

320 GC 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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Engine		
Engine Model	Cat® C4.4	
Net Power		
ISO 9249	107 kW	143 hp
ISO 9249 (DIN)	145 hp (me	etric)
Engine Power		
ISO 14396	108 kW	145 hp
ISO 14396 (DIN)	147 hp (me	etric)
Bore	105 mm	4 in
Stroke	127 mm	5 in
Displacement	4.4 L	269 in ³
Biodiesel capability	Up to B20	(1)

- Meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Recommended for use up to 4500 m (14,764 ft) altitude with engine power derate above 3000 m (9,842.5 ft).
- Advertised power is tested per the standard shown 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 2,000 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 (hydrogenated 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	11.3 rpm	
Maximum Swing Torque	74.4 kN·m	54,900 lb-ft

Weights		
Operating Weight	21,100 kg	46,500 lb
Operating weight	21,100 Kg	40,500 10

 Medium undercarriage, Reach boom, R2.9 (9'6") stick, General Duty (G)D 1.0 m³ (1.31 yd³) bucket, 790 mm (31") triple grouser shoes, 3.7 mt (8,200 lb) counterweight.

Track		
Optional Track Shoes Width	600 mm	24 in
Optional Track Shoes Width	790 mm	31 in
Number of Shoes (each side)	47	
Number of Track Rollers (each side)	7	
Number of Carrier Rollers (each side)	2	

Drive			
Gradeability	35°/70%		
Maximum Travel Speed	5.7 km/h	3.5 mph	
Maximum Drawbar Pull	206 kN	46,311 lbf	
Hydraulic System			
Main System – Maximum Flow – Implement	429 L/min (215 × 2 pumps)	113 gal/min (57 × 2 pumps)	
Maximum Pressure – Equipment	35 000 kPa	5,075 psi	
Maximum Pressure – Travel	34 300 kPa	4,974 psi	
Maximum Pressure – Swing	25 000 kPa	3,625 psi	
Boom Cylinder – Bore	120 mm	5 in	
Boom Cylinder – Stroke	1260 mm	50 in	
Stick Cylinder – Bore	135 mm	5 in	
Stick Cylinder – Stroke	1504 mm	59 in	
Bucket Cylinder – Bore	115 mm	5 in	
Bucket Cylinder – Stroke	1104 mm	43 in	
Service Refill Capacities			
Fuel Tank Capacity	345 L	86.6 gal	
Cooling System	25 L	6.6 gal	
Engine Oil	15 L	4.0 gal	
Swing Drive	12 L	3.2 gal	
Final Drive (each)	4 L	1.1 gal	
Hydraulic System (including tank)	234 L	61.8 gal	
Hydraulic Tank	115 L	30.4 gal	
Standards			
Brakes	ISO 10265:2	008	
Cab/Rollover Protective Structure (ROPS)	ISO 12117-2	:2008	
Falling Object Guard System (FOGS) (optional)	ISO 10262:1998 Level II		

Sound Performance		
ISO 6395:2008 (external)	99 dB(A)	
ISO 6396:2008 (inside cab)	70 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.

Operating Weights and Ground Pressures

	600 mm (Triple Grouse	,) mm (31") Grouser Shoes	
	Weight	Ground Pressure	Weight	Ground Pressure	
Base Machine Configurations	kg (lb)	kPa (psi)	kg (lb)	kPa (psi)	
Base Frame with Track Rollers and Carrier Rollers					
3.7 mt (8,200 lb) Counterweight + Medium Undercarriage Base Machine					
Reach Boom + R2.9 (9'6") Stick + 1.0 m ³ (1.31 yd ³) GD Bucket	20 400 (45,000)	44.7 (6.5)	21 100 (46,500)	35.1 (5.1)	

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

Major Component Weights

Reach Stick (R2.9B1/9'6")

