

M322

WHEELED EXCAVATOR



Engine Power – ISO 14396
Operating Weight Maximum
Forward/Reverse – 2nd Gear

129 kW (174 hp)
24 000 kg (52,911 lb)
30 km/h (18.6 mile/h)



M322

WHEELED EXCAVATOR

Working hard has never been easier than with the Cat® M322 Wheeled Excavator. This machine is designed to help you take on a wide variety of challenges at a lower cost. The Cat M322 plays its part in optimizing the operator's efficiency to increase cash flow. Enjoy the versatility, precision, and efficiency offered by integrated solutions like Cat Grade and Payload technologies. Combined with simplified maintenance, the M322 keeps you working quickly and easily.



IMPROVED PERFORMANCE

A Cat® C7.1 engine and powerful hydraulics give you the power to move your material with speed and precision.

UP TO 5% LOWER MAINTENANCE COSTS

With extended and more synchronized maintenance intervals, you get more done at a lower cost compared to the previous model.

UP TO 45% INCREASED OPERATOR EFFICIENCY

Work faster with improved rotational movement and lower Diesel Exhaust Fluid (DEF) and fuel consumption. Optional Grade, Payload, and E-Fence technologies provide additional versatility, precision, and efficiency.

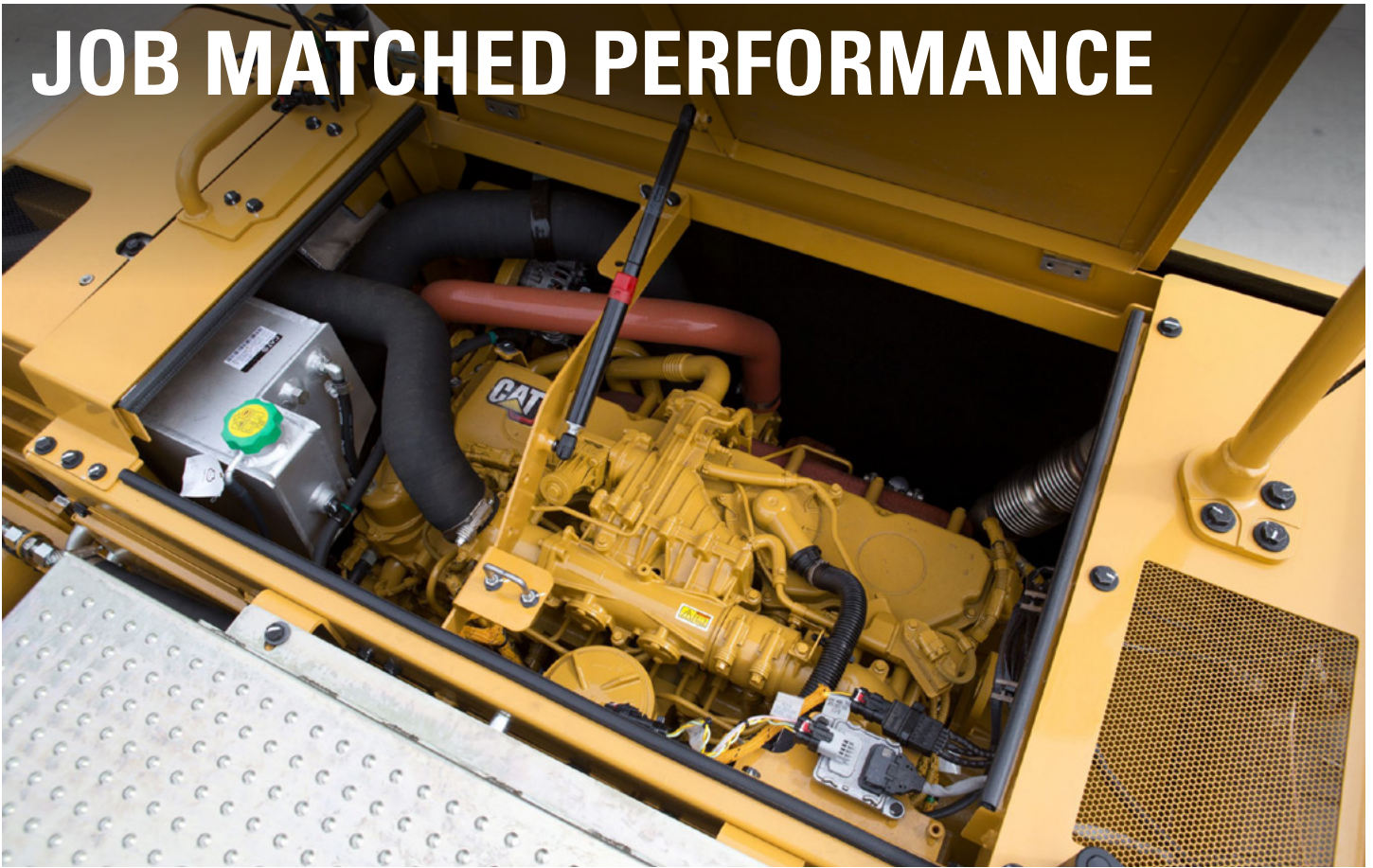
LATEST FEATURES



- Cab Monitor Improvements
 1. Continuously improved user interface allows for intuitive navigation, minimizing performance interruption with the easy-to-use touchscreen menu.
 2. Identify apps quickly with a grid list view, abbreviated app names, and categorized menu options.
 3. A new notification center keeps important information visible to the operator, and displays messages without shrinking the camera view.
 4. Color coded notifications set critical messages apart from the rest.
 5. Use the in-monitor QR code to learn about machine and technology features through a full suite of “how-to” videos.
- Enhance visibility to make service work easier and safer with optional inspection lighting.
- Standard integrated vehicle health management system alerts the operator with service guidance and parts needed to enhance uptime.

Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area. Build Number: 07D

JOB MATCHED PERFORMANCE



- The Cat C7.1 engine matches your performance and production needs.
- Up to 5 percent lower fuel consumption compared to M322F.
- Built-in fuel savers like Auto Engine Speed Control and Engine Idle Shutdown eliminate waste.
- Dedicated swing pump allows faster, smoother combined movements.
- Auxiliary hydraulic options give you the versatility to use a wide range of Cat attachments.

UNMATCHED VERSATILITY

- Travel easily between jobsites with travel speeds up to 30 km/h (19 mph).
- Joystick buttons/sliders can be set up as desired by the operator.
- Enhanced swing lock makes it possible to lock swing and front linkage independently.
- Don't let the temperature stop you from working. The excavator has a standard high-ambient temperature capability of 52° C (125° F) and cold start capability of -18° C (0° F).



