO 9249

Weights

Operating Weight

Standard

56.5 kW

52.9 kW

Optional

68.5 kW

64.9 kW

Backhoe Digging Depth

Digging Depth, SAE Maximum

Standard Stick

E-Stick Retracted – 4.26 m

E-Stick Extended – 4.26 m

4241 mm

4244 mm

5243 mm

422F2 Features

Product Link™

A feature that really allows you to get the most from your Cat Backhoe Loader; view important machine information when you are away from the machine, or even track the machines location. The Product Link option will really help you to get the highest possible productivity from your machine and stay in control.

Cab and Controls

The introduction of the new cab to the Cat Backhoe Loader provides a comfortable and easy to use operator environment. With the ability to customize your experience, the all new cab allows the operator to perform in greater comfort and enjoy the latest technologies available on today's generation of backhoe loaders.

High Ambient Cooling

The 422F2 is equipped with a high ambient engine cooling package, allowing the machine to operate in temperatures up to 50° C.

Electro-Deposition Coating

At Caterpillar we believe in built in quality. The 422F2 has been treated with an electro deposited (E-Coat) primer which completely seals the metallic components of the machines structure. This provides superior protection from damage and the resulting corrosion. The high solids polyurethane top coat provides an unbeatable finish which means your machine looks better for longer.

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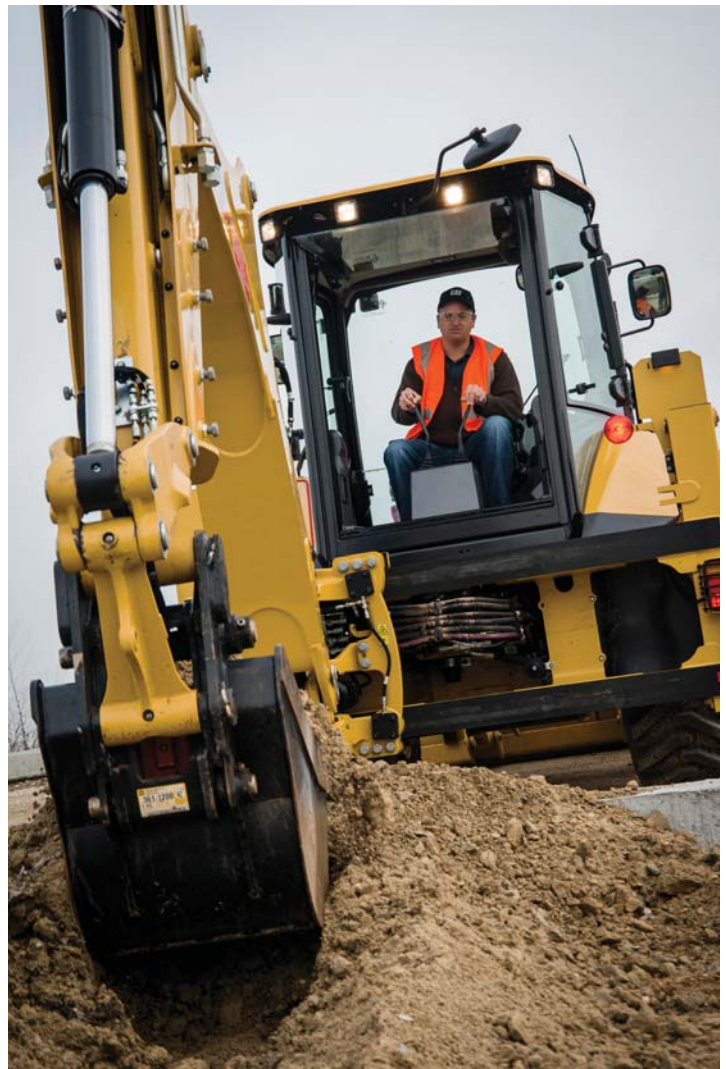


Caterpillar has a well proven history in the construction equipment industry and has been producing the highest quality machines for 90 years, making progress possible and driving positive and sustainable change on every continent. For 30 years Caterpillar has produced the British built backhoe loader. From the A Series to this new F2 Series we have done our best to produce a machine that is designed with the operator in mind, providing reliability, power and a quality operator environment. We have combined 30 years of passion, expertise and experience to create the latest Backhoe Loader offering from Caterpillar, the F2.