Bucket (without linkage): 1.0 m³ (1.31 yd³) GD

	kg	lb
Base Machine (with 3.7 mt [8,200 lb] counterweight, standard swing frame, standard base frame with track rollers and standard carrier rollers for medium undercarriage, without boom cylinder – does not include 90% fuel and 75 kg [165 lb] operator)	13 740	30,300
Track Shoes:		
600 mm (24") Width, 8.5 mm (0.33") Thick, Triple Grouser Track Shoes	2500	5,500
790 mm (31") Width, 10 mm (0.39") Thick, Triple Grouser Track Shoes with Step Extension	3220	7,100
Two Boom Cylinders	340	700
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	310	700
Counterweight:		
3.7 mt (8,200 lb) Counterweight	3700	8,200
Swing Frame:		
Standard Swing Frame	1910	4,150
Undercarriage:		
Standard Base Frame with HD Track Rollers and Standard Carrier Rollers	4140	9,100
Boom (including lines, pins, stick cylinder):		
Reach Boom (5.7 m/18'8")	1690	3,700
Sticks (including lines, pins, bucket cylinder, bucket linkage):		

1080

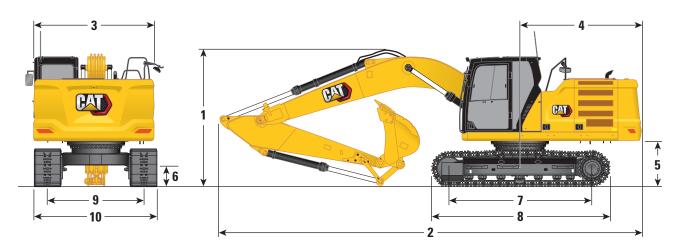
730

2,400

1,600

Dimensions

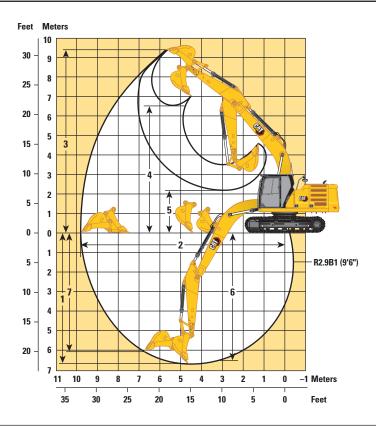
All dimensions are approximate and may vary depending on bucket selection.



Boom Option	Reach B 5.7 m (18	
Stick Option	Reach S R2.9B1 (
1 Machine Height:		
Top of Cab Height	2960 mm	9'9"
Top of FOGS Height	3100 mm	10'2"
Handrail Height	2950 mm	9'8"
With Boom/Stick/Bucket Installed	3160 mm	10'4"
With Boom/Stick Installed	2910 mm	9'7"
With Boom Installed	2480 mm	8'2"
2 Machine Length:		
With Boom/Stick/Bucket Installed	9530 mm	31'3"
With Boom/Stick Installed	9500 mm	31'2"
With Boom Installed	8450 mm	27'9"
3 Upperframe Width	2780 mm	9'1"
4 Tail Swing Radius	2830 mm	9'3"
5 Counterweight Clearance	1050 mm	3'5"
6 Ground Clearance	470 mm	1'7"
7 Length to Center of Rollers	3450 mm	11'4"
8 Track Length	4250 mm	13'11"
9 Track Gauge	2380 mm	7'10"
10 Undercarriage Width:		
600 mm (24") Shoes	2980 mm	9'9"
790 mm (31") Shoes	3170 mm	10'5"
Bucket Type	GD	
Bucket Capacity	1.00 m ³	1.31 yd ³
Bucket Tip Radius	1560 mm	5'1"

Working Ranges

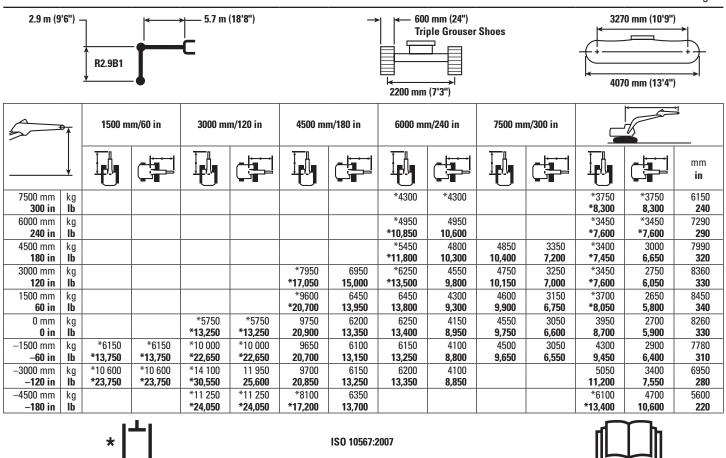
All dimensions are approximate and may vary depending on bucket selection.