EASY OPERATION

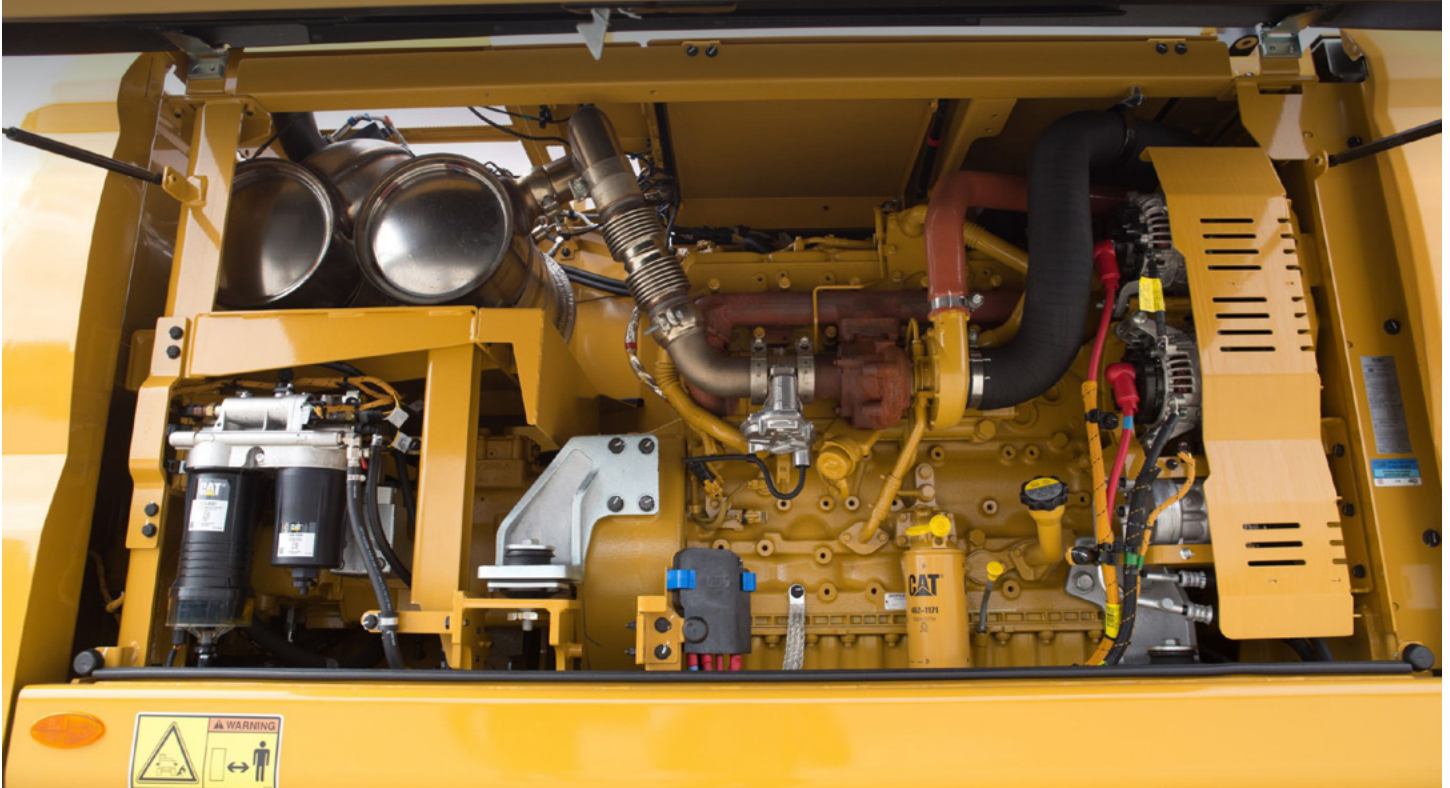


- Start the engine with the push-to-start button, a Bluetooth® key fob, or the unique Operator ID function.
- Everything can be adjusted in the cab from the steering column height to the electrically adjustable mirrors.
- Large split-screen monitor to allow quick view of multiple cameras on the same display.
- Program your power mode and joystick preferences using Operator ID; the excavator remembers your settings each time you go to work.
- Navigate quickly on the standard high-resolution 254 mm (10 inch) touchscreen monitor or with the aid of the jog dial control.
- The axle locks at zero speed and unlocks when the travel pedal is activated. The axle can also be manually locked with a button on the right-hand console.
- Tiltrotator attachments – ours or other brands – work seamlessly with Cat 2D Grade, Assist, Payload, and E-Fence. With no additional hardware required, all you have to do is simply select “Third Party Tiltrotator System Installation” in the monitor, do the calibration, and get to work.
- Cat continues to improve user interface functionality for operators of all skill levels. The touchscreen monitor is an easy-to-use operating tool that presents the jobsite dashboard with an intuitive format. Productivity applications are displayed in grid-view to read on-the-go, and touchscreen navigation is programmed to make sure job performance continues without any hold ups.

- The service platform design provides easy, safe, and quick access to the cab; the steps use an anti-skid punch plate to prevent slipping.
- Operator works in clean air thanks to the cabin filtration system that includes pre-cleaner, a recirculation filter, and a cabin pressure monitor.
- Keep your excavator secure with Operator ID. Use your PIN code on the monitor to enable the pushbutton starting feature.
- For a clearer view of the jobsite, whether during the day or in the dark, the M322 has large glass areas, rear/side cameras, and LED lamps for all working lights.
- Make service work easier and safer with optional inspection lighting. With the flip of a switch, lights will illuminate the engine, pump, battery, and radiator compartments to enhance visibility.



