

# MH3022

## WHEEL MATERIAL HANDLER



Engine Model  
Maximum Operating Weight  
Maximum Reach

Cat® C4.4  
24 500 kg (54,000 lb)  
9280 mm (30.4 ft)

**CAT**®

# MH3022

## WHEEL MATERIAL HANDLER

The Cat® MH3022 is a purpose-built material handler designed to deliver strong performance for your toughest waste and scrapyard applications. The MH3022 features simple-to-use technologies, a comfortable cab, and multiple boom and stick options to match your work. These features help create a safe, reliable product to take on the wide variety of challenges you face each day.



### HIGH PERFORMANCE

Quick cycle times help you complete more work in less time. A wide machine footprint helps provide stability.

### LOW MAINTENANCE COSTS

Long life filters for fuel, hydraulic oil, and air help lower your overall costs.

### OPERATOR COMFORT

Operate with ease. In cab comfort options of your choice and high visibility with 360° machine view help you work comfortably all shift long.

# LATEST FEATURES

## Machine Setup Simplification

- At the touch of fingertips and navigating user-friendly icons, the latest operator oriented User Interface (UI) maximizes uptime and gets crews to work without delay. From re-ordering work tool lists to creating new work tool combinations as needed, operators can quickly set up machines and easily access information.
- The interface allows operators to maintain accuracy and makes the most of every second of their shift. Adding the ability to input couplers and attachments into the system makes setting up work tool combinations highly efficient by significantly reducing calibration time. It also eliminates the need to measure up again when changing Cat® work tool attachments and makes it manageable for a single person to check and adjust for bucket wear.

## Cat Payload\*

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

## Swing Assist

- Swing Assist automatically stops machine swing at operator-defined preset points. Simply swing to the desired stopping point and activate using the machine monitor or a preset joystick button. As you get closer, the machine will automatically decelerate and not allow swing past the set point. Swing Assist helps you hit more repetitive swing targets to help reduce fuel use and improve cycle times.

