

M322

WHEEL EXCAVATOR



Engine Power – ISO 14396

Operating Weight Maximum

Maximum Travel Speed

129 kW (174 hp)

24 845 kg (54,770 lb)

30 km/h (18.6 mile/h)

CAT[®]

M322

WHEEL EXCAVATOR

The Cat® M322 Wheel Excavator helps provide top performance with versatility from the Cat tiltrotator (TRS) integration to get the job done fast. With low maintenance costs, long service intervals, and 100 percent ground-level daily check, the M322 helps save you time and money. A cab made for operator comfort helps keep you working quickly and efficiently.



HIGH PERFORMANCE

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

EASY TO MAINTAIN

Long-life filters for fuel, hydraulic oil, and air, 100 percent ground-level daily check, and centralized grease points with an autolube option help lower your overall costs.

OPERATOR COMFORT

Operate with ease. The Premium cab with an ergonomic control layout and comfortable seat help you work comfortably all shift long.

LATEST FEATURES



Cat Grade 3D Ready

- The Cat Grade 3D Ready option includes all the hardware required for the Grade with 3D system, installed and tested from the factory. This option provides an easier upgrade path for customers who want to add Grade with 3D after their initial purchase. To activate, contact your Cat dealer to purchase the required 3D software licenses. Licenses can be installed remotely or manually loaded onto the machine.

Cat Payload*

- The Cat Payload option provides operators with on-the-go weighing to help them hit load targets and avoid overloading, underloading, or misloading materials.

**Payload technologies are not legal for trade.*

Not all features are available in all regions. Please check with your Cat dealer for specific offering availability in your area.

HIGH PERFORMANCE



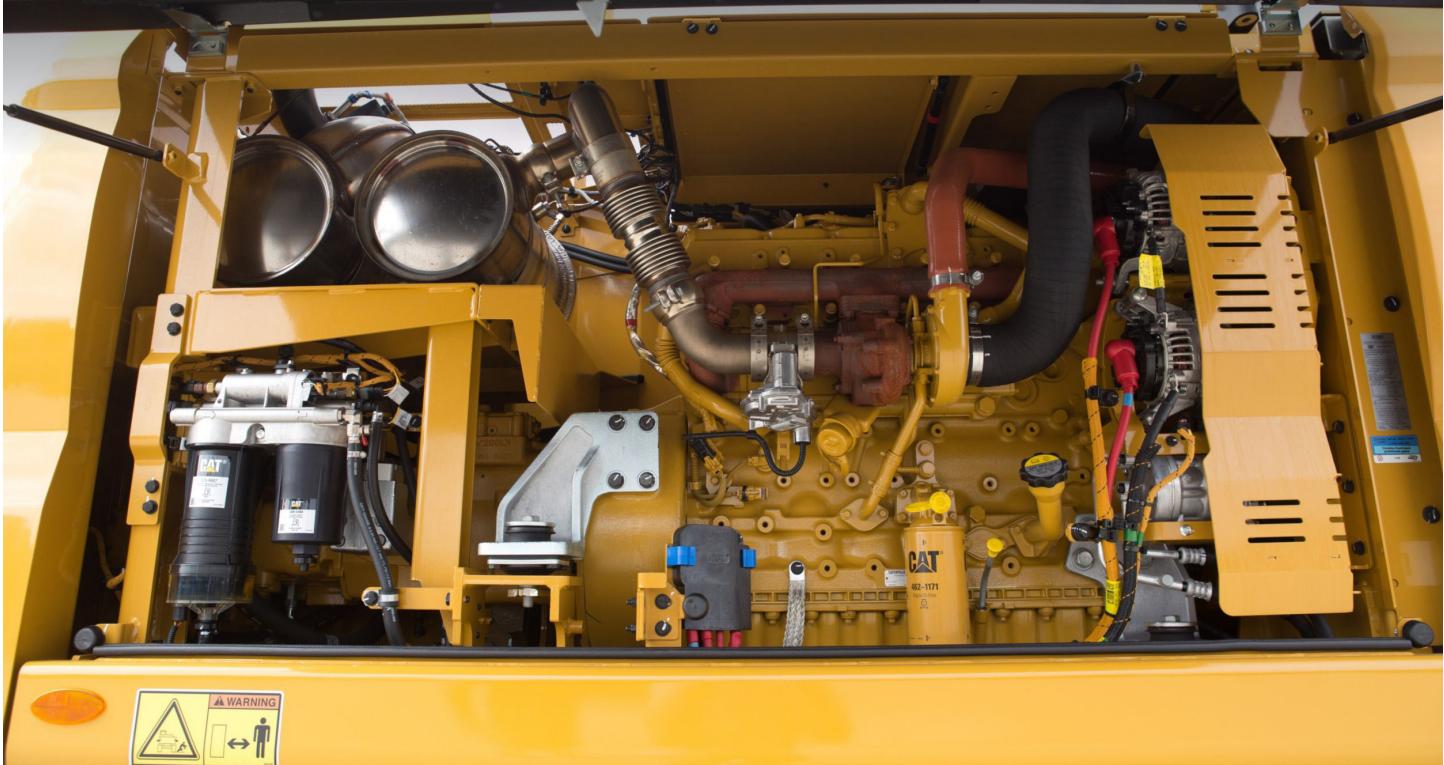
- The Cat engine matches to your performance and production needs. The engine meets U.S. EPA Tier 4 Final and EU Stage V emission standards.
- The M322 is fuel efficient to help keep you moving and productive on the jobsite.
- Easily travel between sites with travel speeds up to 30 km/h (18.6 mph).
- From dirt to asphalt, the excavator matches your needs to help get the job done in a timely, efficient manner.
- The advanced hydraulic system provides the optimum balance of power and efficiency while giving you the control you need for precise working requirements.
- The dedicated swing pump helps provide consistent power for better multi-tasking capabilities.
- High swing torque helps you get the job done fast to move on to the next one.
- Auxiliary hydraulic options give you the versatility to use a wide range of Cat attachments.
- Don't let the temperature stop you from working. The excavator has a standard high-ambient temperature capability of up to 52°C (125°F) and cold start capability of down to -18°C (0°F).