SIMPLIFIED MACHINE MAINTENANCE



- Quickly check and service your machine with all daily maintenance points accessible from ground level.
- Up to 5 percent lower maintenance costs vs. previous model with the same productivity.
- Track your machine's filter life and maintenance intervals on the in-cab monitor.
- The hydraulic oil filter provides improved filtration performance, anti-drain valves to keep oil clean when the filter is replaced, and longer life with a 3,000-hour replacement interval – 50 percent longer than previous filter designs.
- Operator Protective Structure (OPS)
- Scheduled Oil Sampling (S-O-SSM) ports are located at ground level, simplifying maintenance and allowing for quick, easy extraction of fluid samples for analysis.
- Boost productivity with proactive service reminders. The integrated vehicle health management system alerts the operator with step-by-step service guidance along with parts needed so you don't experience any unnecessary downtime.

ELEVATE BUSINESS WITH CAT TECHNOLOGY

- Boost productivity versus traditional grading with optional Cat Grade with 2D system.
- Optional Cat Payload helps you achieve precise load targets to improve your operating efficiency. Pick up a load of material – with a bucket and thumb combination or grapple and clamshell attachments – and get a real-time weight estimate without swinging.
- Combine Payload with VisionLink® and remotely manage your production targets or take payload data with you.
- Upgrade to our dual antenna Global Navigation Satellite System (GNSS) for maximum grading efficiency. The system lets you create and edit designs on the touchscreen monitor while you're on the job, or you can have the plan design sent to the excavator to make your work easier. Plus, you get added benefits of avoidance zones, cut and fill mapping, lane guidance, and augmented reality along with advanced positioning capability.
- Optional Grade Assist helps you stay on grade – simply and effortlessly – with single-lever digging. Set your desired bucket angle and let Bucket Assist automatically maintain the angle in sloping, leveling, fine grading, and trenching applications.
- Optional 2D E-fence is integrated right out of the factory to prevent the excavator from moving outside operator defined set points.
- All Cat Grade systems are compatible with radios and base stations from Trimble, Topcon, and Leica. Already invested in a grade infrastructure? You can install grade systems from Trimble, Topcon, and Leica onto the machine.



SUSTAINABILITY

- The Cat C7.1 engine meets U.S. EPA Tier 4 Final and EU Stage V.
 - 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)* or 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.
 - Cat Grade technologies combine advanced guidance with optional automated machine control helping you reach grading targets while reducing fuel burn and greenhouse gas emissions by improving efficiency, jobsite productivity, and accuracy.
 - Auto Engine Speed Control reduces unnecessary fuel burn and greenhouse gas emissions by allowing the engine to automatically go into idle mode when the machine is not working.
 - Cat® Payload for excavators provides on-the-go material weighing which helps reduce fuel burn by improving loading efficiency, jobsite productivity, and eliminating trips to the scale.
 - Extended maintenance intervals not only reduce downtime but decrease the amount of fluid and filters that are replaced over the life of the machine.
 - Cat S-O-S services helps reveal excessive wear, contaminated fluids or other “unseen” issues that can shorten component life. In many cases, you can extend oil and coolant change intervals by using fluid monitoring. Consult your Cat dealer or the machine’s operation and maintenance manual for more information.
 - Don’t waste fuel idling. Cat VisionLink online fleet monitoring helps you manage idle time and reduce fuel burn and greenhouse gas emissions. VisionLink displays the CO₂ emissions for monitored assets, calculated by fuel type for the Runtime Fuel Burned each day in a selected date range.
 - Remote Flash minimizes downtime and maintenance time while keeping your asset running with maximum efficiency. Alerts for machine updates are sent virtually from your Cat dealer and updates can be deployed without a dealer technician needing to be onsite. Remote Troubleshoot decreases maintenance time and keeps your machine running with maximum efficiency by allowing your Cat dealer to virtually test the machine while working. Once a problem is identified, a technician can fix it the first time, saving time and money.
- *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.***



MORE THAN MACHINES

BUILT AROUND YOUR SUCCESS

When you buy Cat equipment, you get so much more than the machine. You also get the support of a best-in-class dealer network, backed by a range of flexible solutions, technology, tools, and more.



CUSTOMER VALUE AGREEMENTS

A Customer Value Agreement (CVA) from your Cat dealer helps you do more and worry less. A CVA simplifies machine ownership and maintenance, adds the security of expert dealer support, and gives you the peace of mind from effective equipment health management.

