

301.5

Mini Hydraulic
Excavator



Cat® 3003 Naturally Aspirated Diesel Engine

| | | |
|----------------|-------|---------|
| Flywheel Power | 13 kW | 17.4 hp |
|----------------|-------|---------|

Operating Weight:

| | | |
|----------|---------|---------|
| With cab | 1673 kg | 3687 lb |
|----------|---------|---------|

| | | |
|-------------|---------|---------|
| With canopy | 1558 kg | 3434 lb |
|-------------|---------|---------|

301.5 Mini Hydraulic Excavator

Designed, built and backed by Caterpillar to deliver exceptional performance and versatility, ease of operation, serviceability and customer support.

Performance and Versatility

A wide range of work tools gives the 301.5 Mini Hydraulic Excavator versatility in applications such as building construction, landscaping and demolition. Auxiliary hydraulic lines can be installed at the factory or in the field. The control pedal, auxiliary valve and lines up to the swing post are standard. The blade has a float function, allowing the 301.5 to more efficiently perform clean up operations, particularly on finished surfaces. The two-speed hydrostatic power train provides fast travel speeds between work areas.

Built for tough work

The 301.5 Mini Hydraulic Excavator is built to the same high standards as larger Caterpillar® excavators. Stylish design, high quality finish and impact resistant non-metallic corner protectors help maintain the machine's high value.

Ease of Operation

Equipped with cab or canopy, the 301.5 provides an excellent view to the work area. The optional cab is easy to enter and is equipped with many convenience features. Low effort controls are ergonomically designed for maximum operator comfort. **pg. 4**

Serviceability

Tilt-up hood gives access to all major components and service points, making daily maintenance easy. The front linkage has low maintenance pivot joints, which require less time for routine maintenance, and all grease fittings can be easily reached. The S•O•S oil sampling valve provides easy sampling of hydraulic oil for preventative maintenance. **pg. 5**



Work Tools

Caterpillar buckets and hydraulic powered tools, matched to fit the 301.5 Mini Hydraulic Excavator.

Customer Support

Caterpillar dealers offer unmatched customer support with excellent equipment management services and fast parts availability, resulting in maximum uptime and minimum repair costs. Equipment maintenance and management services help optimize performance, reliability and profit. **pg. 5**



Work Tools

Caterpillar designed work tools extend the versatility of the 301.5 Mini Hydraulic Excavator. Built for performance and durability, the full range of mini hydraulic excavator work tools deliver high productivity, long service life and excellent value.

- Digging Buckets
- Ditch Cleaning Buckets
- Hydraulic Hammers
- Auger

Mechanical Quick Coupler

This feature allows the operator to make fast, easy work tool changes. The Caterpillar Quick Coupler maximizes performance while allowing use of standard buckets and work tools.



Operator Station

Comfortable, world class cab and unmatched ease of operation.



Excellent viewing to the work tool is possible with large windows and offset swing post. The curved hood and large rear glass give superior viewing to the rear. The easy-to-open front window, removable lower-front window and sliding right-side window offer excellent ventilation.

Low effort pilot hydraulics and ergonomically designed controls minimize fatigue and maximize comfort for the operator. The automatic swing lock helps ensure that the boom is held in a secure position while transporting the machine. Straight line travel is provided to help maintain a straight

course while tracking and operating the front linkage simultaneously. The console serves as a hydraulic system lockout, preventing use of all hydraulic functions when placed in the up position.

Operator station is easy to enter and exit, and the flat floor is easy to clean. The optional spacious cab is equipped with many convenience features:

- Heater and defroster
- Interior light
- Mounting blocks for mirrors, lights and front guards
- Windshield wiper and washer

Other features in the cab and canopy include:

- Coat hook
- Gauges and indicators
- Storage space
- Optional suspension seat, vinyl or fabric covered

Serviceability

Quick access and superior design make the 301.5 Mini Hydraulic Excavator easy to maintain.

Easy access to major components and service points is provided by the large opening tilt-up engine enclosure.

- Air filter (filter blockage indicator on gauge panel)
- Engine oil check and fill
- Engine oil filter element
- Maintenance-free battery
- Radiator reservoir tank check and fill
- Vertically mounted, spin-on fuel filter/water separator element
- Windshield washer tank

Sight gauges for hydraulic oil and fuel make fluid level checks convenient. Lockable fill caps use the same key as all other locks.

Low maintenance bushings in front linkage pin joints and blade mechanism extend greasing intervals. All grease fittings are easy to access.

S•O•S oil sampling valve allows easy sampling of the hydraulic fluid for preventative maintenance.

Cost effective replacement parts are available through a service exchange program. Many parts are interchangeable with other Cat machines.



Customer Support

Complete services provided by the world's largest dealer network.

Unmatched dealer support with excellent equipment management services and fast parts availability — most within 24 hours — provide maximum uptime and minimum repair costs.

Equipment maintenance services to help optimize machine performance and reliability. Services include:

- Customer Support Agreements
- S•O•S oil analysis
- Maintenance contracts
- Scheduled technical inspections

Equipment management services to help optimize profits. Services include:

- Machine and work tool selection
- Rental and leasing
- Purchasing and financing
- Owning and operating cost management
- Extended warranties

Note: For a complete explanation of these services please call your local Caterpillar dealer.



