

355

hydraulic excavator



Engine power - ISO 14396

Operating weight Bucket: Heavy-duty
(HD)

332 kW (445 hp)

54000 kg (119000 lb)

4.5 m³ (5.9 yd³)

CAT®

Technical Specifications

Please see cat.com for the full technical specifications.

engine		
Net Power - ISO 9249 Net	330 kW	443 hp
Power - ISO 9249 (DIN)	449 hp (metric)	
Engine Model	Cat® C13B	
Engine Power - ISO 14396	332 kW	445 hp
Engine Power - ISO 14396 (DIN)	451 hp (metric)	
Bore	130 mm	5 in
Stroke	157 mm	6 in
Displacement	12.5 L	763 in³
Maximum usable	B20¹ grade biodiesel	
emission standards	It meets China's National IV emission standards for non-road vehicles.	

The nominal net power is the flywheel power measured when the engine is equipped with a fan, intake system, and alternator at 1700 rpm. Nominal power is obtained by testing according to the specified standards in effect at the time of manufacture.

Cat diesel engines must use ULSD (ultra-low sulfur diesel with a sulfur content not exceeding 15 ppm) and be compatible with "blending ULSD with the following low-carbon intensity fuels", with the following maximum percentages:

20% biodiesel FAME (fatty acid methyl esters) ***

100% renewable diesel, HVO (hydrotreated vegetable oil), and GTL (gas-to-liquid) fuels.

Please refer to the guidelines for successful application. For more information, consult your Cat dealer or << Caterpillar Machine Fluids Recommendations>> (Caterpillar Machine Fluids Recommendations, SEBU6250).

*While Caterpillar engines are compatible with these alternative fuels, their use may be prohibited in some areas.

**The greenhouse gas emissions from low-carbon intensity fuels are substantially the same as those from conventional fuels.

***Engines without aftertreatment systems can be compatible with higher proportions of blended fuels, up to 100% biodiesel (for blends with more than 20% biodiesel, please consult your Cat dealer).

Hydraulic system		
Maximum pressure - equipment	35000 kPa	5076 psi
Maximum pressure - Equipment - Lift mode	38000 kPa	5511 psi
Maximum pressure - Driving	35000 kPa	5076 psi
Maximum pressure - rotation	26000 kPa	3771 psi

Rotation mechanism		
Rotation speed	8.3 rpm	
Maximum slewing torque	189 kN-m	139000 ft-lbf

weight		
Working weight	54000 kg	119000 lb

Wide variable gauge (W-VG) chassis, large capacity boom, SD M3.0UB (9'10") stick.

Heavy-duty (HD) 4.5 m³ (5.89 yd³) bucket, 600 mm (24") double gripper track shoes and 9300 mt (20500 lb) counterweight.

Fuel filling capacity		
Fuel tank capacity	715 L	188.9 gal
Diesel exhaust fluid (DEF) tank	80 L	21.1 gal
cooling system	52 L	13.7 gal
Engine oil	40 L	10.6 gal
Rotary drive - each	10.5 L	2.8 gal
final drive - each	9.5 L	2.5 gal
Hydraulic system - including oil tank	550 L	145.3 gal
Hydraulic oil tank	217 L	57.3 gal

size		
boom	Large capacity 6.55 m (21'6")	
stick	Large capacity 2.5 UB (8'2")	
Bucket	SD 3.21 m³ (4.20 yd³)	
Loading height - cab top	3230 mm	10.58 ft
Handrail height	3370 mm	11.08 ft
Loading length	11660 mm	38.25 ft
tail turning radius	3760 mm	12.33 ft
Counterweight ground clearance	1280 mm	4.17 ft
ground clearance	475 mm	1.58 ft
track length	5370 mm	17.58 ft
Track to track roller center length and	4360 mm	14.3 ft
track gauge	2740 mm	9.6 ft
Transport width	3530 mm	11.58 ft

Scope and intensity of work		
boom	Large capacity 6.55 m (21'6")	
pole	Large capacity 2.5 UB (8'2")	
Maximum	SD 3.21 m³ (4.20 yd³)	
digging depth of the bucket	6770 mm	21.7 ft
Maximum ground extension distance	10770 mm	35.2 ft
Maximum cutting height	10090 mm	33.8 ft
Maximum loading height	6580 mm	22.3 ft
Minimum loading height	3110 mm	10.1 ft
2440 mm (8 ft) Maximum cut at horizontal	6600 mm	20.8 ft
bottom depth	4110 mm	12.11 ft
Maximum vertical wall excavation depth	4110 mm	12.11 ft
Bucket digging force - ISO	293 kN	66600 lbf
Stick digging force - ISO	240 kN	54100 lbf

air conditioning system	
This machine's air conditioning system contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.0 kg (2.2 lb) of refrigerant with a CO2 (carbon dioxide) equivalent of 1.430 metric tons (1.6 tons).	
- If equipped with R134a (Global Warming Potential = 1859), the system's refrigerant charge is 1.3 kg (2.9 lb), with a CO2 equivalent of 1.9 metric tons (2.04 tons).	
- If equipped with R1234yf (Global Warming Potential = 0.501), the system's refrigerant charge is 1.1 kg (2.4 lb), with a CO2 equivalent of 0.001 metric tons (0.001 tons).	

