Cat®
306 CR VAB

Mini Hydraulic Excavator

Features:

The Cat® 306 CR Variable Angle Boom (VAB) Mini Excavator delivers maximum power and performance in a mini size to help you work in a wide range of applications. The Variable Angle Boom provides the maximum linkage flexibility in tight applications.

ALL DAY COMFORT

- The 306 CR VAB features a sealed and pressurized cab equipped with an improved air conditioning system, adjustable wrist rests and a suspension seat to help keep you working comfortably all day long.

EASY TO OPERATE

- Controls are easy to use and the intuitive Next Generation Monitor provides customizable machine operator preferences and easy to read machine information.

STICK STEER TRAVEL MODE

- Moving around the job site is even easier with Cat Stick Steer. Easily switch from traditional travel controls with levers and pedals to joystick controls with a push of a button. Travel with improved ergonomics, less effort and improved control is in your hands!

BIG PERFORMANCE IN A MINI DESIGN

- Increased lifting, swinging, travel and multi-functioning performance help you get the job done more efficiently.

SAFETY ON THE JOB SITE

- Your safety is our top priority. The Cat Mini Excavator is designed to help keep you safe on the job. A back-up camera, courtesy work lights and a fluorescent retractable seat belt with optional seat belt reminder system are just a few of the safety features we've built into the machine.

SIMPLE SERVICE FOR LESS DOWNTIME

- Maintenance is quick and easy on the Cat Mini Excavator. Routine check points are easy to access at ground level with grouped service points and robust service panels.

LOWER OPERATING COSTS

- Equipped with features such as auto idle, auto engine shutdown, and efficient hydraulics with a variable displacement pump, the Cat Mini Excavator was designed with reducing your operating costs in mind.

UNMATCHED DEALER SUPPORT

- Your Cat dealer is here to help you reach your business goals. From providing equipment solutions to operator training to service needs and beyond, your Cat dealer is ready to help.

CAT®

CAT TECHNOLOGY

EASE OF USE FOR CAT MINI EXCAVATORS

Ease of Use assists operators in controlling the machine to simplify operation, improve accuracy and enhance overall productivity on the job site. Ease of Use is available equipped on your mini excavator from the factory or as an upgrade kit post purchase.

Operators can choose from two software packages, Indicate or E-Fence to suit their application needs.

INDICATE

Ease of Use Indicate is an entry-level grade system providing visual and audible indicators to where the bucket is versus a target grade to cut and fill to exact specifications the first time without overcutting.

- Ideal for digging footings, septic systems, foundations, slope work and similar applications with level sites.
- Machine integrated depth measurement system from selected bench
- Operators can target a grade relative to the machine chassis (machine reference) or relative to gravity (earth reference).
- Operator can program a flat grade or a slope.
- Does not include the ability to automatically adjust stick, boom or bucket position. Cat Grade is required for autos functionality.
- Includes Swing Assist ideal for truck loading and trenching applications, and Bucket Assist ideal for sloping, leveling, fine grading and trenching applications.

E-FENCE

Ease of Use E-Fence automatically constrains machine motion within operator pre-set boundaries for Ceiling, Floor, Wall and Swing to avoid structures overhead, underground, in front or to the left or right of the machine.

- Ideal for applications near high-traffic, protecting structures on the job site, avoiding fiber optic cables and other underground utilities.
- Limits boom, stick, bucket, house and boom swing from operating beyond set boundaries.
- Includes Swing Assist ideal for truck loading and trenching applications, and Bucket Assist ideal for sloping, leveling, fine grading and trenching applications.

CAT GRADE

Cat Grade is available as an aftermarket-installed automatics system that is easy to learn and use. Cat Grade Advanced 2D and 3D give you the ability to create, manage and grade simple to complex designs with accuracy ensuring cuts and fills are made to exact specifications. Cat Grade reduces costs, improves accuracy, provides improved operator efficiency and enhances safety.