Boom Option		Reach Boom 5.7 m (18'8")		
Stick Option	Reach R2.9B	1 Stick 1 (9'6")		
1 Maximum Digging Depth	6630 mm	21'9"		
2 Maximum Reach at Ground Line	9770 mm	32'		
3 Maximum Cutting Height	9440 mm	30'11"		
4 Maximum Loading Height	6580 mm	21'7"		
5 Minimum Loading Height	2260 mm	7'5"		
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6460 mm	21'2"		
7 Maximum Vertical Wall Digging Depth	6010 mm	19'8"		
Bucket Digging Force (ISO)	129 kN	29,007 lbf		
Stick Digging Force (ISO)	99 kN	22,301 lbf		
Bucket Type	G	·D		
Bucket Capacity	1.0 m ³	1.31 yd ³		
Bucket Tip Radius	1560 mm	5'1"		

Reach Boom Lift Capacities – Counterweight: 3.7 mt (8,200 lb) – with Bucket Linkages, without Bucket

Medium Undercarriage



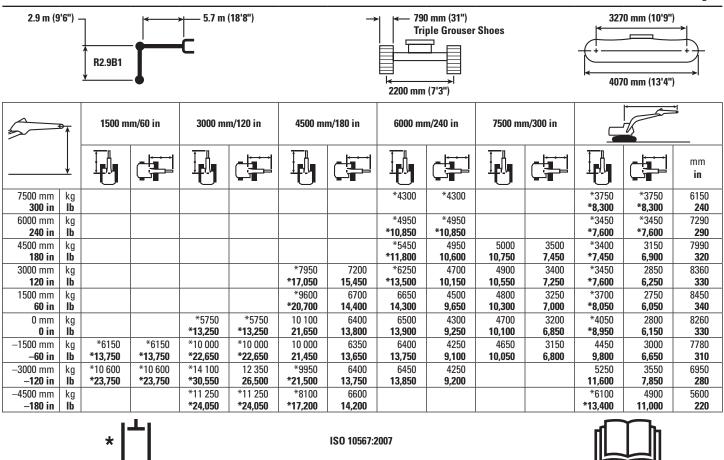
^{*}Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories 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.

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

Reach Boom Lift Capacities – Counterweight: 3.7 mt (8,200 lb) – with Bucket Linkages, without Bucket

Medium Undercarriage



^{*}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.

Bucket Specifications and Compatibility – Southeast Asia

									Reach Boom
		mm	in	m³	yd³	kg	lb	%	R2.9 (9'6")
Pin-On (No Quick Coupler)									
General Duty	В	1150	46	0.90	1.18	786	1,733	100	•
	В	1250	50	1.00	1.31	820	1,808	100	•
General Duty Excavation	В	1400	56	1.14	1.49	858	1,891	100	θ
Heavy Duty	В	1050	43	1.00	1.31	884	1,948	100	•
	В	1200	49	1.19	1.56	955	2,105	100	θ
	В	1350	54	1.38	1.81	1018	2,244	100	0
Heavy Duty	В	1050	42	1.00	1.31	901	1,987	100	•
Severe Duty	В	1100	43	1.00	1.31	965	2,128	90	•
	В	1250	49	1.19	1.56	1063	2,343	90	θ
	•	•	N	1aximum loa	d with pin-	on (payload	d + bucket)	kg	2425
								lb	5,346
									Reach Boom
		mm	in	m³	yd³	kg	lb	%	R2.9 (9'6")
With Cat Pin Grabber Coupler									
General Duty	В	1150	46	0.90	1.18	786	1,733	100	•
	В	1250	50	1.00	1.31	820	1,808	100	Θ
General Duty Excavation	В	1400	56	1.14	1.49	858	1,891	100	0
Heavy Duty	В	1200	49	1.19	1.56	955	2,105	100	0
Heavy Duty	В	1050	42	1.00	1.31	901	1,987	100	θ
Severe Duty	В	1100	43	1.00	1.31	965	2,128	90	θ
	В	1250	49	1.19	1.56	1063	2,343	90	0
	·		Ma	aximum load	with coup	ler (payload	+ bucket)	kg	2006

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.

