



313

Hydraulic Excavator

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

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313 Hydraulic Excavator Specifications

Engine

Engine Model	Cat® C3.6	
Net Power		
ISO 9249	70.6 kW	95 hp
ISO 9249 (DIN)	96 hp (metric)	
Engine Power		
ISO 14396	74.4 kW	100 hp
ISO 14396 (DIN)	101 hp (metric)	
Bore	98 mm	4 in
Stroke	120 mm	5 in
Displacement	3.6 L	220 in ³
Biodiesel Capability	Up to B20 ⁽¹⁾	

- Emits equivalent to China Nonroad Stage III, U.S. EPA Tier 3 and EU Stage IIIA.
- No engine power derating required below 3000 m (9,840 ft) altitude.
- 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.
- Rated speed at 2,200 rpm

⁽¹⁾Cat engines are compatible with diesel fuel blended with the following lower-carbon intensity fuels** up to:

- ✓ 100% biodiesel FAME (fatty acid methyl ester)*
- ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or “Caterpillar Machine Fluids Recommendations” (SEBU6250) for details.

*For use of blends higher than 20% biodiesel, consult your Cat dealer.

**Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.

Swing Mechanism

Swing Speed	11.5 rpm	
Maximum Swing Torque	43 kN·m	31,640 lbf·ft

Weights

Operating Weight	15 850 kg	34,940 lb
• Low Ground Pressure (LGP) undercarriage, Heavy Duty (HD) Reach boom, HD R2.5 (8'2") stick, General Duty (GD) 0.65 m ³ (0.85 yd ³) bucket, 960 mm (38") triple grouser track shoes and 1300 kg (2,870 lb) counterweight.		

Track

Track Shoes Width	960 mm	38 in
Track Shoes Width	790 mm	31 in
Number of Shoes (each side)	44	
Number of Track Rollers (each side)	7	
Number of Carrier Rollers (each side)	2	

Drive

Gradeability	35°/70%	
Maximum Travel Speed	4.6 km/h	2.9 mph
Maximum Drawbar Pull	157 kN	35,295 lbf

Hydraulic System

Main System – Maximum Flow – Implement	247 L/min	65 gal/min
Maximum Pressure – Equipment – Normal	35 000 kPa	5,075 psi
Maximum Pressure – Travel	35 000 kPa	5,075 psi
Maximum Pressure – Swing	25 900 kPa	3,756 psi
Boom Cylinder – Bore	105 mm	4 in
Boom Cylinder – Stroke	1015 mm	40 in
Stick Cylinder – Bore	115 mm	5 in
Stick Cylinder – Stroke	1197 mm	47 in
Bucket Cylinder – Bore	95 mm	4 in
Bucket Cylinder – Stroke	939 mm	37 in

Service Refill Capacities

Fuel Tank Capacity	237 L	62.6 gal
Cooling System	11 L	2.9 gal
Engine Oil	11 L	2.9 gal
Final Drive (each)	6 L	1.6 gal
Hydraulic System (including tank)	145 L	38.3 gal
Hydraulic Tank	77 L	20.3 gal

Standards

Brakes	ISO 10265:2008
Cab/Operator Protective Guards (OPG) (optional)	ISO 10262:1998 Level II

Sound Performance

GB/T 25614-2010 (external)	103 dB(A)
GB/T 25615-2010 (inside cab)	80 dB(A)

- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.85 kg of refrigerant which has a CO₂ equivalent of 1.216 metric tonne.

313 Hydraulic Excavator Specifications

Operating Weights and Ground Pressures

Base Machine Configurations	790 mm (31")		960 mm (38")	
	Triple Grouser Track Shoes		Single Grouser Track Shoes	
	Weight kg (lb)	Ground Pressure kPa (psi)	Weight kg (lb)	Ground Pressure kPa (psi)
Base machine with 1300 kg (2,870 lb) Counterweight and Low Ground Pressure Undercarriage				
HD Reach Boom + HD R2.5 (8'2") Stick + 0.53 m ³ (0.69 yd ³) Utility Duty (UD) Bucket	15 300 (33,700)	27.8 (4.0)	—	—
HD Reach Boom + HD R2.5 (8'2") Stick + 0.65 m ³ (0.85 yd ³) GD Bucket	—	—	15 850 (34,940)	23.5 (3.4)

All operating weights include a 90% fuel tank with 75 kg (165 lb) operator.