GRADE ADVANCED 2D

Cat Grade Advanced 2D allows the operator to set parameters for digging and leveling operations, including cross slope and work site main fall. Grade Advanced 2D also lets the operator input, edit and work to basic 2D design plans from the operator's seat.

- Ideal for commercial site pad designs, trenches, commercial septic systems and similar applications.
- Provides bucket position in real time, and the operator can select from a number of different viewing angles.

GRADE 3D

Cat Grade 3D for excavators adds deeper design capabilities, plus, Global navigation satellite system (GNSS) receivers and a correctional data source to achieve Real Time Kinematic (RTK) positioning guidance for more complex planes, slopes, contours and curves.

- Provides operator with bucket positioning in relation to preloaded 3D design files or background maps.
- Helps to coordinate multiple machine operations while maintaining accurate digging parameters across large job sites.

Availability varies by region, please contact our Cat dealer to discuss the best technology options for you and your application.

Specifications

Engine

Engine Model	Cat® C2.4 Turbo	
Net Power		
ISO 9249, 80/1269/EEC	41.7 kW	55.9 hp
Engine Power		
ISO 14396	43.2 kW	57.9 hp
Bore	87 mm	3.4 in
Stroke	102.4 mm	4 in
Displacement	2.43 L	148 in^3

- Meets U.S. EPA Tier 4 Final and EU Stage V emissions standards.
- 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 at the rated speed of 2,200 rpm and the engine is installed with the factory configured fan, air intake system, exhaust system and alternator with a minimum alternator load.

Weights

Minimum Operating Weight with Cab*	6575 kg	14,498 lb
Maximum Operating Weight with Cab**	7748 kg	17,084 lb

*Minimum Weight is based on rubber tracks, operator, full fuel tank, standard stick, straight blade and no bucket.

**Maximum Weight is based on steel tracks with pads, 500 kg (1,102 lb) counterweight, operator, full fuel tank, standard stick, straight blade and no bucket.

Weight Increase from Minimum Configuration

Counterweight	500 kg	1,102 lb
Steel Tracks with Pads	375 kg	827 lb

Travel System

Travel Speed – High	5.0 km/h	3.1 mph
Travel Speed – Low	2.8 km/h	1.7 mph
Maximum Traction Force – High Speed	31 kN	6,969 lbf
Maximum Traction Force – Low Speed	56 kN	12,589 lbf
Ground Pressure – Minimum Weight	35.9 kPa	5.2 psi
Ground Pressure – Maximum Weight	39.5 kPa	5.7 psi
Gradeability (maximum)	30 degrees	

Service Refill Capacities

Cooling System	10.0 L	2.6 gal
Engine Oil	8.0 L	2.1 gal
Fuel Tank	130 L	34.3 gal
Hydraulic Tank	53 L	14 gal
Hydraulic System	104 L	27.5 gal

Hydraulic System

Load Sensing Hydraulics with Variable Displacement Piston Pump		
Pump Flow @ 2,400 rpm	151 L/min	40 gal/min
Operating Pressure – Equipment	24 500 kPa	3,553 psi
Operating Pressure – Travel	24 500 kPa	3,553 psi
Operating Pressure – Swing	22 500 kPa	3,263 psi
Auxiliary Circuit – Primary		
Flow	90 L/min	24 gal/min
Pressure	24 500 kPa	3,553 psi
Auxiliary Circuit – Secondary		
Flow	33 L/min	9 gal/min
Pressure	24 500 kPa	3,553 psi
Digging Force – Stick (Standard)	28.6 kN	6,430 lbf
Digging Force – Stick (Long)	25.9 kN	5,823 lbf
Digging Force – Bucket	51.5 kN	11,578 lbf

Swing System

Machine Swing Speed	11 rpm
Boom Swing – Left	60 degrees
Boom Swing – Right	65 degrees

