

## Courtesy of Machine.Market

## Cat 436C Backhoe Loader

The new C-Series backhoe loaders begin a new era of performance, versatility, and operator comfi

### Loader versatility

The Cat\* single-tilt loader continues to be the best in its class — with fast cycle times and large payloads. The optional integrated toolcarrier (IT) loader adds even more versatility with a parallel lift

- even more versatility with a parallel lift feature for better material handling.

  Maximum lift and breakout forces.

  Divergent lift arms, a low-profile
- hood, and a single tilt cylinder for maximum visibility to the implement • Large loader torque tube resists
  - bending and twisting Self-leveling and return to die

### Operator station

A new level of comfort and visibility has been achieved in the newlydesigned 436C cab. The operator has

- total machine control in a comfortable environment.

  Spacious operator station
- Spacious operator station
   Convenient personal storage areas
   Large side windows open 180 degrees to maximize visibility and
- Low-effort controls placed within natural reach for operator comfort.

- Caterpillar 3054T engine
- Durable gear-driven water pump
- Thermal starting aid for easier coldweather starting
  Parts commonality with other Cat
  - machines Low cost-per-hour

## The Cat 436C — More than a machine. A partner.

The Cat 436C — More than a machine. A partner.

Once again Caterpilla is the benchmark for both exponomics and performance. You'll load fastee, dig deeper and lift higher, all in the comfort of the CS-eries cale. You asked for comfort and visibility to match performance. Caterpillar answers with the 436C.

Your backhoe loader is ready when you are!

## **Standard Equipment**

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

Air cleaner, dry type, radial seal with precleaner and filter condition indicator Alarm, backup Alternator, 55-amp, 12-volt

Audible system fault alarm Backhoe, 16 ft. 3 in./ 4953 mm dig depth center-pivot excavator-style backhoe 2 lever control Battery, maintenance free, 700 CCA

Brace, lift cylinder
Brakes, oil-disc with dual pedals & interlock
Brake, secondary parking

Brake, secondary parking Cat 3054T turbocharged diesel engine Coat hook

Coolant/antifreeze, extended life (to -34° Fahrenheit /-37°C) Counterweight, bumper (35 lb./16 kg) Differential lock

Engine enclosure Face seals, O-ring Fan, suction, and fan guard Fast reversing shuttle, all gears Flashing hazard/signal lights

Foot rest, backhoe position

Front axle, pendulum mount Front grill with bumpers Gauges: coolant temperature, fuel level, tachometer, torque converter oil

Gauges: coolant temperature, fuel level, tachometer, torque converter oil temperature, voltmeter Ground line fuel fill with 34 gal/128 liters canacity

Grouser style stabilizer shoes Hydraulic hose, XT-3 Hydraulic oil cooler Indicators: air cleaner service, brake on,

clock hour meter, engine coolant, hydraulic oil level sight gauge, oil pressure Instrument panel lights

Key start/stop system with auxiliary position Lights, working (2 front, 2 rear) Load sensing, variable flow system with

43 gpm/162 Vm axial piston pump Loader, self leveling with return-to-dig and transmission disconnect switch on single-lever control Mirror, rearview Power steering, hydrostatic ROPS canopy Seat belt, retractable (2 in./51 mm) Seat, suspension with fabric or vinyl seat

Seat, suspension with fabric or vinyl seat cover and ammests Spin-on fuel, engine oil, hydraulic (10 micron), transmission oil filters, and water separator

water separator
Starting system, thermal starting aid
Storage compartment, internal
Stop and tail fights (2)
Stong and tail fights (2)
Stong transport lock
Tires (see page 17)
Tool box, external, lockable
Torque converter
Throttles, hand and foot
Transmission, four-speed synchromesh
Transmission neutralizer switch