Operator Station

Seen, Not Heard





The Class Leading Operator Environment Just Got Better

- 74 dB(A) internal sound level across the range no matter the engine option.
- Heated seat to keep the operator warm no matter what the conditions are.
- Fantastic layout of switches and controls provide an ergonomic operating environment.
- A redesigned roof cab provides the operator with superior visibility to the loader at maximum dump height, from the comfort of the seat.
- Secure your investment with the Cat Backhoe Loader security system designed specifically for the Cat Backhoe Loader, this device will keep your investment secure, while providing easy access for up to 25 specified people.
- The loader control now gives you more power at your fingertips: Differential lock, transmission neutralizer and auxiliary control.
- The cab design now incorporates a flat profile, and flat glass to ensure replacement and security is as easy as possible.

The 422F2 is fitted with mechanical controls providing low effort operation, with the ability to choose between ISO (Excavator) or SAE (Backhoe) control patterns. Providing easy and safe operation for operators of any experience or ability.

The Proven Cat Engine Delivers Reliable Power on Demand

- The choice of a 56.5 kW or 68.5 kW EU Stage II power unit provides excellent performance for all applications.
- Outstanding fuel economy, contributes to low owning and operating costs.
- A robust power pack, this engine has been seen in many divisions of Cat for a number of years and remains today a very popular option, delivering power when it is needed most.
- Proven world-class manufacturing and core engine designs ensure reliability, quiet operation, and many hours of productive life.

Axles and Differential Lock

The F2 Series of Cat Backhoe Loaders boast heavy duty Cat axles

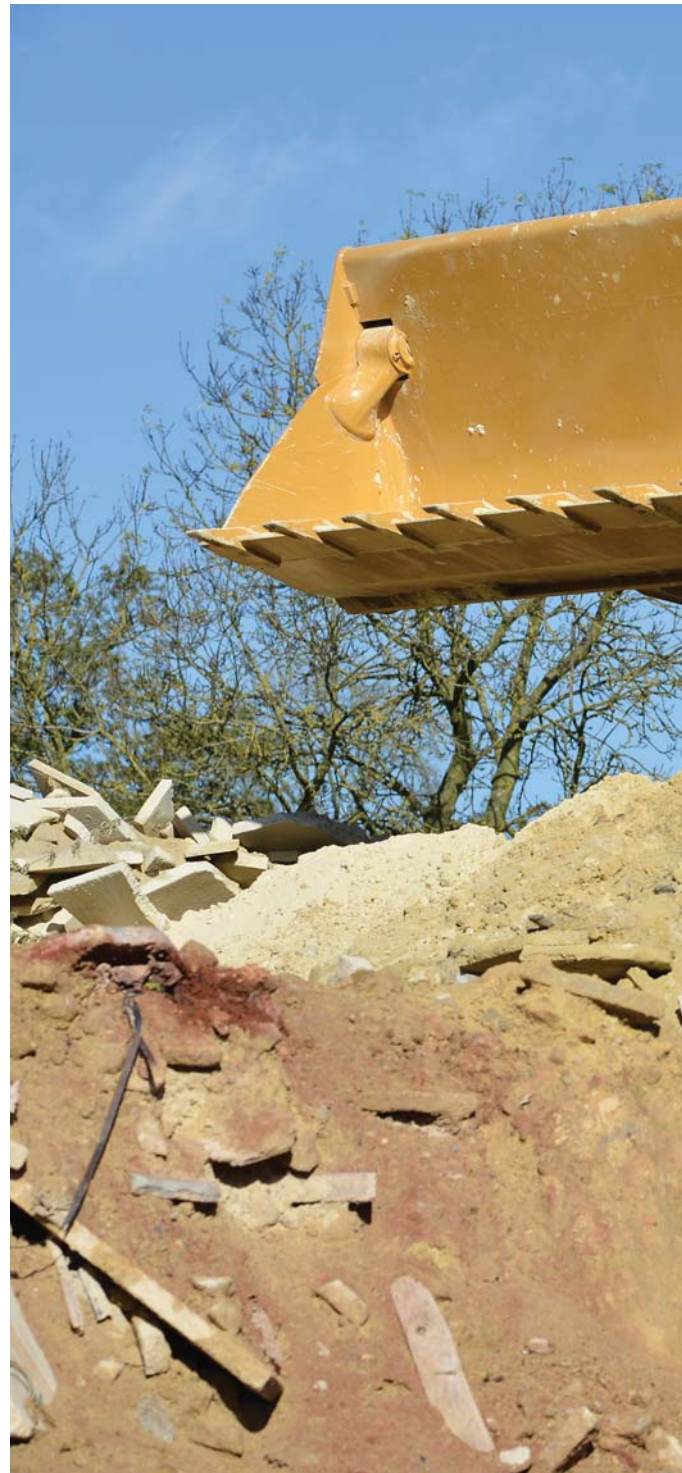
- Providing high durability, low noise levels and superb traction on uneven surfaces.
- Three chamber system provides constant lubrication of the heavy duty running gear and bearings on all gradients.
- 100% locking differential is fitted as standard on the Cat Backhoe Loader, ensuring maximum traction in all conditions.