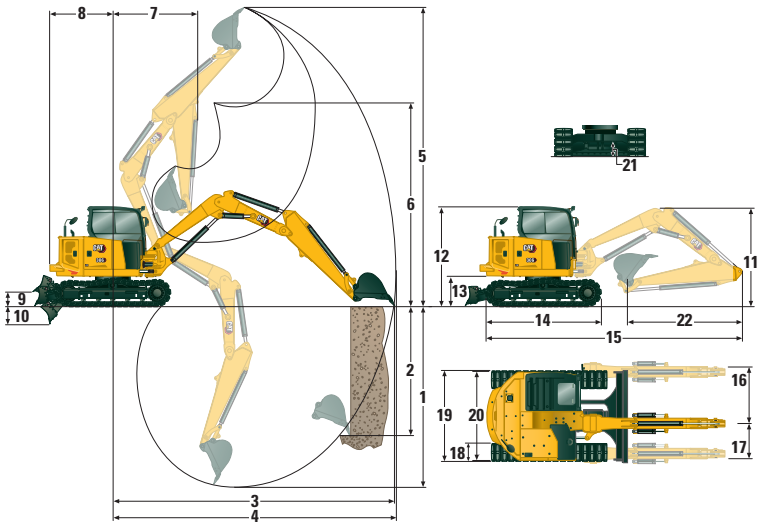
Blade

Straight Blade Width	1980 mm	78 in
Straight Blade Height	390 mm	15.4 in

Certification – Cab

Roll Over Protective Structure (ROPS)	ISO 12117-2:2008
Top Guard	ISO 10262:1998 (Level I)

306 CR VAB Mini Hydraulic Excavator



Dimensions

		Standard Stick	
		VAB In	**VAB Out**
		mm (in)	mm (in)
1	Dig Depth	2975 (117.1)	3940 (155.1)
2	Vertical Wall	1470 (57.9)	3290 (129.5)
3	Maximum Reach at Ground Level	3595 (141.5)	6705 (264.0)
4	Maximum Reach	3910 (153.9)	6855 (269.9)
5	Maximum Dig Height	3005 (118.3)	6680 (263.0)
6	Maximum Dump Clearance	2550 (100.4)	5155 (203.0)
7	Boom in Reach	3276 (129.0)	2642 (104.0)
8	Tail Swing:		
	with Counterweight	1475 (58)	
	without Counterweight	1350 (53)	
9	Maximum Blade Height	415 (16)	
10	Maximum Blade Depth	600 (24)	
11	Boom Height in Shipping Position:		
	with Attachment*	2405 (94.7)	
	without Attachment*	2405 (94.7)	
12	Cab Height	2545 (100)	
13	Swing Bearing Height	672 (27)	
14	Overall Undercarriage Length	2580 (102)	
15	Overall Shipping Length with Counterweight:		
	with Attachment*	5555 (218.7)	
	without Attachment*	5295 (208.5)	
	Overall Shipping Length without Counterweight:		
	with Attachment*	5430 (213.8)	
	without Attachment*	5170 (203.5)	
16	Boom Swing Right	910 (36)	
17	Boom Swing Left	735 (29)	
18	Track Belt/Shoe Width	400 (16)	
19	Overall Track Width	1980 (78)	
20	Width Over Upper House	1950 (77)	
21	Ground Clearance	306 (12)	
22	Stick Length	1580 (62)	1980 (78)

*VAB not at minimum or maximum position; it is at an intermediate position to reduce linkage height.

