

427F2

Backhoe Loader



Cab

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 many of the machine's features, 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.

Cat C3.4B Diesel Engine

The latest in clean emissions technology, Cat 3.4B 55 kW diesel engines utilize enhanced electronic control which fully optimizes engine speed to the application. Turbocharging with smart wastegate for fast response, high power, and increased torque. This engine will provide an emissions solution without the need for Diesel Exhaust Fluid.

Easing Your Workload

Here at Caterpillar we understand that the role of a modern day Backhoe Loader operator can be demanding. Therefore the F2 Series machines have been developed with this in mind and offer a number of functions and options to help reduce the load on the operator; helping to maintain high productivity, controllability and comfort during those longer days. A new instrument panel with LCD display gives the operator quick access to the important information they need. The introduction of features such as: Powerful Hydraulic, Product Link™ and Bluetooth hands free, really allows the operator to perform in comfort and safety while being in full control and having all the information needed to achieve the highest productivity possible.

Intelligent Hydraulics

The F2 Series continues to offer load sensing hydraulics combined with full flow sharing technology. With our intelligent hydraulics technology, you get the flow you need, when you need it, where you need it most.

Secure Your Investment

Protect your Backhoe Loader with the latest security technology. Select from built-in keypads, vandal guards, and the latest version of Product Link so you always know your machine is secure.

Hydraulics

The F Series hydraulics have been given a boost on the new F2 machine. Increasing the pump capacity to give a greater flow rate will now allow the operator more hydraulic performance at their fingertips. The new 427F2 has inherited this higher hydraulic flow and larger pump capacity.



427F2 Backhoe Loader Specifications

Engine

| | EU Stage IIIB Standard Offering |
|------------------------------------|--|
| Model | C3.4B 55 kW Electronic Turbo Intercooled |
| Rated Power (standard) @ 2,200 rpm | |
| Gross Power ISO 14396 | 55.1 kW/74.9 hp |
| Net Power Rating @ 2,200 rpm | |
| ISO 9249 | 51.5 kW/70 hp |
| EEC 80/1269 | 51.5 kW/70 hp |
| Torque Rise (net) @ 1,200 rpm | 88% |
| Maximum Torque @ 1,400 rpm | 438 N·m |
| Bore | 99 mm |
| Stroke | 110 mm |
| Displacement | 3.4 L |

- 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.
- Meets EU Stage IIIB emission standards.

Transmission

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

| | Power Shuttle | Auto-Shift | Auto-Shift (Lock Up) |
|----------------|----------------------|-------------------|-----------------------------|
| Forward | | | |
| 1st | 5.6 km/h | 6 km/h | 6 km/h |
| 2nd | 9.3 km/h | 9.6 km/h | 9.6 km/h |
| 3rd | 21 km/h | 12 km/h | 12 km/h |
| 4th | 40 km/h | 20 km/h | 20 km/h |
| 5th | | 27 km/h | 27 km/h |
| 6th | | 40 km/h | 40 km/h |
| Reverse | | | |
| 1st | 5.6 km/h | 6 km/h | 6 km/h |
| 2nd | 9.3 km/h | 13 km/h | 13 km/h |
| 3rd | 21 km/h | 27 km/h | 27 km/h |
| 4th | 40 km/h | | |

Service Refill Capacities

| | |
|-------------------------------------|--------|
| Cooling System | |
| Fuel Tank | 160 L |
| Engine Oil with Filter | 8.8 L |
| Diesel Exhaust Fluid | 19 L |
| Transmission (Power Shuttle) | |
| AWD | 15 L |
| Transmission (Auto-Shift) | |
| AWD | 19 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 |

Hydraulic System

| | |
|------------------------|-----------------------------|
| Type | Closed Center |
| Pump Type | Variable Flow, Axial Piston |
| Maximum Pump Capacity | 160 L/min |
| System Pressure | |
| Backhoe | 250 Bar |
| Loader | 250 Bar |

Noise Level

| | |
|-------------|-----------|
| Inside Cab | 74 dB(A) |
| Outside Cab | 100 dB(A) |