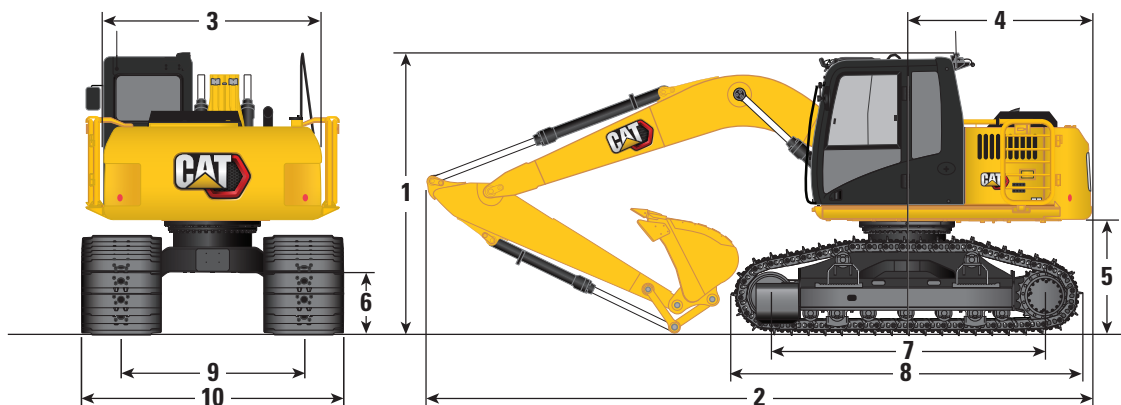
Major Component Weights

	kg	lb
Base Machine Weight (with 1300 kg [2,870 lb] counterweight, upper frame, Low Ground Pressure undercarriage with track rollers – does not include boom, stick, bucket, boom cylinders, stick cylinder, bucket cylinder, tracks, 90% fuel tank and 75 kg [165 lb] operator).	9510	21,000
Track Shoes:		
960 mm (38") Single Grouser Track Shoes	3520	7,760
790 mm (31") Triple Grouser Track Shoes	3050	6,720
Two Boom Cylinders	240	530
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	260	580
Counterweight:		
1300 kg (2,870 lb) Counterweight	1300	2,870
Swing Frame	1400	3,090
Undercarriage:		
Base Frame with Track Rollers and Carrier Rollers for Low Ground Pressure Undercarriage	4000	8,820
Boom (including lines, pins, stick cylinder):		
4.65 m (15'3") HD Reach Boom	1270	2,800
Stick (including lines, pins, bucket cylinder, bucket linkage):		
2.5 m (8'2") HD Reach Stick	670	1,470
Buckets (without linkage, with tips and side cutters):		
GD 0.65 m ³ (0.85 yd ³) Bucket	490	1,080
UD 0.53 m ³ (0.69 yd ³) Bucket	410	910

313 Hydraulic Excavator Specifications

Dimensions

All dimensions are approximate and may vary depending on bucket selection.