Standard Stick

Lift Capacities – Minimum Configuration			Lift Point Radius – 3 m (9.8 ft)			Lift Point Radius – 4.5 m (14.8 ft)			Lift Point Radius (Maximum)			
			Over Front			Over Front			Over Front			
Lift Point Height			Blade Down	Blade Up	Over Side	Blade Down	Blade Up	Over Side	Blade Down	Blade Up	Over Side	m (ft)
4.5 m (14.8 ft)	VAB out	kg (lb)				*1512 (*3,334)	1193 (2,631)	954 (2,104)	*1031 (*2,273)	*1031 (*2,273)	798 (1,760)	4.92 (16.1)
	VAB in	kg (lb)										
3 m (9.8 ft)	VAB out	kg (lb)	*2514 (*5,543)	*2514 (*5,543)	1729 (3,812)	*1659 (*3,658)	1141 (2,516)	905 (1,996)	*962 (*2,121)	736 (1,623)	577 (1,272)	5.78 (190.0)
	VAB in	kg (lb)							*972 (*2,143)	*972 (*2,143)	*972 (*2,143)	4.28 (14.0)
1.5 m (4.9 ft)	VAB out	kg (lb)				*1966 (*4,335)	1033 (2,278)	803 (1,771)	*1012 (*2,231)	652 (1,438)	505 (1,114)	6.07 (19.9)
	VAB in	kg (lb)	*1973 (*4,350)	*1973 (*4,350)	*1973 (*4,350)	*1458 (*3,215)	1165 (2,569)	928 (2,046)	*1160 (*2,558)	*1160 (*2,558)	863 (1,903)	4.69 (15.4)
0 m (0 ft)	VAB out	kg (lb)				*2060 (*4,542)	968 (2,134)	741 (1,634)	*1189 (*2,622)	665 (1,466)	513 (1,131)	5.90 (19.4)
	VAB in	kg (lb)	*3519 (*7,759)	1966 (4,335)	1491 (3,288)				*1841 (*4,059)	1088 (2,399)	852 (1,879)	4.46 (14.6)

Minimum Weight includes cab, rubber tracks, no extra counterweight, operator, full fuel tank, straight blade and no bucket.

Standard Stick

Lift Capacities – Maximum Configuration			Lift Point Radius – 3 m (9.8 ft)			Lift Point Radius – 4.5 m (14.8 ft)			Lift Point Radius (Maximum)			
			Over Front			Over Front			Over Front			
Lift Point Height			Blade Down	Blade Up	Over Side	Blade Down	Blade Up	Over Side	Blade Down	Blade Up	Over Side	m (ft)
4.5 m (14.8 ft)	VAB out	kg (lb)				*1512 (*3,334)	*1512 (*3,334)	1145 (2,525)	*1031 (*2,273)	*1031 (*2,273)	*1031 (*2,273)	4.92 (16.1)
	VAB in	kg (lb)										
3 m (9.8 ft)	VAB out	kg (lb)	*2514 (*5,543)	*2514 (*5,543)	2056 (4,533)	*1659 (*3,658)	1336 (2,946)	1096 (2,417)	*962 (*2,121)	*962 (*2,121)	718 (1,583)	5.78 (19.0)
	VAB in	kg (lb)							*972 (*2,143)	*972 (*2,143)	*972 (*2,143)	4.28 (14.0)
1.5 m (4.9 ft)	VAB out	kg (lb)				*1966 (*4,335)	1229 (2,710)	993 (2,190)	*1012 (*2,231)	787 (1,735)	638 (1,407)	6.07 (19.9)
	VAB in	kg (lb)	*1973 (*4,350)	*1973 (*4,350)	*1973 (*4,350)	*1458 (*3,215)	*1458 (*3,215)	1119 (2,467)	*1160 (*2,558)	*1160 (*2,558)	*1160 (*2,558)	4.69 (15.4)
0 m (0 ft)	VAB out	kg (lb)				*2060 (*4,542)	1164 (2,567)	932 (2,055)	*1189 (*2,622)	805 (1,775)	650 (1,433)	5.90 (19.4)
	VAB in	kg (lb)	*3519 (*7,759)	2306 (5,085)	1817 (4,006)				*1841 (*4,059)	1285 (2,833)	1044 (2,302)	4.46 (14.6)

Maximum Weight includes cab, steel tracks with pads, extra counterweight, operator, full fuel tank, straight blade and no bucket.