427F2 Backhoe Loader Specifications

Weights*

| | |
|--|-----------|
| Operating Weight (estimated) (C3.4) | 8108 kg |
| Operating Weight (Maximum) (ROPS Capacity) | 11 000 kg |
| Cab, ROPS/FOPS | 129 kg |
| Auto-shift Transmission | 55 kg |
| Ride Control | 11 kg |
| Air Conditioning | 42 kg |
| MP Bucket (1.00 m ³ /1.31 yd ³) | |
| With Fold-over Forks | 871 kg |
| Without Fold-over Forks | 611.2 kg |
| Extendible Stick (excludes front counterweight) | 203 kg |
| Counterweights, Base | 115 kg |
| Stackable, One | 250 kg |
| Maximum | 485 kg |
| Minimum Counterweight Recommendations – Standard Stick | |
| Loader Bucket | |
| GP | 115 kg |
| MP | 0 kg |
| Minimum Counterweight Recommendations – Extendible Stick | |
| Loader Bucket | |
| GP | 485 kg |
| MP | 0 kg |
| Total Gross Weight Not to Exceed | 11 000 kg |

*Machine Configuration – standard HRC engine, standard stick hoe, standard cab with A/C, AWD standard shift transmission, 1.03 m³ MP loader bucket, 24 inch standard duty hoe bucket, 12.5/80-18 and 16.9-28 tires, no counterweight, 80 kg operator and full fuel tank.

Axles

All Wheel Drive (AWD)

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, AWD | |
| Static | 22 964 kg |
| Dynamic | 9186 kg |
| Rear Axle | |
| Static | 22 964 kg |
| Dynamic | 9186 kg |

Steering

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

Turning Circle

| | |
|------------------------------|---------|
| AWD (inner wheel not braked) | |
| Outside Front Wheels | 8.18 m |
| Outside Widest Loader Bucket | 10.97 m |

Brakes

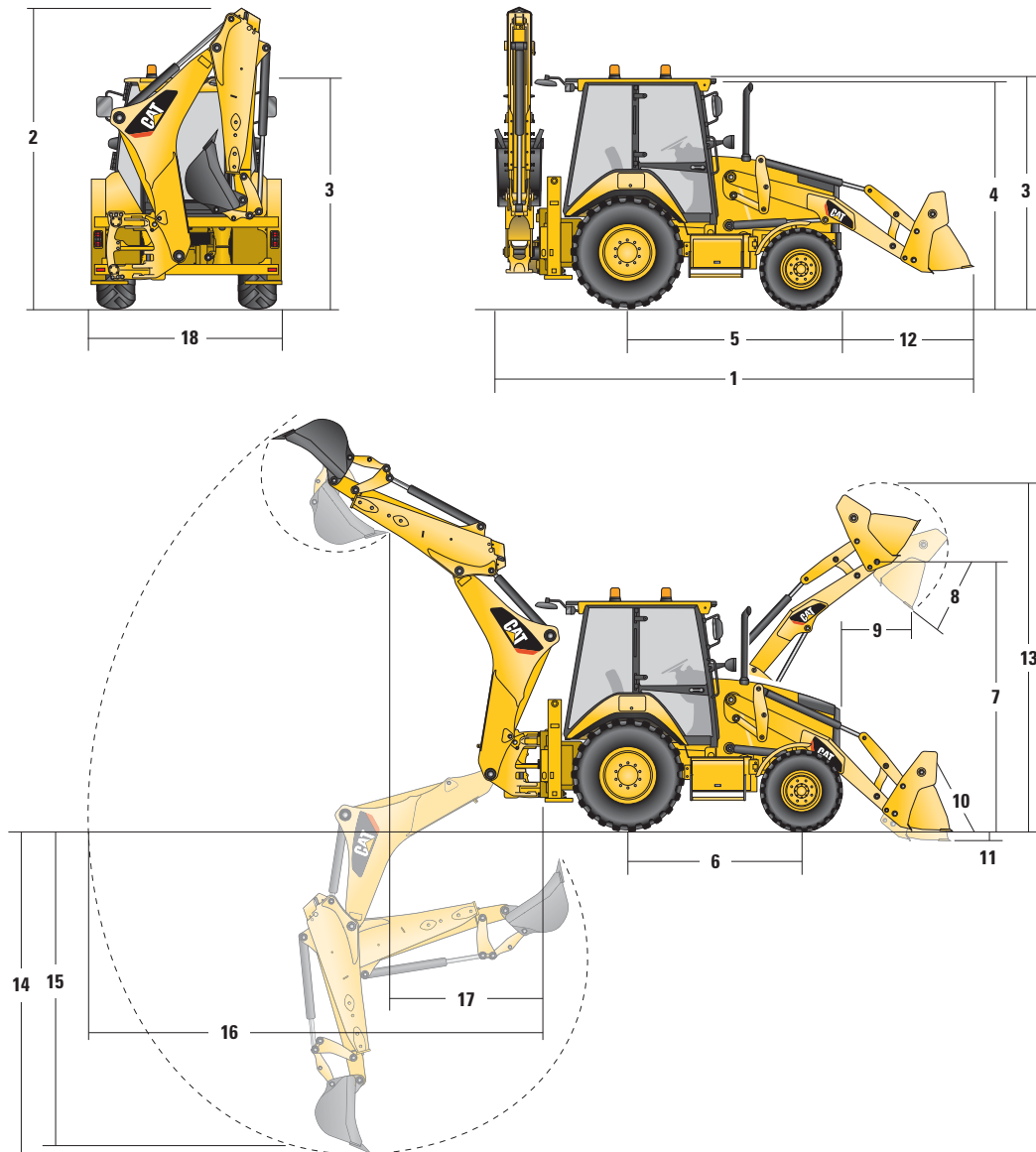
Fully enclosed boosted, hydraulic, multiple discs.