*\*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.  
Build Number: 07E*



# HIGH PERFORMANCE

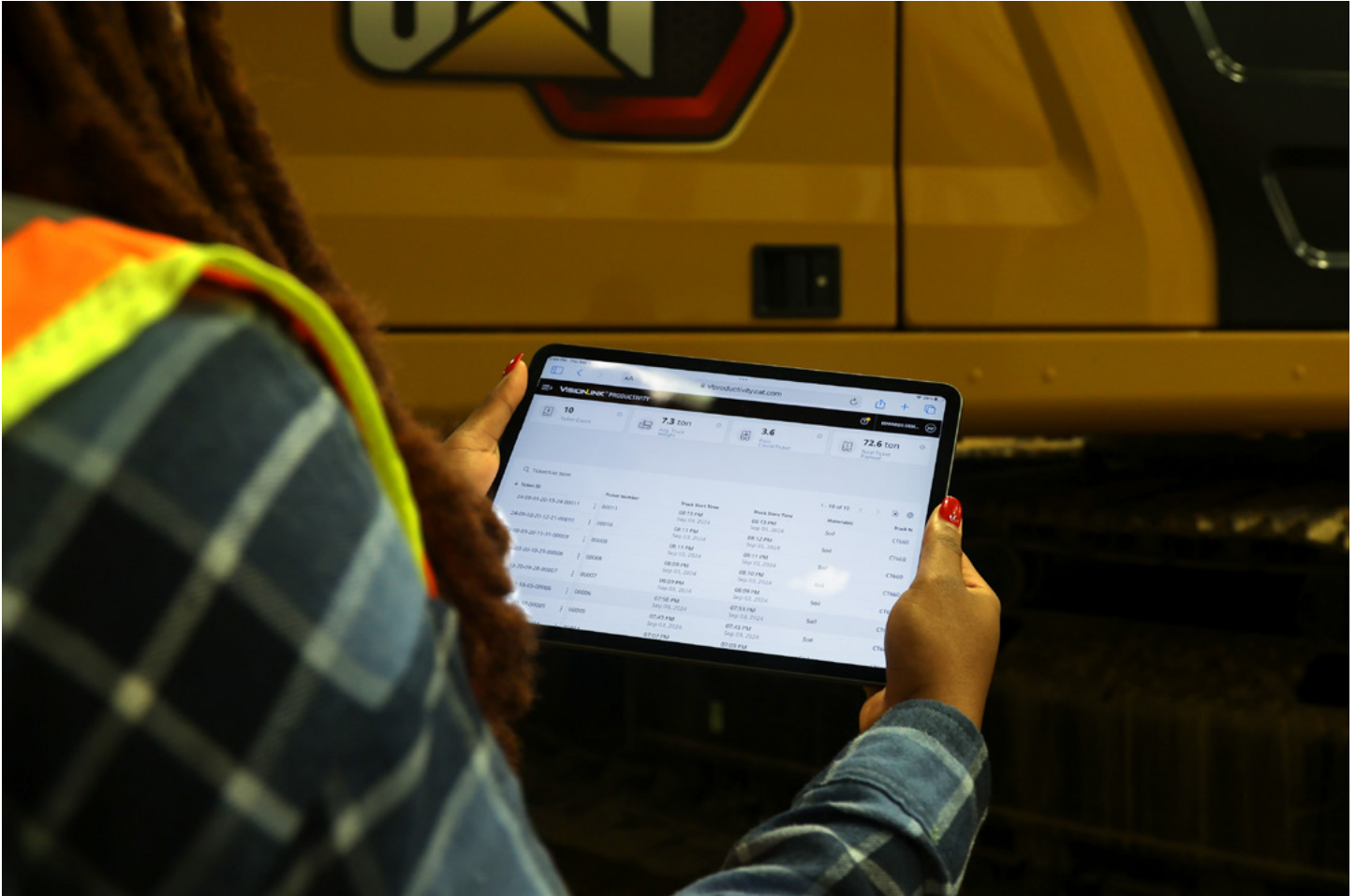


- The C4.4 engine can run on biodiesel up to B20 and meets U.S. EPA Tier 4 Final and EU Stage V emissions standards with an aftertreatment system that requires no scheduled downtime or maintenance.
- Match the machine to the job with three power modes – Power, Smart, and Eco. Smart mode automatically matches engine and hydraulic power to working conditions, helping provide maximum power when needed and reducing power when it isn't to save fuel.
- The advanced electro-hydraulic system helps provide the optimum balance of power and efficiency while giving you the control you need.
- Available SmartBoom™ lets the boom freely travel up and down without using any pump flow so operators can focus on stick and bucket work.
- Valve priority helps put hydraulic pressure and flow where you need it.
- Program and store your preferred power mode and joystick settings using your Operator ID. The machine will automatically remember your selections.

# INTEGRATED CAT® TECHNOLOGIES

- 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, grapple, or clamshell attachments – and get a real-time weight estimate without swinging.
- Combine Cat Payload with VisionLink® and remotely manage your production targets.
- 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.
- Swing Assist automatically stops machine swing at operator-defined preset points. Simply swing to the desired stopping point and activate using the machine monitor or a preset joystick button. As you get closer, the machine will automatically decelerate and not allow swing past the set point. Swing Assist helps you hit more repetitive swing targets to help reduce fuel use and improve cycle times.
- 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.
- 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.

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



# WORK IN COMFORT



- Choose between a deluxe and premium cab. Both provide a comfortable, ergonomic work environment.
- The cab has a wide seat that adjusts for operators of all sizes.
- Control the machine comfortably with easy-to-reach controls all located in front of you.
- Standard automatic climate control keeps you at the right temperature all shift long.
- The optional advanced air filtration system with integrated pre-cleaner helps prevent harmful airborne substances from entering via the air conditioning (A/C) system.
- 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.
- Connect to personal devices via the standard radio's USB ports and Bluetooth® technology.
- 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 ensure job performance continues without any hold-ups.