306 CR VAB 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® C2.4 engine meets U.S. EPA Tier 4 Final and EU Stage V emission standards.
- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels** up to:
  - ✓ 20% 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.

  *Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel (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 0.9 kg (1.98 lb) of refrigerant which has a CO_2 equivalent of 1.430 metric tonnes (1.419 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

Operator Sound Pressure* 72 dB(A) (ISO 6396:2008)

Exterior Sound Power Level** 98 dB(A) (ISO 6395:2008)

*The declared dynamic operator sound pressure levels per ISO 6396:2008. The measurements were conducted with the cab doors and windows closed.

**The labeled sound power level for the CE marked configurations when measured according to the test procedure and conditions specified in European Union Directive 2000/14/EC.

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
  - Power On Demand provides full time efficiency and power when you need it and is transparent to the operator
  - Auto idle and auto engine shutdown
  - Extended maintenance intervals reduce fluid and filter consumption
  - Remote Flash and Remote Troubleshoot (if equipped)

Recycling

- The materials included in machines are categorized as below with approximate weight percentage. Because of variations of product configurations, the following values in the table may vary.

Material Type	Weight Percentage
Steel	65.52
Iron	21.19
Rubber	3.50
Mixed Metal	2.20
Other	1.89
Nonferrous Metal	1.81
Plastic	1.55
Fluid	1.47
Mixed-Metal and Nonmetal	0.85
Mixed Nonmetallic	0.01
Uncategorized	0.00
Total	100.00

- A machine with higher recyclability rate will ensure more efficient usage of valuable natural resources and enhance End-of-Life value of the product. According to ISO 16714 (Earth-moving machinery – Recyclability and recoverability – Terminology and calculation method), recyclability rate is defined as percentage by mass (mass fraction in percent) of the new machine potentially able to be recycled, reused or both.

  All parts in the bill of material are first evaluated by component type based on a list of components defined by the ISO 16714 and Japan CEMA (Construction Equipment Manufacturers Association) standards. Remaining parts are further evaluated for recyclability based on material type.

  Because of variations of product configurations, the following values in the table may vary.

Recyclability – 96%

- The data provided above was based on the product configuration as provided by the individual product group.

Standard and Optional Equipment

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

	Standard	Optional
ENGINE		
Cat C1.7 Turbo Engine (U.S. EPA Tier 4 Final/ EU Stage V)	✓	
Automatic Engine Idle	✓	
Automatic Engine Shutdown	✓	
Automatic Two Speed Travel	✓	
Fuel Water Separator	✓	
Power on Demand (not available in all regions)	✓	
Variable Displacement Piston Pump	✓	
Load Sensing/Flow Sharing Hydraulics	✓	
HYDRAULICS		
Smart Tech Electronic Pump	✓	
Accumulator	✓	
Automatic Swing Brake	✓	
Auxiliary Hydraulic Lines	✓	
One and Two Way Auxiliary Flow	✓	
Continuous Auxiliary Flow	✓	
Auxiliary Line Quick Disconnects	✓	
OPERATOR ENVIRONMENT – CAB		
Stick Steer Mode	✓	
Travel Cruise Control	✓	
Control Pattern Changer	✓	
Adjustable Wrist Rests	✓	
Molded Footrests	✓	
Removable, Washable Floor Mat	✓	
Travel Pedals and Hand Levers	✓	
Cat Key with Passcode Option	✓	
Hydraulic Lockout Controls	✓	
High Back, Suspension Seat	✓	
Retractable Seat Belt (75 mm/3 in)	✓	
Seat Belt Reminder System		✓
Coat Hook	✓	
Cup Holder	✓	
Literature Holder	✓	
Mounting Bosses for Top and Front Guards	✓	
Signaling/Warning Horn	✓	
Cab and (left side) Boom Work Lights	✓	
Utility Space for Mobile Phone	✓	
Rain Visor		✓
Next Generation Color LCD Monitor (IP66)	✓	
– Fuel Level and Coolant Temperature Gauges	✓	
– Maintenance and Machine Monitoring	✓	
– Performance and Machine Adjustments	✓	
– Numeric Security Code	✓	
– Multiple Languages	✓	
– Camera Ready (IP68 and IP69K)	✓	
– Hour Meter with Wake Up Switch	✓	