GENUINE CAT PARTS

Genuine Cat parts deliver the highest level of reliability and productivity. Order direct from your Cat dealer or shop online at parts.cat.com.

REPAIR OPTIONS

A broad range of repair options gives you choices that work with your needs, budget, and timeline. Every repair is performed by expert Cat technicians. You'll receive smart repair advice, a timely, accurate quote, and service that gets your machine back into action quickly.

FINANCIAL SERVICES

Count on Cat Financial to provide the best finance and extended protection solutions for your business. For more than 30 years, we have helped our customers succeed through financial service excellence.



DOZERS



SKID STEERS



MATERIAL HANDLERS



EXCAVATORS



WHEEL LOADERS



TRACK LOADERS

INCREASE YOUR PRODUCTIVITY AND PROFIT WITH CAT ATTACHMENTS

You can easily expand the performance of your machine by utilizing any of the variety of Cat attachments. Each Cat attachment is designed to fit the weight and horsepower of Cat wheeled excavators for improved performance, safety, and stability.

BUCKETS



DEMOLITION AND SORTING GRAPPLERS



ORANGE PEEL GRAPPLERS



HYDRAULIC HAMMERS



MULTI-PROCESSORS



SHEARS



MULCHERS



TILTROTATORS



COMPACTORS



COUPLERS



PULVERIZERS



HYDRAULIC TRANSFER GRABS



TECHNICAL SPECIFICATIONS

Engine

Engine Power – ISO 14396	129 kW	174 hp
Engine Power – ISO 14396 (DIN)	176 hp (metric)	
Engine Model	C 7.1	
Net Power – ISO 9249	128 kW	171 hp
Net Power – ISO 9249 (DIN)	174 hp (metric)	
Bore	105 mm	4.1 in
Displacement	7 L	427.8 in ³
Stroke	135 mm	5.3 in
Biodiesel Capability	Up to B20 ¹	
Emissions	Meets U.S. EPA Tier 4 Final, EU Stage V, Japan 2014 emission standards.	

Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, Clean Emission Module (CEM) exhaust gas aftertreatment, alternator, and cooling fan with engine speed at 2,200 rpm. Advertised power is tested per the specified standard in effect at the time of manufacture.

¹Cat 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)* or 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. *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.

Hydraulic System

Main System – Maximum Flow – Implement	360 L/min	95 gal/min
Maximum Pressure – Implement Circuit – Heavy Lift	37 000 kPa	5,366 psi
Maximum Pressure – Implement Circuit – Travel Circuit	35 000 kPa	5,076 psi
Maximum Pressure – Implement Circuit – Normal	35 000 kPa	5,076 psi

Swing Mechanism

Swing Torque	60 kN-m	44,250 lb-ft
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Machine Weight

Operating Weight Maximum	24 000 kg	52,911 lb
Operating Weight Minimum	20 300 kg	44,750 lb

Service Refill Capacities

Fuel Tank	470 L	124.2 gal
Diesel Exhaust Fluid (DEF)	30 L	7.9 gal
Cooling System	40 L	10.6 gal
Engine Oil	13 L	3.4 gal
Hydraulic Tank	200 L	52.8 gal
Hydraulic System – Including Tank	270 L	71.3 gal

Transmission

Forward/Reverse – 2nd Gear	30 km/h	18.6 mile/h
Forward/Reverse – 1st Gear	9 km/h	5.6 mile/h
Creeper Speed – 1st Gear	5.5 km/h	3.4 mile/h
Creeper Speed – 2nd Gear	15 km/h	9.3 mile/h
Drawbar Pull	127 kN	28,551 lbf
Maximum Gradeability	70%	

Dimensions

Boom	VA 5.4 m (17'10")	
Stick	2.9 m (9'2")	
Shipping Height with Falling Object Guard	3350 mm	11 ft
Support Point	3430 mm	11.3 ft
Shipping Length	9485 mm	31.1 ft
Tail Swing Radius	2800 mm	9.2 ft
Counterweight Clearance	1330 mm	4.3 ft
Ground Clearance	320 mm	1.25 ft
Wheel Base	2750 mm	9 ft

