



320D3

Hydraulic Excavator

Lower your cost per hour. The Cat® 320D3 Excavator balances productivity, efficiency, and reliability to deliver you a reliable, highly efficient, low-cost-per-hour excavator for your work.

HIGH RELIABILITY

- Optimized HD Boom and Stick for longer life in quarry application.
- Two robust undercarriage choices providing optimized stability based on bucket selection.
- Proven 6-cylinder mechanical engine with no electronic control module.
- We designed the Stick and Boom structures using high-tensile steel fabricated into a large box section using internal baffles to absorb torsional stress. The single plate X-shaped, box-section car body provides excellent resistance to torsional bending, dissipating stress throughout the base of the machine.
- Robust bottom guards protect machine components that might be damaged while swinging. A thicker bottom guard plate is used under the pump compartment to protect the suction hose.
- Traverse the job site on the Grease Lubricated Track (GLT) undercarriage. Undercarriage rollers are rebuildable and sealed to prevent dirt and debris from causing internal wear. Grease lubricated links minimize internal bushing wear, reducing noise and increasing life up to 25%.
- Hydraulic snubbers in the boom and stick cylinders dampen end-of-stroke impact prolonging the life of your machine.
- Expect reliable performance from the double-filtered low-pressure fuel system and antirust fuel tank protects the engine from lower quality fuel.
- Thick braiding protects the colored, numbered electrical wires. Non-abrasive connectors keep wiring harnesses in place to prevent failure.

LOWER FUEL CONSUMPTION

- Up to 10% less fuel consumption than the previous 320D3 model in similar applications. Economy mode further reduces fuel consumption with no loss in lifting or digging forces.
- Save even more by using the Economy mode. Speed will reduce, but with no loss in lifting or digging forces. See savings of up to 20%.
- Boom and Stick regeneration circuits reduce fuel consumption by up to 2% while improving cycle times.
- Use automatic engine speed control (AEC) during no-load or light-load conditions to automatically reduce engine speed to minimize fuel consumption.
- Standard one-touch low idle saves fuel by instantly reducing engine speed to 1,000 rpm at the push of a button. Return the engine speed to the throttle position by hitting the button again or simply moving the joysticks.
- Electronic Tandem hydraulic pumps deliver up to 7% more efficiency with less internal friction losses and superior design. Each pump can produce a maximum flow of 214.5 L/min (56.7 gal/min). Hydraulic system components are close together to minimize power loss from friction and pressure drops.
- Optional Fuel Flow meter aids in reporting the fuel consumption through VisionLink™.

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LOWER MAINTENANCE COSTS

- Up to 15% lower maintenance costs than the first generation of 320D3 models, with advanced hydraulic oil filter design and reduced number of filters.
- Hydraulic system does not require a pilot filter, eliminating a filter that had to be changed frequently.
- Updated hydraulic filter design. Preventing oil contaminants entering the system during filter change no longer requires a capsule design.
- Drain filter is replaced with a cleanable screen and magnet.
- Extended first engine oil change interval (500 hours), and maintenance-free batteries.
- A two-stage fuel filtering system with integrated water separator protects the engine from particles larger than four microns when fuel quality is less than ideal.
- There is no need to manually prime the fuel system after fuel filter changes. The standard electric priming pump reduces the risk of contamination by preventing unfiltered fuel from entering the fuel system.
- Easily maintain your machine. Most service locations are easily accessible at ground level for quick, efficient servicing. To allow service and maintenance to get completed quickly and efficiently. A service door on the right side of the upper structure allows ground-level access to the hydraulic pumps, hydraulic filters, engine oil filter, and fuel filters.
- Proven, high-efficiency radial seal engine air filter behind the cab. The machine constantly monitors the engine air filter and will notify you, via the monitor, when service is required.
- A remote greasing block on the boom allows the greasing of hard-to-reach locations. A remote mounted greasing point on the swing bearing allows ease of service.
- VisionLink™ comes standard so you can remotely monitor machine health, location, hours, and absolute fuel level on demand through the online interface.

PERFORMANCE

- Powerful 6-cylinder engine.
- Choice of bucket to match your application, with an optional larger Cat Bucket 1.14 m³ (1.49 yd³) General-duty resulting in increased performance.
- Electrohydraulic control valve, pump and Electronic Control Module (ECM) introduced for better controllability and lower fuel consumption.
- Dig and lift from a stable platform created by the heavy-duty counterweight and eight-roller undercarriage.
- The excavator has a high-ambient capability of 52° C (125° F) and cold start capability of -18° C (0° F). An optional -32° C (-25° F) cold start package is available.
- Add versatility by adding tool control to run a hammer or other tools requiring one-way flow. Order tool control with the machine or add it later with a dealer-installed kit.
- Balance power and efficiency using the open-center, positive flow control electro-hydraulic system.
- Hydraulic cross-sensing makes full engine power always available from hydraulic pumps regardless of which function is used.
- HD boom and HD sticks allow durable performance.