	Standard	Optional
OPERATOR ENVIRONMENT – CAB *(continued)*		
Next Generation Advanced Monitor *(below are all included with Next Generation Advanced Monitor option)*		✓
– Touch Screen		
– Site Reference System		
– High Definition Camera Capable (IP68 and IP69K)		
– Numeric Security Code		
OPERATOR ENVIRONMENT – CAB ONLY		
Operator Sound Pressure 72 dB(A) ISO 6396:2008	✓	
HVAC with Automatic Temperature Control	✓	
Integrated Lower Front Window	✓	
Assisted Front Window Overhead Storage	✓	
Rear Window Emergency Exit	✓	
LED Interior Light	✓	
12V Power Socket	✓	
Radio – Bluetooth®, Auxiliary, Microphone, USB (charging only)	✓	
Skylight	✓	
Jog dial interface	✓	
Air Suspension Heated Seat		✓
UNDERCARRIAGE		
Greased and Lubricated Track	✓	
Hydraulic Track Adjusters	✓	
Tie Down Eyes on Track Frame	✓	
Dozer Straight Blade	✓	
Dozer Float	✓	
Bolt-on, Reversible Wear Edge	✓	
Rubber Tracks	✓	
Steel Tracks (450 mm/17.7 in wide)		✓
Steel Track with Rubber Pads		✓

Standard and Optional Equipment *(continued)*

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

	Standard	Optional
BOOM, STICK AND LINKAGES		
Variable Angle Boom	✓	
Standard Stick (1580 mm/62.2 in)	✓	
Front Shovel Capable – Pin-on/Manual Coupler/Hydraulic Coupler for Cat Tools	✓	
Thumb Ready	✓	
Attachments including Buckets, Augers and Hammers		✓
2nd Auxiliary Hydraulic Lines	✓	
Boom Lowering Check Valve	✓	
Stick Lowering Check Valve	✓	
Certified Lifting Eye		✓
ELECTRICAL		
12 Volt Electrical System	✓	
90 Ampere Alternator	✓	
650 CCA Maintenance Free Battery	✓	
Battery Disconnect	✓	
Circuit Breaker	✓	
Ignition Key Stop Switch	✓	
Signaling/Warning Horn	✓	
Product Link™ Basic (regulations apply)	✓	
Product Link Elite (regulations apply)		✓
Ease of Use Indicate		✓
Ease of Use E-Fence		✓
Cat Grade Advanced 2D		✓
Cat Grade 3D		✓
Travel Alarm	✓	
Camera		✓
Rotating Beacon		✓

	Standard	Optional
GUARDING		
ROPS ISO 12117-2:2008	✓	
Top Guard ISO 10262:1998 (Level I)	✓	
Top Guard ISO 10262:1998 (Level II)		✓
Front Guard (Mesh) ISO 10262:1998 (Level I)		✓
Front Guard (Heavy Duty) ISO 10262:1998 (Level II)		✓
Track Guards		✓
OTHER		
Locks on External Enclosure Doors	✓	
Lockable Fuel Cap	✓	
Beacon Socket	✓	
Rear Reflectors	✓	
Additional Counterweight (250 kg/551 lb)		✓
Additional Counterweight (500 kg/1,102 lb)		✓
Water Jacket Heater		✓
Refueling Pump		✓

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at **www.cat.com**

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

AEHQ8415-03 (04-2024)
Replaces AEHQ8415-02
Build Number: 07A
(Europe)