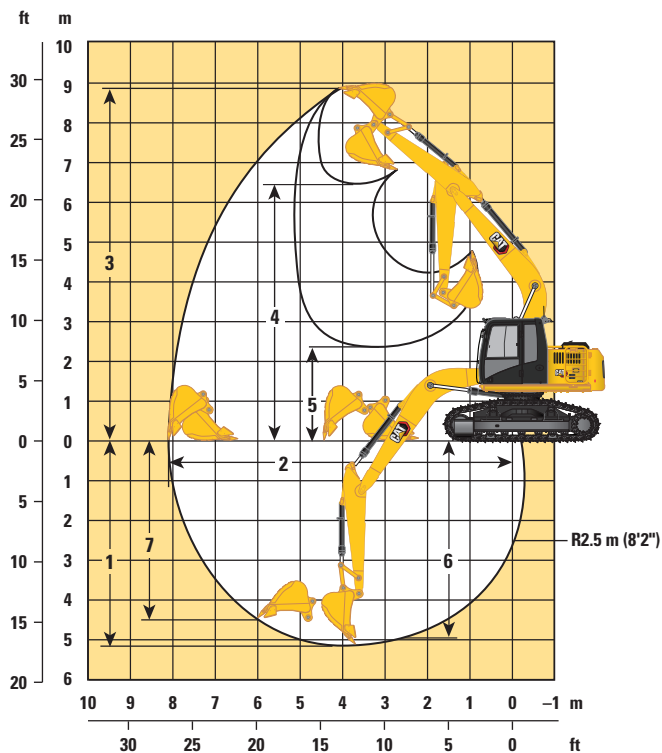


Boom Option	Reach Boom 4.65 m (15'3")	
Stick Options	Reach Stick	
	R2.5 m (8'2")	
1 Machine Height:		
Top of Cab Height	3190 mm	10'6"
Handrail Height	3220 mm	10'7"
With Boom/Stick/Bucket Installed (with stick cylinder lines)	3030 mm	9'11"
With Boom/Stick Installed (with stick cylinder lines)	2700 mm	8'10"
With Boom Installed (with stick cylinder lines)	2170 mm	7'1"
2 Machine Length:		
With Boom/Stick/Bucket Installed (with stick cylinder lines)	7680 mm	25'2"
With Boom/Stick Installed (with stick cylinder lines)	7660 mm	25'2"
With Boom Installed (with stick cylinder lines)	6690 mm	21'11"
3 Upperframe Width	2890 mm	9'6"
4 Tail Swing Radius – 1300 kg (2,870 lb) Counterweight	2200 mm	7'2"
5 Counterweight Clearance	1260 mm	4'2"
6 Ground Clearance	650 mm	2'2"
7 Track Length – Length to Center of Rollers	3130 mm	10'3"
8 Overall Track Length	4000 mm	13'1"
9 Track Gauge	2080 mm	6'10"
10 Undercarriage Width (with steps):		
960 mm (38") Shoes	3040 mm	10'0"
790 mm (31") Shoes	2870 mm	9'5"
Bucket Type	GD	
Bucket Capacity	0.65 m ³	0.85 yd ³
Bucket Tip Radius	1225 mm	4'0"

313 Hydraulic Excavator Specifications

Working Ranges and Forces

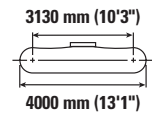
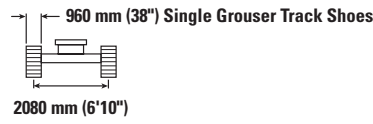
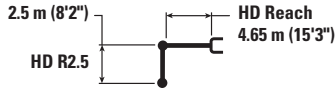
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













Boom Option	Reach Boom 4.65 m (15'3")	
	Stick Options	
	Reach Stick	
	R2.5 m (8'2")	
1 Maximum Digging Depth	5180 mm	17'0"
2 Maximum Reach at Ground Line	8100 mm	26'7"
3 Maximum Cutting Height	8860 mm	29'1"
4 Maximum Loading Height	6460 mm	21'2"
5 Minimum Loading Height	2380 mm	7'10"
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	4970 mm	16'4"
7 Maximum Vertical Wall Digging Depth	4500 mm	14'9"
Minimum Working Equipment Radius	2440 mm	8'0"
Bucket Digging Force (ISO)	98.5 kN	22,140 lbf
Stick Digging Force (ISO)	68.8 kN	15,470 lbf
Bucket Type	GD	
Bucket Capacity	0.65 m ³	0.85 yd ³
Bucket Tip Radius	1225 mm	4'0"

313 Hydraulic Excavator Specifications

Reach Boom Lift Capacities – Counterweight: 1300 kg (2,870 lb) – without Bucket



	1500 mm/5'0"		3000 mm/10'0"		4500 mm/15'0"		6000 mm/20'0"				mm ft/in	
												
7500 mm 25'0"	kg lb									*2750 *6,150	*2750 *6,150	4170 13'1"
6000 mm 20'0"	kg lb				*3450 *7,550	*3450 *7,550				*2300 *5,050	*2300 *5,050	5700 18'5"
4500 mm 15'0"	kg lb				*3800 *8,300	*3800 *8,300	*3650 *7,950	2550 5,500		*2150 *4,700	*2150 *4,700	6550 21'4"
3000 mm 10'0"	kg lb			*6750 *14,450	*6750 *14,450	*4700 *10,200	3850 8,250	*3950 8,500	2450 5,300	*2150 *4,750	1950 4,250	6980 22'10"
1500 mm 5'0"	kg lb			*7400 *17,750	6450 13,850	*5650 *12,250	3550 7,650	3850 8,200	2350 5,050	*2300 *5,000	1850 4,050	7070 23'2"
0 mm 0'0"	kg lb			*7800 *18,000	6200 13,250	5750 12,350	3400 7,250	3750 8,050	2300 4,900	*2600 *5,650	1900 4,200	6830 22'4"
-1500 mm -5'0"	kg lb	*6100 *13,650	*6100 *13,650	*9200 *19,950	6200 13,250	5700 12,250	3350 7,150	3700 8,000	2250 4,850	*3200 *7,050	2150 4,750	6220 20'4"
-3000 mm -10'0"	kg lb			*7700 *16,550	6350 13,600	*5200 *11,050	3400 7,350			*4250 *9,350	2900 6,450	5110 16'7"