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.

427F2 Backhoe Loader Specifications

Machine Dimensions



| | GP – 1.0 m ³ | MP – 1.03 m ³ | MP with forks – 1.03 m ³ |
|--|-------------------------|--------------------------|-------------------------------------|
| 1 Overall Length in Rooding Position | 5734 mm | 5734 mm | 5734 mm |
| Overall Transportation Length | 5704 mm | 5704 mm | 5704 mm |
| 2 Overall Transportation Height – 4.3 m | 3779 mm | 3779 mm | 3779 mm |
| Overall Width (excluding loader bucket) | 2352 mm | 2352 mm | 2352 mm |
| 3 Height to Top of Cab/Canopy | 2897 mm | 2897 mm | 2897 mm |
| 4 Height to Top of Exhaust Stack | 2744 mm | 2744 mm | 2744 mm |
| 5 Rear Axle Centerline to Front Grill | 2705 mm | 2705 mm | 2705 mm |
| 6 Wheelbase AWD | 2200 mm | 2200 mm | 2200 mm |

Dimensions and performance specifications shown are for machines equipped with 12.5/80-18 SGL front tires, 16.9-28c rear tires, standard cab, standard stick with 24 inch standard duty bucket, and 1.0 m³ GP loader bucket and standard equipment unless otherwise specified.