WORK IN COMFORT

- The Premium seat is heated, ventilated, and adjusts automatically.
- Get in and out of the cab easily using the tip-up left console.
- Advanced viscous mounts help you feel comfortable in the cab while you work with reduced cab vibrations.
- Control the excavator comfortably with easy-to-reach controls, all located in front of you.
- Stow your gear with plenty of in-cab storage beneath and behind the seat, overhead, and in the consoles. A cup holder, bottle holder, and coat hook are also provided.
- Bluetooth® integrated radio allows for seamless mobile phone connection to listen to music, podcasts, and hands-free calling.
- Easily adjust the climate control system using the touchscreen monitor or jog dial.



LOW MAINTENANCE COSTS



- Quickly check and service your machine with daily maintenance points accessible from ground level.
- Check the engine oil level quickly and safely from the ground.
- Long-life filters for fuel, hydraulic oil, and air help save on maintenance costs.
- Track your machine's filter life and maintenance intervals on the in-cab monitor.
- The fuel filtration helps protect the engine from fuel contamination.
- The hydraulic oil filter helps provide high filtration performance, anti-drain valves to help keep oil clean when the filter is replaced, and long life with a 3,000-hour replacement interval.
- Centralized grease points with an autolube option mean less downtime and more work getting done.
- Scheduled Oil Sampling (S-O-SSM) ports are located at ground level, helping simplify 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.