ISO 10567:2007



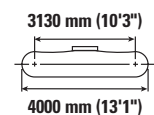
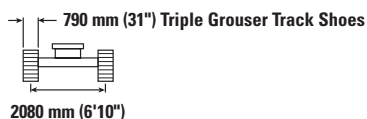
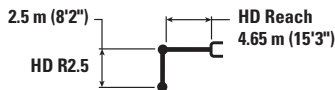
* Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.













Lift capacity stays with ±5% for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

313 Hydraulic Excavator Specifications

Reach Boom Lift Capacities – Counterweight: 1300 kg (2,870 lb) – without Bucket



	1500 mm/5'0"		3000 mm/10'0"		4500 mm/15'0"		6000 mm/20'0"				mm ft/in	
												
7500 mm 25'0"	kg lb									*2750 *6,150	*2750 *6,150	4170 13'1"
6000 mm 20'0"	kg lb				*3450 *7,550	*3450 *7,550				*2300 *5,050	*2300 *5,050	5700 18'5"
4500 mm 15'0"	kg lb				*3800 *8,300	*3800 *8,300	*3650 *7,950	2500 5,300		*2150 *4,700	2150 4,700	6550 21'4"
3000 mm 10'0"	kg lb			*6750 *14,450	*6750 *14,450	*4700 *10,200	3700 8,000	3850 8,200	2400 5,100	*2150 *4,750	1850 4,100	6980 22'10"
1500 mm 5'0"	kg lb			*7400 *17,750	6200 13,400	*5650 *12,250	3450 7,400	3700 7,950	2300 4,900	*2300 *5,000	1800 3,900	7070 23'2"
0 mm 0'0"	kg lb			*7800 *18,000	5950 12,800	5600 11,950	3250 7,000	3600 7,750	2200 4,700	*2600 *5,650	1850 4,000	6830 22'4"
-1500 mm -5'0"	kg lb	*6100 *13,650	*6100 *13,650	*9200 *19,950	5950 12,800	5500 11,850	3200 6,900	3600 7,750	2200 4,700	*3200 *7,050	2100 4,600	6220 20'4"
-3000 mm -10'0"	kg lb			*7700 *16,550	6100 13,150	*5200 *11,050	3300 7,100			*4250 *9,350	2800 6,200	5110 16'7"



ISO 10567:2007



* Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Lift capacity stays with ±5% for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

313 Hydraulic Excavator Specifications

Bucket Specifications and Compatibility

	Linkage	Width		Capacity		Weight		Fill	Low Ground Pressure Undercarriage		
		mm	in	m ³	yd ³	kg	lb		1300 kg (2,870 lb) Counterweight		
									Reach Boom		
									R2.5 m (8'2") Stick		
						960 mm (38") Single Grouser Track Shoes		790 mm (31") Triple Grouser Track Shoes			
Pin-On (No Quick Coupler)											
GENERAL DUTY	312	1050	41	0.65	0.85	490	1,080	100	☉	☉	
								kg	1927	1850	
Maximum load with pin-on (payload + bucket)								lb	4,248	4,079	
With Cat Pin Grabber Coupler											
UTILITY DUTY	312	900	35	0.53	0.69	411	906	100	☉	☉	
								kg	1923	1846	
Maximum load with coupler (payload + bucket)								lb	4,238	4,070	

The above loads are in compliance with hydraulic excavator standard EN474-5:2006 + A3:2013, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled. Capacity based on ISO 7451:2007.

Maximum Material Density:

☉ 1800 kg/m³ (3,000 lb/yd³)

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

Attachments Offering Guide

Not all attachments are available in all regions. Consult your Cat dealer for configurations available in your region.