Bucket weight with General Duty tips.

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- 1800 kg/m³ (3,000 lb/yd³)
- → 1500 kg/m³ (2,500 lb/yd³)
- O 1200 kg/m³ (2,000 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 – Southeast Asia

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

✓ Matc

IN-ON ATTACHMENTS		
Counterweight		3.7 mt (8,200 lb)
Boom Type		Reach
Stick Length		R2.9 (9'6")
Hydraulic Hammers	H115 S	✓
	H120 GC	✓
	H120 GC S	✓
	H120 S	✓
	H130 GC	✓
	H130 GC S	✓
	H130 S	✓
Compactors (Vibratory Plate)	CVP110	✓
Rotary Cutters	RC20	✓

Attachments Offering Guide - Pacific Not all Attachments are available in all regions. Consult your Cat dealer for configurations available in your region. Working range front only **PIN-ON ATTACHMENTS** Counterweight 3.7 mt (8,200 lb) **Boom Type** Reach Stick Length R2.9 (9'6") H115 S Hydraulic Hammers H120 GC ✓ H120 GC S H120 S ✓ H130 GC **√ √** H130 GC S H130 S Demolition and Sorting Grapples G318 ✓ **√*** Mobile Scrap and Demolition Shears S3025 Flat Top Compactors (Vibratory Plate) CVP110 ✓ Rotary Cutters RC20 **CAT PIN GRABBER COUPLER ATTACHMENTS** 3.7 mt (8,200 lb) Counterweight **Boom Type** Reach Stick Length R2.9 (9'6")

H115 S

H120 S

H130 S CVP110

RC20

H120 GC H120 GC S ✓

✓

✓

✓

Hydraulic Hammers

Rotary Cutters

Compactors (Vibratory Plate)

320 GC Standard and Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional
BOOM, STICKS AND LINKAGES		
5.7 m (18'8") Reach boom	✓	
2.9 m (9'6") Reach stick	✓	
2.9 m (9'6") Semi HD Reach stick		✓
Bucket linkage, B1-family with lifting eye	✓	
Bucket linkage, B1-family without lifting eye		✓
CAB		
ROPS	✓	
High-resolution 203 mm (8") LCD touchscreen monitor	✓	
Auto bi-level air conditioner	✓	
Keyless push-to-start engine control	✓	
Height-adjustable console, three steps with tool	✓	
Fixed left-side console	✓	
Mechanical-suspension seat	✓	
51 mm (2") seat belt	✓	
Console mounted Bluetooth® radio with USB ports	✓	
24V DC outlet	✓	
Document storage	✓	
Overhead storage and rear storage with nets	✓	
Beverage holder	✓	
Cup holder	✓	
Openable two-piece front window	✓	
Rear window emergency exit	✓	
Radial wiper with washer	✓	
Openable steel hatch	✓	
LED dome light	✓	
Roller front sunscreen	✓	
Roller rear sunscreen		✓
Washable floor mat	✓	
Beacon ready	✓	

^{*}Connect subscription only. Additional subscriptions are available. Contact your Cat dealer for availability.