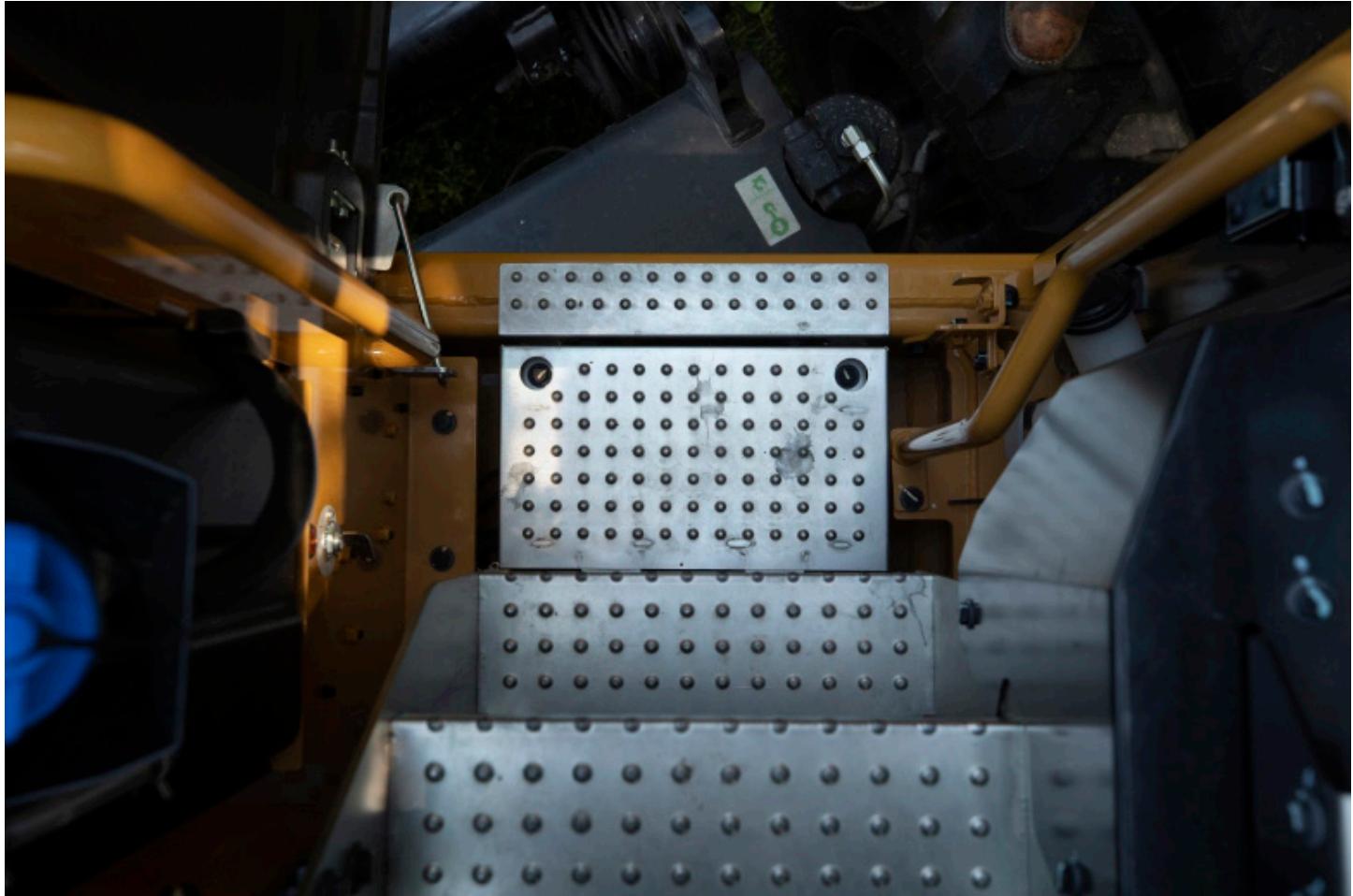
SIMPLE TO OPERATE



- Start the engine with the push-to-start button, a Bluetooth® key fob, or the unique Operator ID function.
- 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 in) 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 or with a joystick button.
- Turn on Heavy Lift mode and get more force when you need it.
- Continuously improved user interface allows for intuitive navigation, minimizing performance interruption with the easy-to-use touchscreen menu.
- Optional Cat tiltrotators work seamlessly with Cat 2D Grade, Assist, Payload, and E-Fence with no additional hardware required. Third-party tiltrotators are compatible with these features and can be activated with the purchase of additional software.