Power Shuttle Transmission

The 422F2 boasts a constant mesh, synchronized 4 forward and 4 reverse mechanical transmission. Capable of speeds up to 40 km/h, directional changes are made from the column mounted shuttle and gear changes using the floor mounted shift lever.

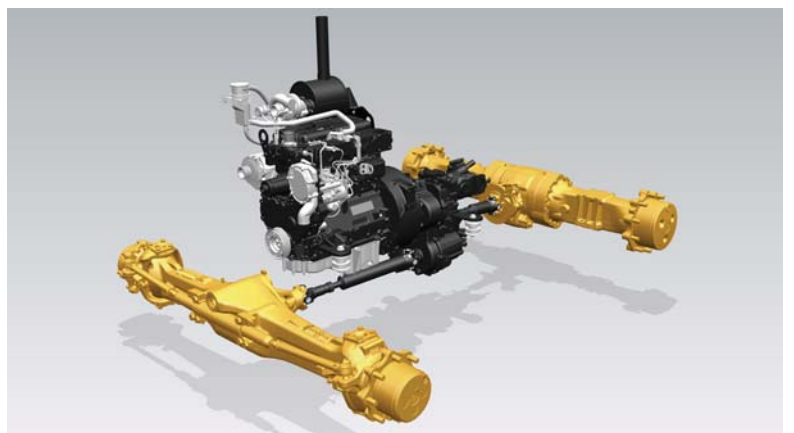
Hydraulic Boosted Brakes

Hydraulic boosted brakes are featured as standard on the 422F2. The hydraulic assistance reduced operator effort. The system produces the same braking performance, with less force exerted, resulting in quicker braking reactions and less operator fatigue.



Power Train

Powerful, Proven, Efficient





Hydraulics

Unmatched Performance

Powerful Load Sensing Hydraulic System

Intelligent hydraulics provide the right amount of power at the right time. Load sensing, closed center hydraulic system, actively matches hydraulic power and flow, allowing full hydraulic forces at any engine speed.

- Flow-sharing valves actively manage the flow of oil between each function of the machine. When the operator demands multiple operations the machine responds, providing smooth, effortless operation.
- The torque limiter on the machine helps to provide perfect synchronization between the engine, transmission and hydraulic system.
- Cat Backhoe Loaders have always provided a superior solution and this machine is no different. A high capacity variable displacement piston pump allows for perfect matching of power and operator demand, providing power when it is needed as well as great fuel economy.





Single Tilt Loader

Reaching New Heights



Loader Performance

The proven design of the F2 loader provides ultimate performance. This machine makes light work of lifting and loading.

- Single tilt loader from Cat ensures excellent performance, with brilliant breakout forces and lift capacities, combined with excellent height and reach.
- Ride Control option offers loader suspension to improve ride comfort when moving around the job site or transporting the machine on the road. There is also the added benefit of increased material retention providing an invaluable boost in productivity.
- The Return to Dig system returns the bucket to level, great for applications with repetitive work cycles.



Backhoe

Built for the Task

Excavator Style Backhoe

Whether close-up truck loading or digging over obstacles, the iconic excavator style boom tackles the toughest jobs with ease. Combine this versatility with powerful breakout forces, controllability, a flow-sharing hydraulic system and the 422F2 is capable of high levels of productivity with minimum effort. The boom is a narrow design, ensuring maximum visibility to the work tool and ground.