Match

PIN-ON ATTACHMENTS

Undercarriage		790 mm (31 in)/ 960 mm (38 in)
Counterweight		1300 kg (2,870 lb)
Boom Type		Reach
Stick Length		2.50 m (8'2")
Hydraulic Hammers	H110 GC	✓
	H110 GC Side Mount	✓
	H110 GC S	✓
	H110 S	✓
	H115 GC	✓
	H115 GC S	✓
	H115	✓
Compactors (Vibratory Plate)	CVP75	✓
Rotary Cutters	RC10	✓

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
BOOMS, STICKS AND LINKAGES			HYDRAULIC SYSTEM		
4.65 m (15'3") HD Reach boom	✓		Electronic main control valve	✓	
2.5 m (8'2") HD Reach stick	✓		Electronic control pump	✓	
Bucket linkage without lifting eye	✓		Tool control (without high pressure flow)		✓
CAB			Tool control (one way high pressure flow)		✓
Sound suppressed with viscous mounts	✓		Tool control (two way high pressure flow)		✓
Operator Protective Guards (OPG)		✓	Main control valve without tool control		✓
High-resolution 203 mm (8") LCD touchscreen monitor	✓		Automatic two-speed travel	✓	
Emergency exit	✓		Element type main hydraulic filter	✓	
Mechanically adjustable seat with headrest	✓		SAFETY AND SECURITY		
2" (51 mm) orange seat belt	✓		Hydraulic lock out lever neutralizes all controls	✓	
Fixed left side console	✓		Signaling/warning horn	✓	
Automatic bi-level air conditioner	✓		Ground-level secondary engine shutoff switch	✓	
Keyless push-to-start engine control	✓		Lockable disconnect switch	✓	
1-button joystick		✓	SERVICE AND MAINTENANCE		
1-slider joystick		✓	Grouped engine oil and fuel filters	✓	
AM/FM radio with Bluetooth®	✓		Scheduled Oil Sampling (S-O-S SM) ports	✓	
Speaker	✓		Radiator screen	✓	
24V DC outlet	✓		UNDERCARRIAGE AND STRUCTURES		
Cup holder and storage compartments	✓		Low Ground Pressure undercarriage	✓	
70/30 tempered glass windshield	✓		Grease lubricated track link	✓	
Roller front sunscreen		✓	960 mm (38") single grouser track shoes		✓
Upper radial wiper with washer	✓		790 mm (31") triple grouser track shoes		✓
Openable steel hatch	✓		Center track guiding guard	✓	
Dome light	✓		HD travel motor guards	✓	
Washable floor mat	✓		Bottom guard	✓	
CAT TECHNOLOGY			Swivel guard		✓
Cat Equipment Management:			1300 kg (2,870 lb) counterweight	✓	
VisionLink®	✓ ¹				
ELECTRICAL SYSTEM					
750 CCA maintenance-free batteries (×2)	✓				
Centralized electrical disconnect switch	✓				
LED left-side boom and chassis lights	✓				
LED right-side boom light		✓			
LED cab light		✓			
ENGINE					
Cat® C3.6 single turbo diesel engine	✓				
-18° C (-0.4° F) cold start capability	✓				

¹Provides core telematics data to manage health, maintenance insights, and condition monitoring. Other plans available for more comprehensive data reporting. Consult your Cat dealer for details.

313 Environmental Declaration

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit <https://www.caterpillar.com/en/company/sustainability>.

Engine

- The Cat C3.6 engine Emits equivalent to China Nonroad Stage III, U.S. EPA Tier 3
- Cat engines are compatible with diesel fuel blended with the following lower-carbon intensity fuels** up to:
 - ✓ 100% biodiesel FAME (fatty acid methyl ester)*
 - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.

**For use of blends higher than 20% biodiesel, consult your Cat dealer.*

***Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.*

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.8 kg (1.8 lb) of refrigerant which has a CO₂ equivalent of 1.144 metric tonnes (1.261 tons).

Paint

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
 - Barium < 0.01%
 - Cadmium < 0.01%
 - Chromium < 0.01%
 - Lead < 0.01%

Sound Performance

With cooling fan speed at maximum value:

Operator Sound Pressure Level (GB/T 25614-2010) – 80 dB(A)

Exterior Sound Power Level (GB/T 25615-2010) – 103 dB(A)

- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

Oils and Fluids

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

Features and Technology

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
 - Advanced hydraulic systems balance power and efficiency
 - Smart mode matches machine power to digging requirements automatically
 - Eco mode supports reduced fuel consumption for light applications
 - One-touch low idle with automatic engine speed control
 - Extended maintenance intervals help to reduce fluid and filter consumption

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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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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