acoustic performance	
GB/T 25614-2010 (External)	108 dB(A)
GB/T 25614-2010 (Internal) External	73 dB(A)

External Sound - Bystander sound power level is the guaranteed value under correct equipment configuration, conforming to GB16710-2010 requirements. Testing is conducted according to the procedures and conditions specified in GB/T25614-2010. Measurements are taken at 70% of the maximum engine cooling fan speed.

Internal Sound - Operator sound pressure level testing is performed on the Caterpillar cab according to the test procedures and conditions specified in GB/T25615-2010. Test conditions include proper cab installation and maintenance, and closed doors and windows. Measurements are taken at 70% of the maximum engine cooling fan speed.

Hearing protection measures should be taken for prolonged operation in open console or cab environments (e.g., poorly maintained or with doors/windows open), or in noisy environments.

Standard equipment and optional equipment

Standard and optional equipment may vary. Please consult your Cat® dealer for details.

Chassis and Structure	Standard configuration	Optional
Traction ring located on the y	●	
underframe, fixed gauge		●
chassis, variable gauge		●
chassis, 9300 kg (20500 lb) ballast,		●
10050 kg (22156 lb) ballast, 600 mm		●
(24") ballast, double traction tooth track shoes,		●
750 mm (30") triple traction tooth track shoes, 750		●
mm (30") double traction tooth track shoes.		●
Boom and stick	Standard configuration	Optional
6.55 m (21'6") SD; Large capacity boom		●
6.9 m (22'8") SD; Extended boom		●
2.5 m (8'2") SD; Large capacity stick		●
2.9 m (9'6") SD; Extended stick		●
3.0 m (9'10") SD; Large capacity stick		●
Cab Rollover	Standard configuration	Optional
Protection Structure (ROPS)	●	
Cab/Operator Protective Gear (OPG)		●
High-resolution 203 mm (8") LCD Touchscreen Display	●	
Automatic Two-Stage Air Conditioning	●	
Keyless Push-Button Start Engine Control	●	
Air Suspension Basic Seat	●	
51 mm (2") Seatbelt	●	
Bluetooth Radio with USB/Auxiliary Port	●	
24V DC power socket	●	
beverage holder	●	
openable two-piece front windows	●	
rear windows emergency exit	●	
radial wipers and washer	●	
openable steel cab hatch.	●	
LED dome light	●	
roll-up front sunshade	●	
washable floor mats	●	
high-resolution 254 mm (10") LCD touchscreen display		●
roll-up rear sunshade.		●
CAT technology	Standard configuration	Optional
Cat Equipment Management:		
Remote Flash	●	
Remote Troubleshoot	●	
Operator Coaching		●

The engine	Standard configuration	Optional
offers three selectable modes: Power and Smart. (Smart) and Eco engine speed	●	
automatic control	●	
up to 4500 m (14760 ft) Altitude operating capability	●	
up to 52°C (126°F) High temperature cooling capability	●	
down to -18°C (0°F) Cold start	●	
capability Dual-element air filter with integrated pre-filter Remote	●	
shut-off	●	
Cold start engine heater		●
Hydraulic reverse fan down to		●
-32°C (-25°F) Cold start capability		●
Electrical system	Standard configuration	Optional
1000 CCA maintenance-free batteries (x4)	●	
Central electrical disconnect switch	●	
LED light	●	
intake heater		●
Repair and maintenance	Standard configuration	Optional
Integrated vehicle health management system	●	
Centralized location of engine oil and fuel filter	●	
S•O•S port	●	
The hydraulic	Standard configuration	Optional
system boom and stick regeneration circuit	●	
electronic main control	●	
valve automatically preheats the hydraulic oil.	●	
Automatic swing parking brake	●	
High-performance hydraulic return oil filter,	●	
dual-speed travel,	●	
single-phase single-pump auxiliary		●
circuit, combined bidirectional dual-pump auxiliary circuit, quick		●
connector circuit.		●
The safety	Standard configuration	Optional
maintenance platform is equipped with anti-slip plates, countersunk	●	
screws, a rearview	●	
camera, a lockable power-off	●	
switch, automatic hydraulic	●	
hammer stop, rearview	●	
camera maintenance lighting, and more.		●