Extendible Stick

The 422F2 is available with an extendible stick that increases dig depth and reach capability increasing the machines versatility and utilization, reducing the amount of machine repositioning and therefore reducing site damage. A sliding inner section design helps to ensure the wear pads remain as dirt free as possible, extending adjustment and replacement intervals. Auxiliary lines, for operating hydraulic work tools, have been routed so that they are protected from damage when working in the narrowest of trenches.

Side Shift Frame

The F2 Series Side Shift Frame has exterior locking clamps, with no disassembly needed when servicing. The frame is a solid design with E-Coat protection, this prevents material build up in the frame and reduces the risk of rust, increasing the life of the frame.

Cat Cushion Swing

The 422F2 is equipped with Cat Cushion Swing, which enables very fast trenching by damping the boom oscillation during trenching cycles.

Powered Side Shift (optional)

Provides a hydraulic service to allow the operator to easily position the backhoe across the full width of the Side Shift Frame. Ideal for use in areas with minimal space and utility applications such as gas, electrical, and telecoms.



Work Tools

A Solution for Every Job



Loader

Loader Buckets

General Purpose loader buckets are available as well as the hydraulically operated Multi Purpose bucket. These come in a range of sizes from 0.96 m³ to 1.3 m³.

Other Available Loader Tools include:

- Brooms
- Material Handling Arms
- Truss Booms
- Forks
- Blades

Backhoe

Excavating Buckets

Cat Work Tools provide a range of buckets in various sizes. It is easy to find the correct bucket for the application with a range including:

- Standard Duty
- Heavy Duty
- High Capacity
- Rock
- Ditching

Other Available Backhoe Tools include:

- Cold Planers
- Hammers
- Augers
- Vibratory Compaction Plates

Backhoe Quick Coupler

Manual or hydraulic backhoe couplers make rear tool exchange quick, easy and safe. New Cat dual lock couplers have a self adjusting wedge design to ensure a tight fit. They also feature a safety lock which automatically engages.





Serviceability

Less Time Servicing, More Time Working

Daily Service Points

Caterpillar understands that the easier a task is the more likely it is to be done. We have ensured that to service the Cat Backhoe Loader is as simple as it can be. All daily check points are grouped together and are easy to access. Sealed for life axles and driveshafts remove the need for operators to grease the time consuming and awkward areas below the machine.

Wear Pad Adjustments

The Extendible Stick (E-Stick) is designed to be self lubricating, to minimize the need for operator interaction. The stabilizers and E-Stick all have easily adjustable wear pads that require no disassembly. When wear pad adjustments are necessary, the adjustment bolts are easy to access, taking minutes to complete the adjustment.

Cat Filters

All Cat filters are vertically mounted for spill free servicing and reduced oil contamination. These low micron filters remove microscopic particles from the oil, keeping the engine, transmission and hydraulic system running smoothly for years.

Hinged Cooling Pack

The hood opens to reveal the engine and a unique to Cat hinged cooling pack. The air conditioning pack lifts up and the radiator tilts forward with no tooling required, giving easy access for debris removal whether you are in the workshop or on a job site, keeping cooling performance to an optimum.



Customer Support

Unrivalled Customer Support Network

Customer Support Agreements

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-SSM 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 to suit your every requirement.

Machine Selection

Your dealer can help 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 there be a more suitable solution?

Training and Support

Speak to your dealer about additional support. They can advise you on operating techniques for your machines which will minimize wear and tear, maximize productivity, lower owning and operating costs and help you make the most of the fantastic features offered on the Cat Backhoe Loaders.

422F2 Backhoe Loader Specifications

Engine

	EU Stage II Standard Offering*	EU Stage II Optional Offering*
Model	3054C 56.5 kW Naturally Aspirated	3054C 68.5 kW Mech Turbo
Rated Power (standard) @ 2,200 rpm		
Gross Power ISO 14396	56.5 kW/ 76.8 hp	68.5 kW/ 93 hp
Net Power Rating @ 2,200 rpm		
ISO 9249	52.9 kW/ 71.9 hp	65.4 kW/ 88.3 hp
EEC 80/1269	52.9 kW/ 71.9 hp	65.4 kW/ 88.3 hp
Torque Rise (net) @ 1,400 rpm	27%	38%
Maximum Torque @ 1,400 rpm	288 N·m	384 N·m
Bore	105 mm	105 mm
Stroke	127 mm	127 mm
Displacement	4.4 L	4.4 L

*Meets Stage II/Tier 2 equivalent emission standards.

- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- No derating required up to 2286 m altitude. Auto derate protects hydraulic and transmission systems.

Service Refill Capacities

Cooling System with A/C	20 L
Fuel Tank	160 L
Engine Oil with Filter	9.1 L
Transmission (Power Shuttle)	
2WD	15 L
AWD	15 L
Rear Axle	16.5 L
Planetaries	1.7 L
Front Axle (AWD)	11 L
Planetaries	0.7 L
Hydraulic System	95 L
Hydraulic Tank	40 L

Transmission

Travel speeds of two wheel drive backhoe loader at full throttle, when equipped with 16.9×28 rear tires.

	Power Shuttle
Forward	
1st	5.5 km/h
2nd	9.0 km/h
3rd	20.6 km/h
4th	40 km/h
Reverse	
1st	5.5 km/h
2nd	9.0 km/h
3rd	20.6 km/h
4th	40 km/h

Hydraulic System

Type	Closed Center
Pump Type	Variable-flow, Axial Piston
Maximum Pump Capacity	132 L/min
System Pressure	
Backhoe	230 Bar
Loader	230 Bar

422F2 Backhoe Loader Specifications

Weights*

Operating Weight	7529 kg	
Operating Weight (maximum) (ROPS capacity)	11 000 kg	
Cab, ROPS/FOPS	157 kg	
Ride Control	11 kg	
Air Conditioning	40 kg	
All-Wheel Drive	147 kg	
MP Bucket (0.96 m ³ /1.25 yd ³)		
With Fold-over Forks	808 kg	
Without Fold-over Forks	605 kg	
4.3 m Extendible Stick (excludes ft. counterweight)	203 kg	
Counterweights		
Base	115 kg	
Medium	240 kg	
Maximum	460 kg	
Minimum Counterweight Recommendations – Standard Stick		
Loader Bucket		
GP	2WD	240 kg
GP	AWD	115 kg
MP	2WD	115 kg
MP	AWD	0 kg
Minimum Counterweight Recommendations – Extendible Stick		
Loader Bucket		
GP	2WD	460 kg
GP	AWD	460 kg
MP	2WD	115 kg
MP	AWD	0 kg

*Machine Configuration – T2 56 kW engine, standard stick hoe, OROPS canopy, 2WD standard shift transmission, 1.0 m³ GP loader bucket, 24" standard duty hoe bucket, 11L-16 and 16.9-28 tires, 240 kg counterweight, 80 kg operator and full fuel tank.

Axles

All Wheel Drive (AWD) – Optional

Features

- Heavy-duty rear axle with self adjusting inboard brakes, differential lock and final drives.
- AWD is engaged by front console panel switch or by brake pedal during all-wheel-braking operation. AWD can be engaged on the move, under load, in any gear, forward or reverse. AWD has outer final drives for easy maintenance.
- AWD front axle 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.

Axle Ratings

Front Axle, 2WD	
Static	22 964 kg
Dynamic	9186 kg
Front Axle, AWD	
Static	22 964 kg
Dynamic	9186 kg
Rear Axle	
Static	22 964 kg
Dynamic	9186 kg

Steering

Type	Front Wheel
Power Steering	Hydrostatic
2WD Cylinder, One (1) Double-acting	
Bore	65 mm
Stroke	120 mm
Rod Diameter	36 mm
Axle Oscillation	11 mm
AWD Cylinder, One (1) Double-acting	
Bore	65 mm
Stroke	120 mm
Rod Diameter	36 mm

Turning Circle

2WD/AWD (inner wheel not braked)	
Outside Front Wheels	8.2 m
Outside Widest Loader Bucket	11.0 m