	Standard	Optional
CAT TECHNOLOGY		
VisionLink®	√ *	
VisionLink Productivity		✓
Remote Flash	✓	
ELECTRICAL SYSTEM		
1,000 CCA maintenance-free batteries (×2)	✓	
Centralized electrical disconnect switch	✓	
Programmable time-delay LED working lights	✓	
LED chassis light and Left Hand (LH) boom light – 1,800 lumens	✓	
LED chassis light, LH and Right Hand (RH) boom lights, cab lights – 1,800 lumens		✓
ENGINE		
Cat C4.4 single turbo diesel engine	✓	
Two selectable power modes	✓	
Automatic engine speed control	✓	
Automatic engine idle shutdown	✓	
Work up to 3000 m (9,842.5 ft) above sea level without engine power de-rating	✓	
52° C (125° F) high-ambient cooling capacity	✓	
Cold starting capability for –32° C (–25° F)		✓
Double element air filter with integrated pre-cleaner	✓	
Electric fuel priming pump	✓	
Electric cooling fans with auto-reverse function	✓	

(continued on next page)

320 GC Standard and Optional Equipment

Standard and Optional Equipment (continued)

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

	Standard	Optional
HYDRAULIC SYSTEM		
Boom and stick regeneration circuits	✓	
Electronic main control valve	✓	
Auto warm up	✓	
Auto two-speed travel	✓	
Boom and stick drift reduction valve	✓	
Element type main hydraulic filter	✓	
Three button joysticks	✓	
Slider joysticks		✓
Tandem type electronic main pump	✓	
Hammer return filter circuit		✓
Basic Tool Control (one pump, one way high-pressure flow)		✓
Advanced Tool Control (two pump, one/two way high-pressure flow)		✓
Quick coupler circuit for Cat pin grabber		✓
Operating pattern (four way)		✓
Standard fluids	✓	
Multi viscous hydraulic oil	✓	
Arctic fluids (include grease, engine oil, hydraulic oil)		✓
SAFETY AND SECURITY		
Auto hammer stop	✓	
Rearview camera and right-side mirror	✓	
Rearview and right-hand sideview cameras		✓
Neutral lever (lock out) for all controls	✓	
Anti-skid plate and countersunk bolts on service platform	✓	
Ground-level accessible secondary engine shutoff switch in cab	✓	
Lockable disconnect switch	✓	
RH handrail and handhold (ISO 2867:2011 compliant)	✓	
Travel alarm		✓
Swing alarm		✓

	Standard	Optional
SERVICE AND MAINTENANCE		
Scheduled Oil Sampling (S·O·S SM)	✓	
sampling ports		
Grouped location for engine oil	\checkmark	
and fuel filters		
Ground-level second dipstick for engine oil	\checkmark	
Radiator screen		✓
Side entry to service platform	✓	
Integrated vehicle health	✓	
management system		
UNDERCARRIAGE AND STRUCTURES		
Medium undercarriage	✓	
600 mm (24") triple grouser track shoes		✓
790 mm (31") triple grouser track shoes		✓
Tie-down points on base frame	✓	
Center track guiding guard	✓	
Swivel guard		✓
Bottom guards	✓	
Travel motor guards	✓	
Grease lubricated track links	✓	
3.7 mt (8,200 lb) counterweight	✓	

Dealer Installed Kit and Attachments

Attachments may vary. Consult your Cat dealer for details.

CAB

- Lower radial wiper
- Rain protector plus cab light cover
- Polycarbonate roof hatch
- Sun visor, slider
- Laminated P5A glass front windshield
- LH/RH electrical pedal for tool control
- Armrest kit
- Dual exit rear window kit
- 75 mm (3") retractable seat belt
- Lunch box net
- Rear storage
- Tool box

GUARDS

- Swivel guard
- Side rubber bumper guard
- Falling object guard system
- Mesh guard full front
- Mesh guard half front
- Full protecting vandalism guard

MAINTENANCE

• Duct ready kit

SAFETY AND SECURITY

• Bluetooth receiver

320 GC 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® C4.4 engine meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- 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 (hydrogenated 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 0.85 kg (1.9 lb) of refrigerant which has a CO₂ equivalent of 1.216 metric tonnes (1.340 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

ISO 6395 (external) - 99 dB(A)

ISO 6396 (inside cab) – 70 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 minimizes fuel consumption for light applications
- Cut maintenance costs up to 20% with extended service intervals
- Programmable high-efficiency cooling fans run only when needed
- The latest hydraulic oil filter provides longer life with a 3,000-hour replacement interval

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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AEXQ3039-03 (09-2023) Replaces AEXQ3039-02 Build Number: 07G (SE Asia, Pacific Islands)