WORK IN COMFORT

- The updated spacious cab design provides excellent visibility from the operator's seat to keep you aware of your surroundings – without bending or straining to see.
- In-cab high-resolution 203 mm (8 in) touch screen display are easy to use, intuitive and user-friendly.
- Work a full day with less fatigue using the ergonomically designed electro-hydraulic joysticks matched to operator's wrist and arm position. Joystick consoles can be adjusted, further improving operator comfort and productivity.
- Easy to access radio controls, engine throttle, wiper controls and Bluetooth® phone pairing for operator convenience.
- Improved automatic climate control helps maintain consistent cab temperature. Five outlets ensure proper air circulation to keep you comfortable regardless of outside temperatures.
- Ergonomically designed seat to improve operator's comfort. Wide adjustable armrests and retractable seatbelt are also included.
- Standard cab equipment to enhance operator comfort and productivity, the cab includes a radio, lighter, drink holder, coat hook, service meter, literature holder, magazine rack and storage compartment.
- Keep your phone or other personal electronics charged using the 24V auxiliary power ports delivering up to 5A of power.
- There is plenty of room for you to store your gear. There are two storage locations at the rear of the right console and one space for your lunchbox behind the seat.

BUILT-IN SAFETY FEATURES

- We designed the cab to provide excellent visibility from the operator's seat. In addition, two standard mirrors help keep you aware of your surroundings.
- The machine provides you a work platform for all routine service and maintenance needs. Anti-skid plating with countersunk bolts reduces the potential for slippage and trip hazards.
- Grips on the track frame, service platform, cab and battery compartment for an easy climb up and down from the service platform and operator station.
- Handrails and hand hold are provided for easy access.
- Optional rearview cameras with additional mirror enhance visibility behind the machine.
- Optional Rollover Protective Structure (ROPS) compliant cab is now available.
- Ground level access to engine secondary shut-off feature.
- The hydraulic lockout lever prevents operators from leaving the cab without first isolating all hydraulic functions.
- A lockable disconnect switch isolates the battery and enhances safety by disconnecting the electrical energy when servicing the machine.
- A full-length firewall separates the engine from the hydraulic pump and offers protection in the event of an incident.
- The machine can be equipped with a Operator Protective Guards (OPG) that conforms to the ISO 10262:1998 standard. These guards are bolted directly to the cab shell.

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

	Standard	Optional		Standard	Optional
UNDERCARRIAGE AND STRUCTURES			BOOM AND STICK		
600 mm (24 in) triple grouser shoes (10 mm/0.4 in thick)	✓		5.7 m (18'8") HD Reach boom	✓	
Grease lubricated track links	✓		2.5 m (8'2") HD Reach stick	✓	
Tie down points on base frame	✓		ELECTRICAL SYSTEM		
Center track guiding guard	✓		Two 750 CCA maintenance free batteries	✓	
Segmented track guiding guard	✓		LED chassis and cab lights	✓	
3650 kg (8,050 lb) counterweight	✓		LED left-side boom light	✓	
4250 mm (13'11") long undercarriage		✓	SERVICE AND MAINTENANCE		
4080 mm (13'5") standard undercarriage		✓	Grouped engine oil, fuel, and hydraulic oil filters	✓	
ELECTRICAL			Scheduled Oil Sampling (S-O-S SM) ports	✓	
LED right-side boom light		✓	Radiator screen for radiator/oil cooler	✓	
CAT TECHNOLOGY			HYDRAULIC SYSTEM		
VisionLink	✓		Electronic main control valve, hammer ready	✓	
CAB			Back-to-back electronic pump	✓	
Sound suppressed cab with viscous mounts	✓		Boom and stick regeneration circuits	✓	
High-resolution 203 mm (8") LCD touchscreen monitor	✓		Automatic hydraulic warm up	✓	
Mechanically adjustable seat with headrest	✓		Automatic two-speed travel	✓	
Automatic bi-level air conditioner	✓		High performance hydraulic return filter	✓	
Keyless push-to-start engine control	✓		Hammer lines		✓
1-button joystick	✓		Hammer return filter		✓
AM/FM radio with USB and auxiliary port	✓		SAFETY AND SECURITY		
24V DC outlet	✓		Anti-skid plating with countersunk bolts	✓	
Cup holder and storage compartments	✓		Handrail and handhold	✓	
70/30 tempered glass windshield	✓		Lockable external tool/storage box	✓	
Upper radial wiper with washer	✓		Signaling/warning horn	✓	
Openable steel hatch	✓		Hydraulic lockout lever	✓	
Dome light	✓		ROPS		✓
Washable floor mat	✓		OPG with matching lights		✓
ENGINE			Rearview camera		✓
Diesel engine, ALUW06DTI/8 – mechanical governor – emits equivalent to U.S. EPA Tier 2, noncertified	✓		Travel alarm		✓
Two selectable power modes: Standard, Eco	✓				
One-touch low idle with auto engine speed control	✓				
Two stage fuel filtration system with water separator and indicator	✓				
52° C (125° F) high-ambient cooling capacity	✓				
4000 m (13,120 ft) altitude capability	✓				
Radial seal air filter with double filter element	✓				
-32° C (-25° F) cold start capability		✓			
Air pre-cleaner		✓			
Fuel flow meter		✓			
Biodiesel capability (up to B10)		✓			