SAFETY FEATURES

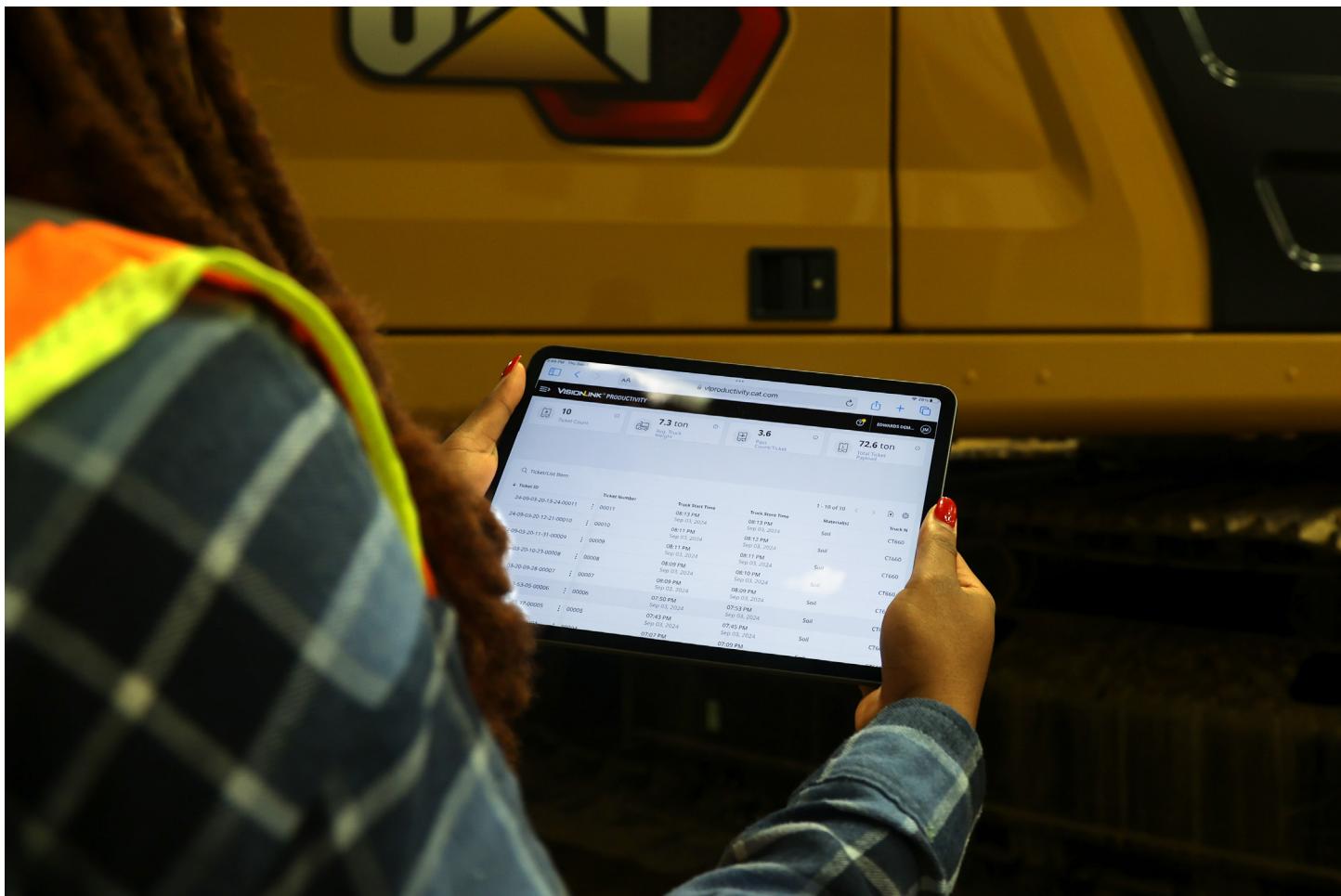
- Access daily maintenance points from ground level.
- Keep your excavator secure with Operator ID. Use your PIN code on the monitor to enable the push button starting feature.
- The standard Rollover Protective Structure (ROPS) cab meets ISO 12117-2:2008 requirements.
- Enjoy great all-around visibility with the help of small cab pillars, large windows, and a flat engine hood design. Rear and right-side-view cameras are standard.
- The service platform design helps provide easy, safe, and quick access to the upper service platform; the service platform steps use anti-skid punch plates to help prevent slipping.
- The standard hydraulic lockout lever isolates all hydraulic and travel functions in the lowered position.
- The travel and swing lock prevent the front linkage and upper frame from moving as you travel.
- The ground-level shutoff switch stops all fuel to the engine when activated and shuts down the machine.
- Optional inspection lighting helps make service work easy and safe. With the flip of a switch, lights will illuminate the engine, pump, battery, and radiator compartments to enhance visibility.
- Optional Operator Protective Guards (OPG) protect from falling and flying debris.
- Optional Cab Avoidance helps you avoid contact between your work tool attachment and the cab.
- Optional 2D E-fence is integrated right out of the factory to prevent the excavator from moving outside operator defined set points.