Transport tie-downs

Warning horn, front, electric

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	US Gal	Liters
Cooling System		
turbocharged / a/c	5.7	21.6
Fuel Tank	34.0	128.0
Engine Oil with Filter	2.0	7.3
Transmission		
two-wheel-drive	4.0	15.0
all-wheel-drive	4.8	18.0
Rear Axle	6.4	24.0
Count Awley (AWD)	2.0	7.4

two-wheel-drive	4.0	15.0
all-wheel-drive	4.8	18.0
Rear Axle	6.4	24.0
Front Axle (AWD)	2.0	7.4
center	2.0	7.5
planetaries	0.2	0.75
Hydraulic System	21.0	79.0
Hydraulic Tank	8.0	38.0

Rear Axle	6.4	
Front Axle (AWD)	2.0	П
center	2.0	
planetaries	0.2	-
Hydraulic System	21.0	
Hydraulic Tank	8.0	

### \* Valve stem protection (VSP) included \*\*Must use with 21L x 24 12 PR rear tire

Size Rating Type

11L x 16

IT Loader

2WD (F3)

2WD\*+ (F3)

Rear, Ontional

AWD/AWS\* (SGL)12.5/80 x 18

AWD/AWS+ (IT510)340/80 x R18 Rear, Standard

2WD/AWD/AWS(IT\$25)19.5L x 24 10

2WD/AWD/AWS (TT\$10)19.5L x R24 F

2WD/AWD (IT525) 21L x 24

11L x 16

14.5/75 x 16

## Standard-Duty Buckets

With weld-on adapters and pin-on teeth

Tires Tubeless, nylon, loader design tires. Single-Tilt

Type

Front, Standard 2WD (F3)

Front, Optional 2WD\*\* (F3)

Rear, Optional

AWD/AWS\* (SGL)12.5/80 x 18

AWD/AWS\* (IT510)340/80 x R18

2WD/AWD (IT525) 21L x 24

2WD/AWD/AWS(IT525)19.5L x 24 10

2WD/AWD/AWS (IT510)19.5L x R24R

Width Capacities SAE Weight (in/mm) (friffinges) (lb/kg) 12 / 305 287 / 130 331 / 150 30 / 762

397 / 180

**Heavy-Duty Buckets** With weld-on adapters and pin-on teeth Width Capacities SAE Weight (felflinery) (lb/kg)

16 / 400 3.5 / 100 7.07.198 386 / 175 463 / 210

### **High-Capacity Buckets** With weld-on adapters and pin-on teeth

36/914 11.5/311

Width (in/mm)	Capacities SAE (ft/liters)	Weight (lb/kg)	No. of Toeth
18 / 457	6.5 / 184	342 / 155	4
24 / 610	9.0 / 255	397 / 180	5
30 / 762	11.0/311	441 / 200	5
36/914	14.0 / 396	474 / 215	6

Extreme-Service Buckets With weld-on adapters and pin-on touth

Width Canacities SAE Weight No of

(in/mm) (fit/liters) (lb./kg) 320 / 145 6.0 / 156 364 / 165

Note: Additional GET tips available through Caterpillar Parts

### Weights

Standard machine with 1.4 yd1/ 1.07 m1 general-nurpose loader bucket, 24 in. / 610 mm high-caracity backhoe bucket. 1.010 lb. / 460 kg counterweight. 176 lb. / 80 kg operator and full fuel

tank.

Operating weight (range) 15,599-21,389 lb. / 7076-9700 kg POPS cale 573 lb / 260 ke 234 lb. / 106 kg All Wheel Steer 760 lb / 345 ke Loader IT w/O6 MP bucket (1.25 vd<sup>2</sup>/ 0.96 m<sup>2</sup>)

with fold-over forks 867 lb. / 393 kg w/o fold-over forks 490 lb. / 222 kg Extendible stick (excludes front counterweight) 523 lb. / 237 ki Counterweights, base 320 lb. / 145 ki

sescicable, three (ea) 230 lb / 105 kg stackable, one 470 lb. / 215 kg Minimum Counterweight Recommendations - Standard Stick IT I mader w/OC

GP	2WD	1,010 lb. /460 kg	550 lb. / 250 kg	
GP	AWD/AWS	1,010 lb. / 460 kg	320 lb, / 145 kg	
MP	2WD	320 lb. / 145 kg	Bumper	
MP	AWD/AWS	Bumper	Bumper	
MP with fold-over feeks	2WD	320 lb. / 145 kg	N/A	
MP with fold-over forks	AWD/AWS	Bumper	N/A	
Early / Material handling arm	2WD/AWD/AWS	N/A	350 lb. / 250 kg	