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Technical Specifications

Engine

Engine Model	ALUW06DTI	
Biodiesel Capability	Up to B10	
Emissions	Noncertified emission engine	
Net Power – ISO 9249	92 kW	123 hp
Net Power – ISO 9249 (DIN)	125 hp (metric)	
Engine Power – ISO 14396	100 kW	134 hp
Engine Power – ISO 14396 (DIN)	136 hp (metric)	
Bore	104 mm	4 in
Stroke	113 mm	4 in
Displacement	5.8 L	351 in ³

- Non-certified emission engine.
- Recommended for use up to 4000 m (13,120 ft) altitude with engine power derate above 3000 m (9,840 ft).
- Advertised power is tested per the specified standard in effect at the time of manufacture.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air intake system, exhaust system and alternator.
- Engine speed at 1,700 rpm.

Hydraulic System

Main System – Maximum Flow	429 L/min	113 gal/min
Maximum Pressure – Equipment	35 000 kPa	5,075 psi
Maximum Pressure – Travel	35 000 kPa	5,075 psi
Maximum Pressure – Swing	25 000 kPa	3,625 psi

Swing Mechanism

Swing Speed	11.88 r/min	
Maximum Swing Torque	62 kN-m	45,581 ft-lbf

Weights

Operating Weight	21 000 kg	46,300 lb
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Service Refill Capacities

Fuel Tank Capacity	350 L	92.5 gal
Cooling System	19 L	5 gal
Engine Oil	18 L	4.8 gal
Swing Drive – each	6 L	1.6 gal
Final Drive – each	5 L	1.3 gal
Hydraulic System – including tank	218 L	57.6 gal
Hydraulic Tank	115 L	30.4 gal

Dimensions

Boom	HD Reach 5.7 m (18'8")	
Stick	HD Reach 2.5 m (8'2")	
Bucket	GD 1.14 m³ (1.49 yd³)	
Shipping Height – top of cab	3050 mm	10 ft
Handrail Height	3015 mm	9.11 ft
Shipping Length	9530 mm	31.3 ft
Tail Swing Radius	2750 mm	9 ft
Counterweight Clearance	1020 mm	3.4 ft
Ground Clearance	450 mm	1.6 ft
Track Length	4250 mm	13.11 ft
Length to Center of Rollers	3450 mm	11.3 ft
Track Gauge	2380 mm	7.1 ft
Transport Width	2980 mm	9.9 ft

Working Ranges and Forces

Boom	HD Reach 5.7 m (18'8")	
Stick	HD Reach 2.5 m (8'2")	
Bucket	GD 1.14 m³ (1.49 yd³)	
Maximum Digging Depth	6300 mm	20.8 ft
Maximum Reach at Ground Level	9470 mm	31.1 ft
Maximum Cutting Height	9250 mm	30.4 ft
Maximum Loading Height	6290 mm	20.8 ft
Minimum Loading Height	2590 mm	8.6 ft
Maximum Depth Cut for 2440 mm (8 ft) Level Bottom	5960 mm	19.7 ft
Maximum Vertical Wall Digging Depth	5720 mm	18.9 ft
Bucket Digging Force – ISO	135 kN	30,350 lbf
Stick Digging Force – ISO	118 kN	26,530 lbf

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