INTEGRATED CAT® TECHNOLOGIES

- The latest operator oriented User Interface (UI) has been designed to help maximize uptime.
- VisionLink™ provides actionable data insights for all assets – regardless of fleet size or equipment manufacturer.* Review equipment data from your desktop or mobile device to maximize uptime and optimize assets. Dashboards provide information such as hours, miles, location, idle time, and fuel utilization. Make informed decisions that lower costs, simplify maintenance, and improve safety and security on your jobsite.
- Remote Flash is a mobile application that allows you to update onboard software without a technician being present, allowing you to initiate software updates when convenient, increasing your overall operating efficiency.
- Remote Troubleshoot is a mobile application that allows your Cat dealer to perform diagnostic testing on your connected machine remotely to help ensure that issues are resolved quickly and with less downtime.
- Optional Cat Grade with 2D system helps boost productivity versus traditional grading.
- 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 with the purchase of additional software for activation.
- Optional Cat Grade with 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 Cat Payload helps you achieve precise load targets to improve your operating efficiency. Pick up a load of material with a bucket and get a real-time weight estimate without swinging.

**Data field availability can vary by equipment manufacturer.*



SUSTAINABILITY

- The Cat C7.1 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) and are compatible* with 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.
- 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.
- Extended maintenance intervals not only reduce downtime, but also decrease the amount of fluid and filters that are replaced over the life of the machine.
- Cat Scheduled Oil Sampling (S-O-SSM) services help 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.
- 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 on site.
- 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.
- 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.
- 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.

* While Caterpillar engines are compatible with these alternative fuels, some regions may not allow their use.

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

*** Engines with no aftertreatment devices are compatible with higher blends, up to 100% biodiesel (for use of blends higher than 20% biodiesel, consult your Cat dealer).



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 world-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 wheel excavators for improved performance, safety, and stability.

BUCKETS

DEMOLITION AND
SORTING GRAPPLERS

ORANGE PEEL GRAPPLERS

HYDRAULIC HAMMERS



MULTI-PROCESSORS

SHEARS

MULCHERS

TIROTATORS



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	Cat® C7.1	
Net Power – ISO 9249	128 kW	171 hp
Net Power – ISO 9249 (DIN)	174 hp (metric)	
Bore	105 mm	4.1 in
Stroke	135 mm	5.3 in
Displacement	7 L	427.8 in ³
Biodiesel Capability	Up to B20 ¹	
Emissions	Meets U.S. EPA Tier 4 Final and EU Stage V 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 running at intermediate speed. Rated 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) and are compatible* with 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.

* While Caterpillar engines are compatible with these alternative fuels, some regions may not allow their use.

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

*** Engines with no aftertreatment devices are compatible with higher blends, up to 100% biodiesel (for use of blends higher than 20% biodiesel, consult your Cat dealer).

Drive		
Maximum Travel Speed	30 km/h	18.6 mile/h
Hydraulic System		
Main System – Maximum Flow – Implement	360 L/min	95 gal/min
Maximum Pressure – Implement Circuit – Normal	35 000 kPa	5,076 psi
Maximum Pressure – Implement Circuit – Heavy Lift	37 000 kPa	5,366 psi
Maximum Pressure – Implement Circuit – Travel Circuit	35 000 kPa	5,076 psi

Swing Mechanism

Maximum Swing Speed*	8.6 rpm	44,250 lbf/ft
Standard Swing Torque	60 kN·m	44,250 lbf·ft
Optional Swing Torque	69 kN·m	50,890 lbf·ft

*For CE-marked machine default value may be set lower.

Machine Weight		
Operating Weight Maximum	24 845 kg	54,770 lb
Operating Weight Minimum	21 515 kg	47,430 lb

Operating weight includes full fuel tank, operator, General Duty (GD) bucket and dual pneumatic tires. Weight varies depending on configuration. Typical configurations include 2.5 m (8'2") stick and 3500 kg (7,716 lb) counterweight.