Brakes

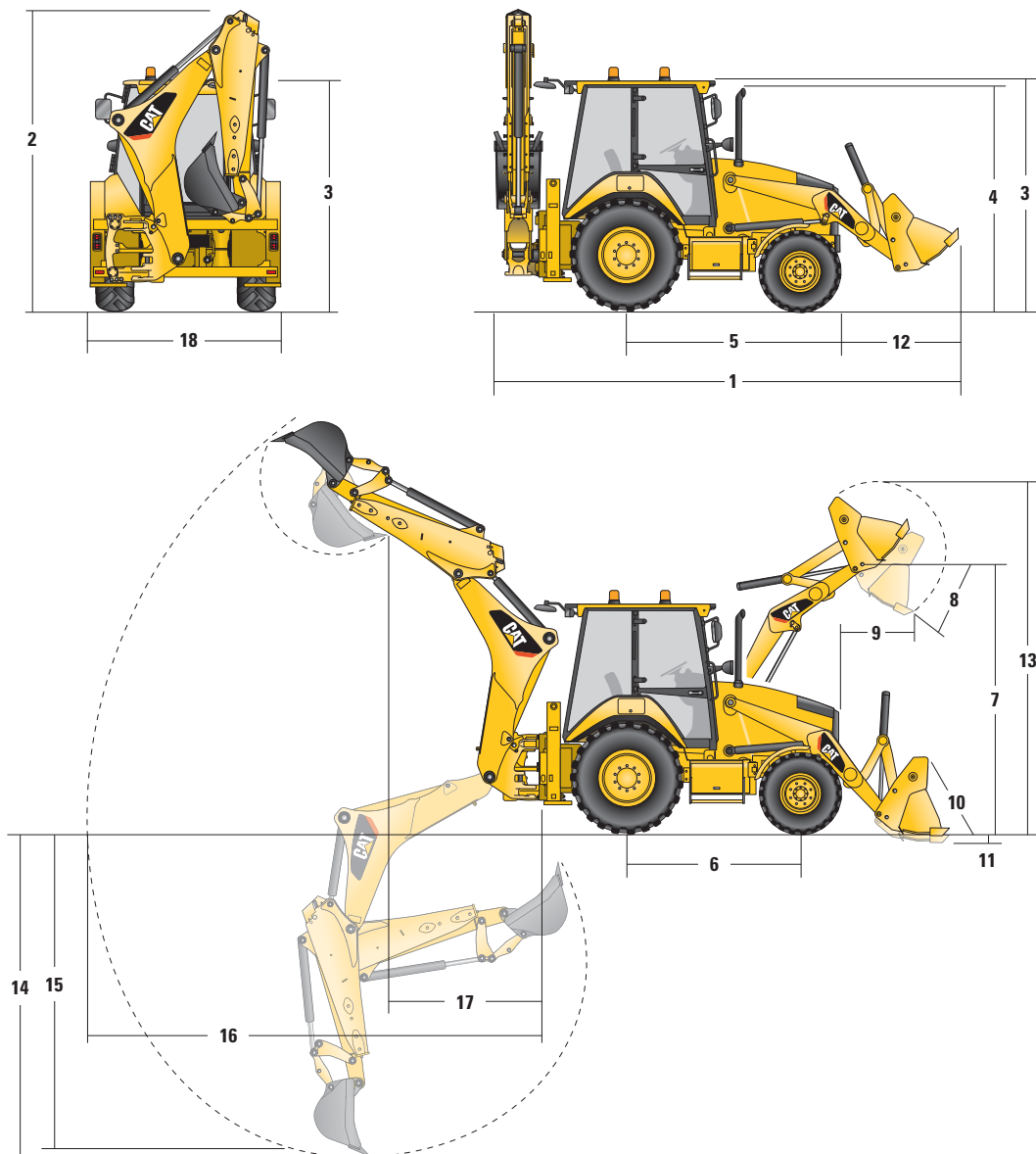
Fully enclosed boosted, hydraulic, multiple discs.

Features

- Inboard oil-immersed, hydraulically actuated multiple Kevlar discs on final drive input shaft.
- Completely enclosed and sealed.
- Self-adjusting.
- Dual foot-operated boosted 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.

422F2 Backhoe Loader Specifications

Machine Dimensions



	GP – 1.0 m ³	MP – 1.03 m ³	MP – 1.03 m ³
1 Overall Length in Rooding Position	5755 mm	5745 mm	5745 mm
Overall Transportation Length	5772 mm	5728 mm	5728 mm
2 Overall Transport Height (4.3 m stick)	3810 mm	3810 mm	3810 mm
Overall Width (excluding bucket)	2280 mm	2280 mm	2280 mm
3 Height to Top of Cab/Canopy	2829 mm	2829 mm	2829 mm
4 Height to Top of Exhaust Stack	2681 mm	2681 mm	2681 mm
5 Rear Axle Centerline to Front Grill	2705 mm	2705 mm	2705 mm
6 Wheelbase 2WD/AWD	2200 mm	2200 mm	2200 mm

Dimensions and performance specifications shown are for machines equipped with 11L-16, 16.9-28 tires, OROPS canopy, standard stick with 24 inch standard duty bucket, and 1.0 m³ loader bucket and standard equipment unless otherwise specified.