427F2 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 | 1.03 m ³ | 1.03 m ³ | 1.03 m ³ |
| Width | 2406 mm | 2406 mm | 2406 mm |
| Lift Capacity at Maximum Height | 3817 kg | 3580 kg | 3240 kg |
| Lift Breakout Force | 54.82 kN | 53.34 kN | 50.24 kN |
| Tilt Breakout Force | 54.84 kN | 60.32 kN | 58.79 kN |
| Tipping Load at Breakout Point | 6557 kg | 6537 kg | 6260 kg |
| 7 Maximum Hinge Pin Height | 3497 mm | 3497 mm | 3497 mm |
| 8 Dump Angle at Full Height | 45° | 45° | 45° |
| Dump Height at Maximum Angle | 2796 mm | 2823 mm | 2823 mm |
| 9 Dump Reach at Maximum Angle | 805 mm | 731 mm | 731 mm |
| 10 Maximum Bucket Rollback at Ground Level | 38° | 39° | 39° |
| 11 Digging Depth | 61 mm | 94 mm | 94 mm |
| Maximum Grading Angle | 114° | 116° | 116° |
| 12 Grill to Bucket Cutting Edge, Carry Position | 1467 mm | 1419 mm | 1419 mm |
| 13 Maximum Operating Height | 4394 mm | 4427 mm | 4883 mm |
| Bucket Weight (excluding teeth and forks) | 428 kg | 611 kg | 705 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 | 4278 mm | 4281 mm | 5274 mm |
| Digging Depth, Manufacturer's Maximum | 4775 mm | 4778 mm | 5696 mm |
| 15 Digging Depth, 2440 mm Flat Bottom | 3893 mm | 3897 mm | 4966 mm |
| Digging Depth, 600 mm Flat Bottom | 4235 mm | 4239 mm | 5235 mm |
| Digging Depth, 610 mm Flat Bottom, Manufacturer's | 4748 mm | 4753 mm | 5696 mm |
| Reach from Rear Axle Centerline at Ground Line | 6739 mm | 6744 mm | 7670 mm |
| 16 Reach from Swing Pivot at Ground Line | 5649 mm | 5654 mm | 6580 mm |
| Maximum Operating Height | 5691 mm | 5692 mm | 6297 mm |
| Loading Height | 4016 mm | 4025 mm | 4630 mm |
| 17 Loading Reach | 1669 mm | 1617 mm | 2475 mm |
| Swing Arc | 180° | 180° | 180° |
| Bucket Rotation | 205° | 205° | 205° |
| 18 Stabilizer Overall Width | 2352 mm | 2352 mm | 2352 mm |
| Bucket Dig Force | 63.44 kN | 63.42 kN | 63.42 kN |
| Stick Dig Force | 36.17 kN | 36.90 kN | 26.98 kN |

427F2 Backhoe Loader 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 ROPS and FOPS | | | Field Installed Attachments | | |
| Cab, Deluxe | — | ✓ | Powered Side Shift (PSS) | — | ✓ |
| Cab, Standard | ✓ | — | Boom Sticks and Linkages – Backhoe | | |
| *See Cab Options Page | | | Quick Coupler, Hydraulic | — | ✓ |
| Tires/Steering/Brakes | | | Quick Coupler, Mechanical | — | ✓ |
| All Wheel Drive | ✓ | — | Stick, Extending (4.26 m) | — | ✓ |
| 100% Differential Lock | ✓ | — | Stick, Standard (4.26 m) | ✓ | — |
| Hydraulic Boosted Brakes (dual pedals) | ✓ | — | Transport Lock, Swing | ✓ | — |
| Tires 26 inch | ✓ | — | Transport Lock, Boom | ✓ | — |
| Tires 28 inch | — | ✓ | Boom Sticks and Linkages – Loader | | |
| Engine/Transmission | | | Loader Cutting Edge (2 pieces) | — | ✓ |
| Battery 750 CCA, Maintenance Free (standard) | ✓ | — | Hydraulics | | |
| Battery 750 CCA, Maintenance Free (heavy duty) | — | ✓ | Hydraulic Pump (160 L/min) | ✓ | — |
| Hinged Radiator Unit for Simple Debris Removal | ✓ | — | Hydraulic Quick Disconnects (twist to connect) | — | ✓ |
| Engine 55 kW (75 hp) Cat C3.4B | ✓ | — | Side Shift Lock (electro-hydraulic) | — | ✓ |
| Engine Block Heater | — | ✓ | Hydraulic Oil Cooler | ✓ | — |
| Jump Start Connector | — | ✓ | Hydraulics – Backhoe | | |
| Transmission, 4-Speed Manual | ✓ | — | Hydraulic Lines, 1-Way | — | ✓ |
| Transmission, 6-Speed Automatic | — | ✓ | Hydraulic Lines, 2-Way | — | ✓ |
| Transmission, 6-Speed Automatic (torque lock-up) | — | ✓ | Hydraulics – Loader | | |
| Input | | | Loader Kickout, Float | ✓ | — |
| Controls, Mechanical Lever | ✓ | — | Loader Kickout, Return to Dig | ✓ | — |
| Power Steering, Hydrostatic | ✓ | — | Auto Ride Control | — | ✓ |
| Other Attachments | | | Parallel Lift | ✓ | — |
| Counterweight, 115 kg | — | ✓ | Electrical | | |
| Counterweight, 250 kg | — | ✓ | Product Link, Cellular | — | ✓ |
| Counterweight, 485 kg | — | ✓ | Product Link, Satellite | — | ✓ |
| Front Fenders | — | ✓ | Reversing Alarm | ✓ | — |
| Street Pads, Stabilizers | — | ✓ | Stabilizer Alarm | ✓ | — |
| Tool Storage Box | ✓ | — | Beacon, Strobe | — | ✓ |
| Transport Tie-downs | ✓ | — | Beacon, Rotating | — | ✓ |
| Guards | | | | | |
| Guard, Teeth (GP/MP) | — | ✓ | | | |
| Guard, Driveshaft | — | ✓ | | | |
| Guard, Tail Lights | — | ✓ | | | |
| Loader Safety Brace | ✓ | — | | | |
| Object Handling Kit | — | ✓ | | | |