Minimum Counterweight Recommendations — Extendible Stick

GP	2WD/AWD/AWS	1,250 lb. / 570 kg	1,250 lb. / 570 kg
MP	2WD	1,250 lb. / 570 kg	780 lb. / 355 kg
MP	AWD/AWS	1,250 lb. / 570 kg	550 lb. / 250 kg
MP with fold-over forks	2WD	1,250 lb. / 570 kg	N/A
MP with fold-over forks	AWD/AWS	1,010 lb. / 460 kg	N/A
Forks / Material handling arm	2WD/AWD/AWS	N/A	1,250 lb. / 570 kg

None: Burmer (35 lb. / 16 kg) is standard with all units Total gross, vehicle weight not to exceed 21,389 lb. / 9700 kg.

### Steering Full hydrostatic steering.

Full hydrostatic steering controlled by a hand metering unit. Steering unit provides secondary steering capability in case of power failure.

Front wheel 2WD Cylinder, one (1) double-acting Bore 3 in. / 76 mm 8 8 in / 224 mm 2.6 in / 65 mm AWD Cylinder, one (1) double-acting 2.6 in. / 65 mm 83 in /210 mm Rod diameter 1.4 in. / 36 mm

**Turning Circle** 

2WD / AWD (Inner wheel not braked) Outside front wheels 26 ft. 11 in. / 8.2 m

Outside widest loader bucket 35 ft 5 in / 10 8 m SAE1695

All Wheel Steer

Full hydrostatic steering controlled by a hand metering unit. Three operatorselected modes to maximize the machine maneuverability:

1 - Two-wheel-steer mode 2 - Circle-steer mode 3 - Independent-rear-maneuvering mode Steering unit provides secondary steering in case of power failure.

Type: All Wheel Steer Power steering: hydrostatic Cylinders: one double-acting front cylinder and one double-acting rear cylinder

8.3 in. / 210 mm Baar 3.1 in. / 80 mm 4.1 in. / 104 mm 1.6 in /40 mm

Bore

Rod diameter Turning Circle\*: Two-wheel-steen 35 ft. 5 in. / 10.8 m Circle steer 34 ft. 1 in. / 10.4 m

31 6 2 in 195 m Meets ISO 5010 1992 and SAE J1511

February 1994. \* Outside widest loader bucket

Courtesy of Machine. Market

### Axles

Choice of standard two-wheel-drive or all-wheel-drive

### Features

- · Heavy-duty rear axle with selfadjusting inboard brakes, differential
  - lock, and final drives Optional all-wheel-drive (AWD) engaged by front console panel switch, on-the-go, under load, in any gear, forward and reverse. Features outboard planetary gear final drives.
- AWD and 2WD axles are pendulum. mounted and permanently sealed and lubricated, requiring no daily
  - maintenance. Also feature doubleacting steering cylinder with 50° steering angle for increased maneuverability. Oscillation 11st each direction from centerline.

Axle Batings Front syle two-wheel drive

Static	30,319 lb.	13750 kg	
Dynamic	6,983 lb.	3167 kg	
Front axle, all-	wheel drive		
Static	27,029 lb.	12258 kg	
Dynamic	6,983 lb.	3167 kg	
Rear axle			
Static	61,233 lb.	27770 kg	
Dynamic	20,418 lb.	9260 kg	

## 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

Variable-flow, axial-piston

43 gpm / 162 1/m at 2,200 RPM System pressure 3.000 psi / 20700 kPa

## **Brakes**

Fully enclosed, hydraulic, multiple discs.

### Features

· Inboard oil-immersed, hydraulicallyactuated, multiple 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 SAE J1473 October 1990 and

ISO 3450 1985 requirements.

### Cah

ROPS cab is standard.