Working Ranges and Forces

Boom Type	VA 5.4 m (17'10")	
Stick	2.9 m (9'2")	
Bucket	GD 1.2 m ³ (1.7 yd ³)	
Maximum Loading Height	7520 mm	24.7 ft
Maximum Digging Depth	6650 mm	21.8 ft
Reach at Ground Level	10 190 mm	33.4 ft
Vertical Wall Digging Depth	5290 mm	17.3 ft
Bucket Forces (ISO)	151 kN	33,946 lbf
Stick Forces (ISO)	105 kN	23,605 lbf
Maximum Depth Cut for 2440 mm (8 ft) Level Bottom	6560 mm	21.6 ft
Cutting Height	10 900 mm	35.8 ft

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.0 kg of refrigerant which has a CO₂ equivalent of 1.43 metric tonnes.

STANDARD & OPTIONAL EQUIPMENT

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

	Standard	Optional		Standard	Optional
BOOM AND STICKS			ELECTRICAL SYSTEM		
5.4 m (17'10") variable adjustable boom	✓		LED lights on chassis (left-hand, right-hand) and counterweight	✓	
2.5 m (8'2") stick		✓	Programmable time-delay LED working lights	✓	
2.9 m (9'6") stick		✓	Roading and indicator lights, front and rear	✓	
UNDERCARRIAGE AND STRUCTURES			Maintenance-free batteries	✓	
11.00-20 16 PR, dual tires	✓		Centralized electrical disconnect switch	✓	
Automatic brake/axle lock	✓		Electrical refueling pump		✓
Creeper speed	✓		SERVICE AND MAINTENANCE		
All wheel drive	✓		S-O-S ports	✓	
3500 kg (7,716 lb) counterweight		✓	Integrated vehicle health management system	✓	
4700 kg (10,362 lb) counterweight		✓	Automatic lubrication system for implement and swing system		✓
CAT TECHNOLOGY			HYDRAULIC SYSTEM		
VisionLink	✓		Automatic swing brake	✓	
Remote Flash	✓		Auto hydraulic oil warm up	✓	
Remote Troubleshoot	✓		Electronic main control valve	✓	
Cat Grade Connectivity		✓	Boom, stick, and bucket drift reduction valves	✓	
Cat Grade 2D		✓	1-slider joystick	✓	
Cat Grade with Attachment Ready Option (ARO)		✓	Heavy lift mode	✓	
Cat Grade 3D dual GNSS		✓	Separate dedicated swing pump	✓	
Laser catcher		✓	Boom, stick, and bucket drift reduction valves	✓	
Grade Assist		✓	2-slider joystick		✓
Cat Payload		✓	Second high-pressure auxiliary circuit (one-/ two-way high-pressure flow)		✓
Cat Tilt Rotator (TRS) Integration		✓	Medium pressure auxiliary circuit (one-/ two-way medium-pressure flow)		✓
CAB			Quick coupler circuit		✓
Rollover Protective Structure (ROPS), advanced sound suppression	✓		SmartBoom		✓
Premium cab with auto-adjustable seat and air ventilation	✓		Ride control		✓
High-resolution 254 mm (10 in) LCD touchscreen monitor	✓		Cat tiltrotator support		✓
ENGINE			Joystick steering		✓
Power mode selector	✓		Boom/stick lowering check valves		✓
One-touch low idle with auto engine speed control	✓		SAFETY AND SECURITY		
Auto engine idle shutdown	✓		Rear- and right-side-view cameras	✓	
52° C (125° F) high-ambient cooling capacity	✓		Ground-level engine shutoff switch	✓	
Cold start capability -18° C (0° F)	✓		Anti-skid plate and countersunk bolts on service platform	✓	
Double element air filter with integrated pre-cleaner	✓		360° visibility		✓
Electric fuel priming pump	✓		Cat asset tracker		✓
On-demand electric cooling fans	✓		Wide angle mirrors		✓
			Signaling/warning horn		✓
			2D E-Fence		✓
			Inspection lighting		✓

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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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AEXQ3307-02
Replaces AEXQ3307-01
Build Number: 07D
(N Am, Europe)