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
Hydraulic Tank	200 L	52.8 gal
Hydraulic System – Including Tank	405 L	107 gal

Dimensions

Boom	Variable Adjustable Boom 5.4 m (17'10")	
Stick	2.9 m (9'2")	
Bucket	General Duty (GD) 1.19 m ³ (1.56 yd ³)	
Shipping Height – Top of Cab	3350 mm	11 ft
Shipping Length	9485 mm	31.1 ft
Support Point	3430 mm	11.3 ft
Tail Swing Radius	2800 mm	9.2 ft
Counterweight Clearance	1330 mm	4.4 ft
Ground Clearance	320 mm	1 ft
Undercarriage Length	5175 mm	17 ft
Wheel Base	2750 mm	9 ft

Working Ranges and Forces

Boom	Variable Adjustable Boom 5.4 m (17'10")	
Stick	2.9 m (9'2")	
Bucket	General Duty (GD) 1.19 m ³ (1.56 yd ³)	
Maximum Cutting Height	10 900 mm	35.8 ft
Maximum Loading Height	7520 mm	24.7 ft
Maximum Digging Depth	6650 mm	21.8 ft
Maximum Vertical Wall Digging Depth	5290 mm	17.3 ft
Maximum Reach at Ground Line	10 190 mm	33.4 ft
Bucket Forces (ISO)	151 kN	33,946 lbf
Stick Forces (ISO)	105 kN	23,605 lbf

Range values are with dual pneumatic tires (11.00-20). Range values are calculated with a GD bucket (CW) and CW quick coupler with a tip radius of 1697 mm (5'7"). Force values are calculated with heavy lift on, a GD bucket (pin-on) and a tip radius of 1574 mm (5'2").

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. See the label or instruction manual for identification of the gas. If equipped with R134a (Global Warming Potential = 1430), the system contains 0.75 kg (1.7 lb) of refrigerant which has a CO₂ equivalent of 1.073 metric tonnes (1.182 tons). If equipped with R1234yf (Global Warming Potential = 0.5), the system contains 0.8 kg (1.8 lb) of refrigerant which has a CO₂ equivalent of 0.0004 metric tonnes (0.0004 tons).

STANDARD AND 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 (Europe only)	✓		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	✓
Automatic brake/axle lock	✓		Centralized electrical disconnect switch	✓
All-wheel drive	✓		Electrical refueling pump	✓
11.00-20 16 PR, dual tires	✓		SERVICE AND MAINTENANCE	
3500 kg (7,716 lb) counterweight (Europe only)	✓		Scheduled Oil Sampling (S-O-S SM) ports	✓
4700 kg (10,362 lb) counterweight	✓		Integrated vehicle health management system	✓
CAT® TECHNOLOGY			Automatic lubrication system for implement and swing system	✓
VisionLink™	✓		HYDRAULIC SYSTEM	
Remote Flash and Remote Troubleshoot	✓		Boom, stick, and bucket drift reduction valves	✓
Cat Grade with 2D	✓		Automatic hydraulic oil warm up	✓
Cat Grade with 2D with Attachment Ready Option (ARO)	✓		Heavy lift mode	✓
Laser catcher	✓		One-slider joysticks	✓
Cat Grade 3D ready	✓		Boom/stick lowering check valves	✓
Cat Grade Connectivity	✓		Two-slider joysticks	✓
Cat Grade with Assist	✓		Joystick steering	✓
Cat Payload	✓		SAFETY AND SECURITY	
Cat Tiltrotator (TRS) Integration	✓		Rear and right-side-view cameras	✓
CAB			Lockable disconnect switch	✓
Sound-suppressed ROPS cab	✓		Anti-skid plate and countersunk bolts on service platform	✓
Keyless push-to-start engine control	✓		Wide angle mirrors	✓
Height-adjustable console, infinite with no tool	✓		360° visibility	✓
High-resolution 254 mm (10 in) LCD touchscreen monitor	✓		Signal/warning horn	✓
Operator Protective Guards (OPG)	✓		Inspection lighting	✓
ENGINE			2D E-fence	✓
Power mode selector	✓		Cab Avoidance	✓
One-touch low idle with automatic engine speed control	✓			
Automatic engine idle shutdown	✓			
Up to 52°C (125°F) high-ambient cooling capacity	✓			
Cold start capability down to -18°C (0°F)	✓			
Double element air filter with integrated pre-cleaner	✓			

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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AEXQ4207-01 (02-2026)

Replaces: AEXQ4207-00

Build Number: 07E
(Europe, N Am)