Engine

Caterpillar 3003 naturally aspirated, watercooled, 4-stroke, 3-cylinder diesel engine.

The following ratings apply at 2300 rpm when tested under the specific standard conditions for the specified standard:

| Gross power | kW | hp |
|-------------|------|------|
| SAE J1995 | 13.7 | 18.4 |

| Net power | kW | hp | PS |
|-------------|------|------|------|
| Caterpillar | 13.0 | 17.4 | — |
| ISO 9249 | 13.0 | 17.4 | — |
| SAE J1349 | 13.0 | 17.4 | — |
| EEC 80/1269 | 13.0 | 17.4 | — |
| DIN 70020 | — | — | 18.0 |

Dimensions

| | | |
|--------------|---------------------|----------------------|
| Bore | 75 mm | 2.95" |
| Stroke | 72 mm | 2.83" |
| Displacement | 954 cm ³ | 58.2 in ³ |

The Caterpillar 3003 engine meets the EPA and projected EU stage 1 emission requirements through 2004.

Travel System

| Travel speed: | | |
|---------------|----------|---------|
| High | 4.4 km/h | 2.7 mph |
| Low | 2.2 km/h | 1.4 mph |

| Max traction force: | | |
|---------------------|---------|---------|
| High | 6.4 kN | 1440 lb |
| Low | 13.6 kN | 3060 lb |

Gradeability 30° max

- Each track is driven by one independent 2-speed motor
- Drive modules are integrated into the roller frame for total protection
- Straight line travel when tracking and operating the front linkage simultaneously

Sound Levels

Operator sound pressure level is 83 dbA for cab and 80 dbA for canopy builds when measured per ISO 6396 (dynamic) or 95/27/EC.

Undercarriage

H-shaped, fabricated frame.

- Fabricated design gives high durability
- Tapered roller frame reduces accumulation of material in the tracks
- Track tension adjustment is accomplished through grease-filled cylinders
- Trackshoe width is 230 mm (9") for both standard rubber and optional steel shoes
- Ground clearance is 220 mm (8.7")

Number of rollers per side 3

Blade

Blade is curved and is full width of the machine.

| | | |
|-----------------|--------|-------|
| Width | 980 mm | 38.6" |
| Height of blade | 250 mm | 9.8" |
| Dig depth | 225 mm | 8.8" |
| Lift height | 200 mm | 7.9" |

Electrical System

12-volt system.

- 55-amp alternator
- 12-volt, 500 CCA, 45 amp/hr maintenance free battery
- Sealed electrical connectors

Hydraulic System

- Auxiliary valve, lines to the swing post and foot pedal are standard
- Optional auxiliary hydraulic lines are available
- Secondary optional auxiliary line uses the bucket cylinder hydraulic circuit
- Boom, stick, bucket and machine swing are pilot-controlled

Pumps: three gear-type, Max delivery:

| | | |
|--------|------------|-------------|
| Tandem | 2 x 16 lpm | 2 x 4.2 gpm |
| Single | 1 x 17 lpm | 1 x 4.5 gpm |

Operating pressures:

| | | |
|-----------|---------|----------|
| Equipment | 186 bar | 2734 psi |
| Travel | 186 bar | 2734 psi |
| Swing | 172 bar | 2528 psi |

Auxiliary circuits:

| | |
|-----------------------------|--|
| Primary auxiliary circuit | 32 lpm (8.4 gpm) at 186 bar (2734 psi) |
| Secondary auxiliary circuit | 16 lpm (4.2 gpm) at 186 bar (2734 psi) |

Digging forces:

| | | |
|--------|---------|---------|
| Stick | 900 kg | 1984 lb |
| Bucket | 1290 kg | 2843 lb |

Swing System

Hydraulic motor-driven.

- Automatic swing brake, spring applied, hydraulic release
- Centralized lubrication

Machine swing speed 9.7 rpm

Boom swing system with cast swing post:

| | |
|---------------------|-----|
| Left (without stop) | 90° |
| Left (with stop) | 54° |
| Right | 50° |

Service Refill Capacities

| | liters | gallons |
|------------------|--------|---------|
| Cooling system | 4.5 | 1.2 |
| Engine oil | 3.5 | .9 |
| Fuel tank | 22 | 5.8 |
| Hydraulic tank | 20 | 5.3 |
| Hydraulic system | 37 | 9.8 |