When properly installed and maintained. the cab offered by Caterpillar, when tested with doors and windows closed as per work cycle procedures specified in ANSI/SAE J1166 May 90, results in an operator sound exposure Leg (equivalent sound pressure level) of 82 dB(A). This A-weighted sound exposure level can be used in conjunction with OSHA. MSHA, and EEC Occupational Noise Exposure Criteria. Also, when tested as per the static specifications of 86/662/EEC, the respective sound pressure levels are as follows:

Turbocharged dB(A) dB(A)\* Exterior (ISO 6393) 106 \*with air conditioning

ROPS (Roll Over Protective Structure) offered by Caterpillar for this machine meets ROPS criteria SAE 1394, SAE J1040 May 1994, and ISO 3471 1994. It also meets FOPS (Falling Object Protective Structure) criteria SAE January 1981 and ISO 3449 1992.

### Engine

Caterpillar 3054T turbocharged, direct injection, four-cylinder diesel engine.

Ratings at 2200 RI	PM	HP	kW
Gross Power (turbo	3)	89	66
Net Power (turbo)		85	63
The following ratin RPM when tested a conditions for the a Net Power at 220 Turbocharged	inder the specified	specifi	ed
Caterpillar	85	63	
SAE J1349	84	63	-
ISO 9249	85	63	-
ISO 1585	8.5	63	-
EEC 80/1269	85	63	-

EEC 80/1269	85	63	-
DIN 70020	-	100	8.3
Dimensions			
Bore.	3.94	in. / 1	00 mm
Stroke			27 mm
Displacement	243 cu	in. / 4	.0 liter
Percent Torque	Rise (net)		
Turbocharged			24.1

- Power Rating Conditions

  Based on standard air conditions of 77°F (25°C) and 29.32 in, 199 kPa)
- dry barometer.

  Used 35°API gravity fuel having an LHV of 18,390 Btu/lb. (42,780 kJ/kg) when used at 86°F (30°C) when used at 86°F (30°C) h./val (838.9)
- g/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 7,500 ft.
- (2286 m) altitude. Features
- Controlled-expansion, three-ring pistons made of lightweight, silicon/aluminum alloy for strength and maximum thermal conductivity.
   Forest, chrome/molybdenum-steel
- crankshaft with tuffride hardened journals.

  • Front and rear crankshaft oil seals are "lip" type Viton design featuring an internal dust lin.
- Heat-resistant, silicone-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. Uses replaceable flanged pressfit drystype cast iron liners.
- Cylinder head is high-strength, castiron alloy construction with extradusy wall and dock thickness. Intake and exhaust ports are fully machined.
   Direct-injection fuel system provides
- Direct-injection fuel system provides accurate fuel delivery. Injectors are easily accessible.
   Dry-type, radial-seal, two-stage air.
- cleaner improves visibility by eliminating hood-mounted precleaner.

  Direct-electric 12-volt starting and
- charging system with 700 CCA Group 31 maintenance-free battery.

  Standard thermal starting aid system for efficient cold weather starting.

### Transmission

Caterpillar countershaft four-speed transmission with electric forward and reverse shuttle.

Four speeds forward and reverse power shuttle — 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 machine while shuttle is enpaged.

Torque converter free-wheel clutch allows the converter stator to free-wheel during high-speed, low-load conditions such as roading. Transmission Disconnect Hand-operated power disconnect (no clutch) for easy, on-the-go shifting and full engine run for faster cycle times.

Torque Converter
Single-stage, 2.63:1 stall ratio.
Forward/Reverse Electric Power
Shuttle
Conveniently placed, hand-operated

lever provides instant, on-the-go direction changes between forward and reverse through power hydraulic clutchos. Travel Speeds
Travel speeds of two-wheel-drive

backhoe loader at full throttle, when equipped with 19.5L x 24 rear tires.

| Section | Sect

## All Wheel Steer

Adds maneuverability and versatility,





operation, all easily selected from the indicates position of year wheels.

### All Wheel Steer (AWS). The independently-maneuvered rear axle

reduces the turning diameter by over 4 feet, giving the tightest turning circle. All Wheel Steer provides three modes of operation:

offers the performance capabilities desired for on-road operation, and when additional maneuverability is not

· (2) Circle steer: used for steering provides reduced turning allows for tighter operation in confined spaces.