422F2 Backhoe Loader Specifications

Loader Bucket Dimensions and Performance

	GP – 1.0 m ³	MP – 1.03 m ³	MP with forks – 1.03 m ³
Capacity	1.00 m ³	1.03 m ³	1.03 m ³
Width	2406 mm	2406 mm	2406 mm
Lift Capacity at Maximum Height	2823 kg	2640 kg	2518 kg
Lift Breakout Force	46.2 kN	44.9 kN	43.3 kN
Tilt Breakout Force	49.0 kN	54.2 kN	53.3 kN
Tipping Load at Breakout Point	6252 kg	6205 kg	6059 kg
7 Maximum Hinge Pin Height	3395 mm	3395 mm	3395 mm
8 Dump Angle at Full Height	46°	46°	46°
Dump Height at Maximum Angle	2686 mm	2711 mm	2711 mm
9 Dump Reach at Maximum Angle	783 mm	711 mm	711 mm
10 Maximum Bucket Rollback at Ground Level	37°	38°	38°
11 Digging Depth	168 mm	201 mm	201 mm
Maximum Grading Angle	113°	115°	115°
12 Grill to Bucket Cutting Edge, Carry Position	1477 mm	1438 mm	1438 mm
13 Maximum Operating Height	4293 mm	4324 mm	4324 mm
Bucket Weight (excluding teeth or forks)	441 kg	680 kg	851 kg

Backhoe Dimensions and Performance

	Standard Stick – 4.3 m	E-Stick Retracted – 4.3 m	E-Stick Extended – 4.3 m
14 Digging Depth, SAE Maximum	4241 mm	4244 mm	5243 mm
Digging Depth, Manufacturer's Maximum	4843 mm	4849 mm	5765 mm
15 Digging Depth, 2400 mm Flat Bottom	3837 mm	3858 mm	4930 mm
Digging Depth, 600 mm Flat Bottom	4199 mm	4203 mm	5202 mm
Digging Depth, 600 mm Flat Bottom, Manufacturer's	4827 mm	4832 mm	5765 mm
Reach from Rear Axle Centerline at Ground Line	6970 mm	6970 mm	7902 mm
16 Reach from Swing Pivot at Ground Line	5645 mm	5650 mm	6576 mm
Maximum Operating Height	5739 mm	5741 mm	6361 mm
Loading Height	4063 mm	4071 mm	4691 mm
17 Loading Reach	1613 mm	1561 mm	2408 mm
Swing Arc	180°	180°	180°
Bucket Rotation	205°	205°	205°
18 Stabilizer (overall width)	2241 mm	2241 mm	2241 mm
Bucket Dig Force	58.4 kN	58.4 kN	58.4 kN
Stick Dig Force	33.4 kN	34.1 kN	25.0 kN

Dimensions and performance specifications shown are for machines equipped with 11L-16, 16.9-28 tires, OROPS canopy, standard stick with 24 inch standard duty bucket, and 1.0 m³ loader bucket and standard equipment unless otherwise specified.