427F2 Backhoe Loader Standard and Optional Equipment

Cab Options

| | Standard | Deluxe | | Standard | Deluxe |
|---|----------|----------|---|----------|----------|
| Air Recirculation Control | — | ✓ | Internal Power Socket (×1) | ✓ | ✓ |
| Air Conditioning | Optional | Optional | Kickdown Function on Loader Control | ✓ | ✓ |
| Auto-Up Stabilizers | — | ✓ | Left Hand Storage Console | ✓ | ✓ |
| Beacon Socket (×2) | ✓ | ✓ | Premium Radio | Optional | Optional |
| Brake Pedals Operable Independently and Interlocked | ✓ | ✓ | Rear Tail Lights (LED) | ✓ | ✓ |
| Cab Heater | ✓ | ✓ | Removable Floor Mat | ✓ | ✓ |
| Cab Internal Light | ✓ | ✓ | Safety Lock, Hydraulics | ✓ | ✓ |
| Cab Internal Light (courtesy) | — | ✓ | Safety Lock, Transmission | ✓ | ✓ |
| Cup Holders (×2) | ✓ | ✓ | Seat, Deluxe Fabric | — | ✓ |
| Differential Lock Button on Loader Control | ✓ | ✓ | Seat, Deluxe Fabric Heated | Optional | Optional |
| Entry Level Radio | Optional | Optional | Seat, Fabric | ✓ | — |
| Face Fan | Optional | Optional | Security Keypad | Optional | Optional |
| Front and Rear Side Opening Windows | ✓ | ✓ | Self Cancelling Directional Indicators | ✓ | ✓ |
| Front Headlights* | ✓ | ✓ | Steering Wheel Column, Tilt and Telescopic Adjustment | — | ✓ |
| Full Width Perforated Sun Visor | ✓ | ✓ | Steering Wheel Column, Tilt | ✓ | |
| Fully Adjustable Work Lights (×8) | ✓ | ✓ | Transmission Neutralizer on Loader Control | ✓ | ✓ |
| Gauge Cluster with LCD Display | ✓ | ✓ | Throttle, Foot | ✓ | ✓ |
| Horn Front | ✓ | ✓ | Throttle, Hand | ✓ | ✓ |
| Horn Rear | ✓ | ✓ | Window Wiper Front and Rear | ✓ | ✓ |
| Instrument Panel Vandal Guard | ✓ | ✓ | | | |

*May vary depending on region

427F2 Backhoe Loader

Materials and specifications are subject to change without notice.

Featured machines in photos may include additional equipment.

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

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