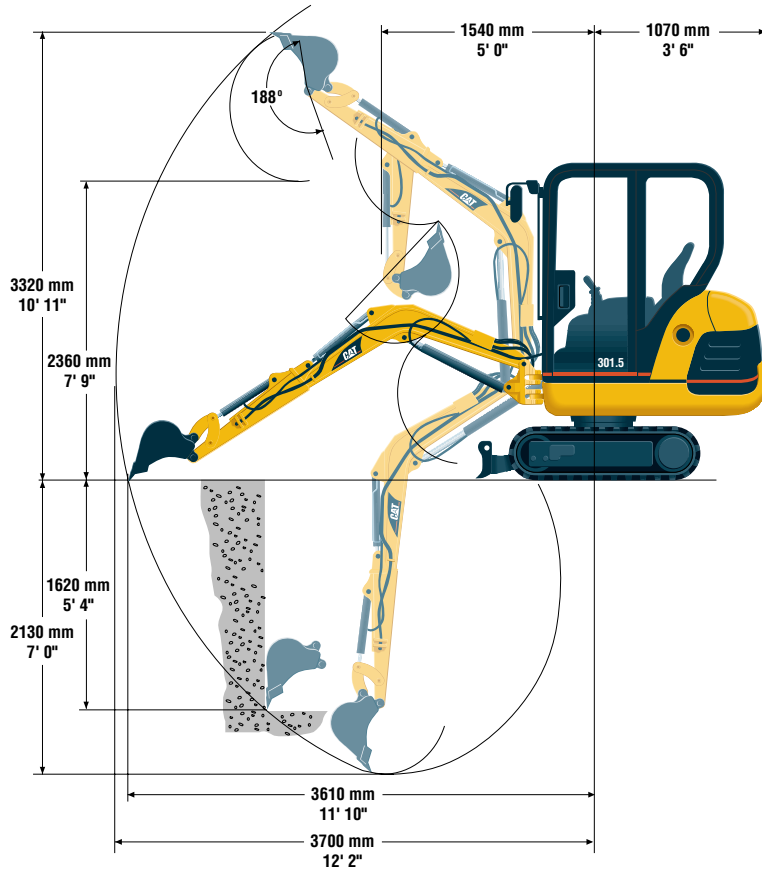
Weights

With rubber tracks, bucket, operator, full fuel and auxiliary lines.

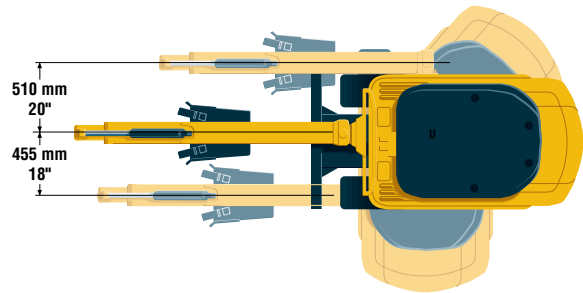
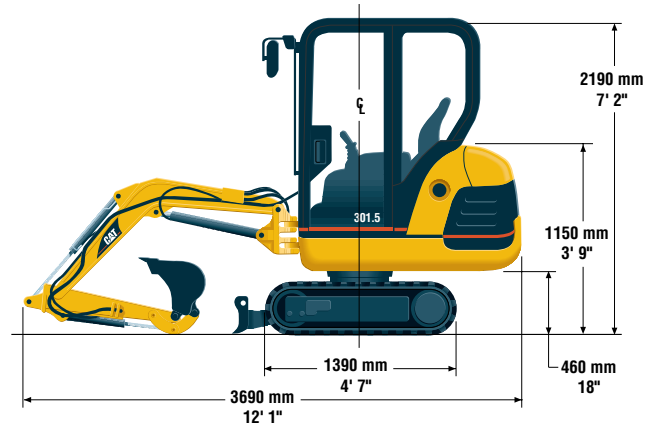
| | | |
|--------|---------|---------|
| Cab | 1673 kg | 3687 lb |
| Canopy | 1558 kg | 3434 lb |

Dimensions

(approximate)



| | | |
|-----------------------|--------|-----|
| Track and blade width | 980 mm | 38" |
| Gauge width | 750 mm | 30" |
| Shoe width | 230 mm | 9" |



Standard Equipment

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

- | | |
|--|------------------------------------|
| Alternator, 55-amp | Horn |
| Automatic swing parking brake | Hydraulic oil cooler |
| Auxiliary hydraulic PTO with valve, controls and lines to the swing post | Lockable fuel cap |
| Boom cylinder guard | Lockable storage box |
| Canopy, FOPS ISO 10262 (Level I) and Tip-Over Protection ISO 12117 | Low maintenance linkage pin joints |
| Coat hook | Maintenance-free battery |
| Dozer blade | Seatbelt, 50 mm (2 in) |
| Floor mat | Static, vinyl covered seat |
| Gauges or indicators for fuel level, engine coolant temp., hour meter, engine oil pressure, air cleaner, alternator and glow plugs | Two-speed travel |
| | 230 mm (9 in) rubber track |
| | Wrist rests |

Optional Equipment

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

- Auxiliary hydraulic lines, front linkage
- Boom check valve
- Cab, fully glazed, FOPS ISO 10262 (Level 1), Tip-Over Protection ISO 12117 with:
 - Heater/defroster
 - Interior light
 - Windshield wiper and washer
- Foot travel pedals
- FOPS ISO 10262 (Level II) guards
- Front screen for cab and canopy
- Lights, cab mounted and boom mounted
- Mirrors, for cab or canopy
- Radio installation kit
- Suspension seat, vinyl or fabric
- Tool kit
- Travel alarm
- 230 mm (9 in) double grouser steel track

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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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