422F2 Standard and Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
Cab			Field Installed Attachments		
Cab, Deluxe	—	✓	Powered Side Shift (PSS)	—	✓
Cab, Standard	✓	—	Boom Sticks and Linkages – Backhoe		
Canopy, Base	—	✓	Quick Coupler, Hydraulic (backhoe)	—	✓
Canopy, Plus	—	✓	Quick Coupler, Mechanical (backhoe)	—	✓
*See Cab Options Page			Stick, Extending (4.3 m)	—	✓
Cab ROPS and FOPS are standard. ROPS (Rollover Protective Structure) offered by Caterpillar for this machine meets ROPS criteria ISO 3471:1994 and FOPS (Falling Objects Protective Structure) criteria ISO 3449:1992.			Stick, Standard (4.3 m)	✓	—
Tires/Steering/Brakes			Transport Lock, Swing	✓	—
All Wheel Drive	—	✓	Transport Lock, Boom	✓	—
100% Differential Lock	✓	—	Boom Sticks and Linkages – Loader		
Hydraulic Boosted Brakes (dual pedals)	✓	—	Loader Cutting Edge (2 pieces)	—	✓
Tires 26 inch	✓	—	Hydraulics		
Tires 28 inch	—	✓	Hydraulic Pump, 60 cc (132 L/min)	✓	—
Engine/Transmission			Hydraulic Quick Disconnects (twist to connect)	—	✓
Battery 750 CCA, Maintenance Free (standard)	✓	—	Side Shift Lock (electro-hydraulic)	✓	—
Battery 750 CCA, Maintenance Free (heavy duty)	—	✓	Hydraulic Oil Cooler	✓	—
Engine 56.5 kW (77 hp) Cat 3054C DINA	✓	—	Hydraulics – Backhoe		
Engine 68.5 kW (93 hp) Cat 3054C DIT	—	✓	Hydraulic lines, 1-way	—	✓
Engine Block Heater	—	✓	Hydraulic lines, 2-way	—	✓
Jump Start Connector	✓	—	Hydraulics – Loader		
Transmission Neutralizer	✓	—	Loader kickout, Float	✓	—
Transmission, 4-Speed Manual	✓	—	Loader kickout, Return to Dig	✓	—
Input			Auto Ride Control	—	✓
Controls, Mechanical Lever	✓	—	Single Tilt	✓	—
Power Steering, Hydrostatic	✓	—	Electrical		
Other Attachments			Product Link, Cellular	—	✓
Counterweight, 115 kg	—	✓	Product Link, Satellite	—	✓
Counterweight, 240 kg	—	✓	Reversing Alarm	✓	—
Counterweight, 460 kg	—	✓	Beacon, Strobe	—	✓
Front Fenders	—	✓	Beacon, Standard	—	✓
Street Pads, Stabilizers	—	✓			
Tool Storage Box	✓	—			
Transport Tie-downs	✓	—			
Guards					
Guard, Teeth (GP/MP)	—	✓			
Guard, Driveshaft	—	✓			
Guard, Tail Lights	—	✓			
Loader Safety Brace	✓	—			

Cab Options

	Canopy	Canopy Plus	Cab
Air Conditioning*	—	—	Optional
Beacon Socket (×2)	✓	✓	✓
Radio, Premium	Optional	Optional	Optional
Radio, Entry Level	Optional	Optional	Optional
Cab Heater	—	—	✓
Cab Internal Light	Optional	Optional	✓
Cup Holders (×2)	✓	✓	✓
Differential Lock Button on Loader Control	✓	✓	✓
Face Fan	Optional	Optional	Optional
Removable Floor Mat	✓	✓	✓
Front and Rear Side Opening Windows	—	—	✓
Front Headlights**	✓	✓	✓
Full Width Perforated Sun Visor	—	—	✓
Fully Adjustable Halogen Work Lights (×4)	✓	—	—
Fully Adjustable Halogen Work Lights (×8)	—	✓	✓
Cab, Fully Glazed	—	—	✓
Cab, Part Glazed (front window)	—	✓	—
Cab, No Glazing (open canopy)	✓	—	—

	Canopy	Canopy Plus	Cab
Gauge Cluster	✓	✓	✓
Horn, Front	✓	✓	✓
Horn, Rear	✓	✓	✓
Instrument Panel Vandal Guard	✓	✓	✓
Internal Power Socket (×1)	✓	✓	✓
Rear Tail Lights (LED)	—	—	✓
Rear Tail Lights (Bulbs)	✓	✓	—
Left and Right Opening Doors	—	—	✓
Left Hand Storage Console	✓	✓	✓
Safety Lock, Hydraulics	✓	✓	✓
Safety Lock, Transmission	✓	✓	✓
Seat, Fabric	—	—	✓
Seat, Deluxe Fabric Heated	—	—	Optional
Seat, Vinyl with Mechanical Suspension	✓	✓	—
Security Keypad	Optional	Optional	Optional
Self Cancelling Directional Indicator	✓	✓	✓
Steering Wheel Column, Tilt Adjustment	—	✓	✓
Steering Wheel, Fixed (no adjustment)	✓	—	—
Window Wipers, Rear	—	—	✓
Window Wipers, Front	—	✓	✓

*Not available on 56 kW manually aspirated engine

**May vary depending on region

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

AEHQ7432-01 (07-2016)
Replaces AEHQ7432

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