· (3) Independent-rearmaneuvering: each axle is controlled independently. A rocker switch located on the loader lever maneuvering of the rear wheels. This extra dimension of control allows for the greatest maneuverability of the machine. It gives the machine the ability to crab and to turn even tighter than in the circle-speer mode.

operations:

parallel to an open trench or foundation wall. · Steering and maneuvering while backdragging or dozing with the loader bucket. · Grading and leveling while on

controls the rear axle when in the independent-rear-maneuvering mode.

### Optimal visibility to the loader tool Excellent visibility is achieved with the traction and flotation, and front tires that provide a clear view of the loader implement and front work area.

a side slope. Courtesy of Machine, Market Load-sensing, closed-center system provides power where you need it, when you need it.



Hydraudics. You don't work at full production all the time — and the Caterpillar variable-flow system senses the work demand and adjusts flow and pressure to match it. This system allows high backet dig forces whatever the engine speed — providing sexellent control for those delicate jobs in confined areas. And, very importantly, there's less wear and tear on the system.

Caterpillar hydraulic systems are truly "load-sensing" — with closed-centered implement valves. This design permits feedback of the hydraulic system requirements to the pump, allowing delivery of the exact flow and pressure necessary to satisfy the requirements of the hydraulic system.

Pressure-compensated valves are used to reduce control-lever effort for less operator fatigue.

Pump flow has been increased to 43 gpm for even faster cycle times and more productivity.

Caterpillar XT hoses are used for all pressure applications to substantially reduce downtime from hose failure. The Cat XT-3 hose is made of four overlapping, insulated wire spiral wraps bonded together for unrivaled long life. XT-3 boses exceed SAE certification standards, and the hose routing protects them from work damage. If a hose does need replacing, it's fast, easy, and requires no special tools.

Caterpillar couplings are equipped with O-ring face seal fittings for long life and less maintenance.



### Hydraulic Pump

The state of the s

XT Hose

# Wasted Horsepower/Fuel



In the Cot closed-center hydraudic system, power is delivered only when neviaed soring fuel and equipment were and sear. In contrast, on open-center, gear-pump system constantly pumps hydraudic oil at nearmaximum force, resulting in wasted horsepower and fuel.



O-Ring Face Seal Fittings

2 436C / 436C IT specifications

### Power-Shuttle transmission.

Built rugged for tough applications. The Power-Shuttle transmission provides four speed selections in a constant mesh synchronized arrangement, coupled with hydraulically shifted forward and reverse shuttle clueches. Direction and tawel speed can be chanced on she-no. A rocker switch engages all-wheeldrive (AWD) on-the-go, under lead. A new torque converter is used to efficiently apply engine power for maximum fuel efficiency and performance. An improved second-gear natio increases machine rimpull to

The Cat extendible stick increases versatility by extending dig depth and

reach by approximately four feet. Selflubricated, non-metallic, shim-adjustable wear pads are used for low maintenance, minimal wear and ease of adjustment.



### Power Train/Chassis

Designed for strength, performance, and versatility.

Caterpillar 3054T engine, The 3054T engine in the 436C is a turbocharged, 4cylinder, 4-stroke, direct-injection starting down to -20° F. The Cat 3054T also features a gear-driven water pump. providing better reliability than a conventional belt-driven design. A dry-type, radial-seal air filter has been designed specifically for this

incorporates the function of the air cleaner and precleaner into a single unit. which eliminates the hood-mounted procleamer.

Axles and brakes. The semi-floating rear axle is an enclosed design that allows extended operation even in the harshest environments. Multi-disc. hydraulic brakes are oil-immersed and self-adjusting.

Hydraulies. You don't work at full capacity all the time - and the Caterpillar variable-flow system senses virtually eliminate downtime from bose failure. If a hose does need replacing, it's fast, easy and requires no special

Caterpillar couplings are equipped

Stackable counterweights allow easy adjustment of weight distribution without having to completely replace an

Spacious, lockable tool and battery box provides secure tool storage.





Operator controls. The 436C sees a new standard for smooth, precise control, and case-of-operation. Instrumentation is user-friendly and controls are positioned within easy reach. The Cat variableflow, load-sensing hydraulic system adjusts flow and pressure to meet work demand. And there's less operator effort, resulting in less fatigue and greater productivity.



436C / 436C IT specifications

### Operator Station

The C-Series cab - new dimensions in comfort and visibility.

Visibility. The 436C is specially designed for maximum visibility — with 40 percent more visibility than previous models. The sloping from hood and divergene tilt amus allow the operator to see more of the forward work area and loader attachment. Rear visibility continues to be the best in the industry with a narrow boom and a rear window that stows above the operator out of



Operator control. The cale on the #40C is tellally new — designed to maximize operator comfort. Features include a mew heatinglair conditioning system with increased capacity. Pully opening side and rear windows provide additional ventilation, and the cale roof tellal rearrange of the cale of



### Excavator-style backhoe

- · Ability to reach over obstacles
- · Faster, easier truck loading · Enhanced visibility

### All Wheel Steer Option · Improves maneuverability and

versatility

· Increases machine utilization

### Load-sensing hydraulic system · Power where you need it, when you

- need it, at any engine speed
- · Cat exclusive, high-pressure XT hose · O-ring face seal fittings for reliability

### Other special features Single location access to service refill

- · Stackable counterweights allow easy
- adjustment of weight distribution
- · Spacious, lockable tool and battery box provides secure tool storage
- . Large 34-gallon fuel tank extends



## **Optional Equipment**

With approximate change in operating weight.

lbs/kg	
Air conditioning	Battery, additional
All Wheel Steer	Cab. ROPS
Alternator, 90 amp	Coolant, additional protection
Attachments, front loader (single tilt)	(-58° F/-50° C)
General-purpose buckets:	Counterweights:
1.31 vd'/1.0 m'	Base
1.40 yd 7 1.07 m <sup>1</sup>	Stackable:
1.50 yd 7 1.15 m1 40 / 18	three (each)
Multi-purpose buckets:	
1.25 yd /0.96 m <sup>1</sup>	one
1.25 vd /0.96 m3 w/fks867 / 393	Two piece
1.35 vd <sup>2</sup> /1.03 m <sup>2</sup> 540 / 245	Guards:
1.35 yd 71.03 m' w/fks 915 / 415	AWD driveshaft
Attachments, front loader (TT)	Stabilizer, rock
General-purpose bucket:	High ambient cooling package 4/2
1.31 yd <sup>1</sup> /1.0 m <sup>1</sup>	Hydraulic valves, loader:
1.50 vd ½ 1.15 m²79 / 36	3rd valve for GP, MP or
Multi-purpose bucket:	Quick Coupler
1.25 yd50.96 m1	Hydraulic valves, backhoe:
1.35 vd/1.03 m <sup>1</sup> 540 / 245	Auxiliary valve
Forks (for use with IT loader):	(standard stick)
43 in./1.043 mm714 / -324	Auxiliary valve
48 in/1.220 mm677 / -307	(extendible stick)
53 in/1,346 mm648/-294	Hydraulic lines:
Carriage, fork265 / -120	Auxiliary, low flow use
Material handling arm269 / -122	(to boom)
Attachments, backhoe	Universal, high flow use
Buckets (see page 17)	(to stick)
Quick Coupler (backhoe):	Quick disconnects
Mechanical	Lights:
Axle, front:	Working, additional
All-wheel-drive 234 / 106	(2 front, 2 rear)
Backhoe controls:	Loader, IT w/ QC741 / 336
Excavator pattern	
Foot swing, 3 or 4 lever26 / 12	
Four lever	

lbs/kg
Radio installation kit
Receptacle, 12 volt
Internal
External
Rotating beacon
Seat belt, 3 in./75mm
Stabilizers
Street pads, rubber (set of 4) . 82 / 37
Reversible pads
Stick, extendible
Teeth, loader bucket
Tilt steering wheel
Tires(see page 17)
Vandalism protection
Gauge cover
Padlocks
Hood lock 070

\* Included in base machine weight