# RELIABLE, DURABLE, AND VERSATILE

- Count on your machine to withstand wear throughout the years. Boom, sticks, and other high-stress areas are reinforced with thick multi-plate fabrications, castings, and forgings to help ensure quality and reliability.
- Work up to 3000 m (9,840 ft) above sea level without derating.
- Don't let the temperature stop you from working. The machine has a standard high-ambient temperature capability of 52°C (125°F) and a cold-start capability of -18°C (0°F).
- Auto warm-up speeds up hydraulic oil warming in cold temperatures and helps prolong the life of components.
- Standard autolube simplifies maintenance by automatically keeping the machine greased from the swing bearing and cab riser to the stick end.
- Match your machine to the application. Multiple configurations allow you to customize your machine to your needs.
- An optional 15 kW (20 hp) generator allows for magnet operation. Generator controls are fully integrated into the cab monitor.
- Expand your work capabilities with attachments for a variety of applications.



# MAINTENANCE



- Track your machine's filter life and maintenance intervals via the in-cab monitor.
- Scheduled Oil Sampling (S-O-S<sup>SM</sup>) ports are located at ground level, helping simplify maintenance and allowing for quick, easy extraction of fluid samples for analysis.
- The long life of the air intake filter with pre-cleaner helps save on maintenance costs.
- 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.
- High-efficiency cooling fans run only when needed; you can program intervals so they automatically reverse to help keep cores clean without interrupting your work.
- Boost productivity with proactive service reminders. The integrated vehicle health management system alerts the operator with step-by-step service guidance and the parts needed to help reduce unnecessary downtime.
- The optional waste package includes a wide-fin-spacing radiator and air inlet screen with an integrated vibration device designed to help improve the performance of the reversible fan to help enhance cleaning results.

# SAFETY FEATURES

- Cab Avoidance helps you avoid contact between your work tool attachment and the cab.
- Standard 2D E-fence prevents your machine from moving outside operator-defined parameters.
- Ground-level shutoff switch stops all fuel to the engine when activated and shuts down the machine.
- Keep your machine secure with Operator ID. Use your PIN code on the monitor to enable the push-button starting feature.
- Enjoy great all-around visibility with the help of small cab pillars, large windows, and a flat engine hood design. Rearview and side-view cameras are standard.
- Standard 1,800-lumen LED exterior lights illuminate your surroundings for a safer work environment.
- Thick impact-resistant windshields fulfill P5A or P8B standards.
- Service platform design provides easy, safe, and quick access to the upper service platform. The service platform steps use an anti-skid punch plate to help prevent slipping.
- The standard hydraulic lockout lever isolates all hydraulic and travel functions in the lowered position.
- Optional Operator Protective Guards (OPG) protect from falling and flying debris.
- In an emergency, lower the cab safely with the emergency cab lowering valve behind the cab riser or to the right of the seat. The valve located behind the cab riser is easily accessible.
- Boom and stick lowering check valves prevent reverse flow, keeping your front linkage securely in place should the hydraulic system unexpectedly lose pressure.
- Make service work more accessible 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.



# SUSTAINABILITY

- The Cat C4.4 engine meets U.S. EPA Tier 4 Final and EU Stage V emission standards.
- The MH3022 emits less CO<sub>2</sub> than the MH3022-06.
- 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 (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.
- Auto Engine Speed Control helps reduce unnecessary fuel burn and greenhouse gas emissions by allowing the engine to automatically go into idle mode when the machine is not working.
- Cat 2D E-fence keeps the front linkage within a predefined work area to avoid hazards such as traffic – not only helping keep personnel safe but also helps avoid repairs, downtime, and costly jobsite fines.
- Extended maintenance intervals help reduce downtime and decrease the amount of fluid and filters that are replaced over the life of the machine.
- VisionLink® displays the CO<sub>2</sub> emissions for monitored assets, calculated by fuel type for the Runtime Fuel Burned each day in a selected date range.
- Remote Flash helps minimize 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 helps decrease 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 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](http://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

Easily expand the performance of your machine by using Cat attachments. Each Cat attachment is designed to fit the weight and horsepower of Cat material handlers for improved performance, safety, and stability.

**GSH – ORANGE PEEL GRAPPLES**



**GSV – ORANGE PEEL GRAPPLES**



**DEMO AND SORTING GRAPPLES**



**CLAMSHELL GRAPPLES**



**MULTI-PROCESSORS**



# TECHNICAL SPECIFICATIONS

## Engine

Engine Model	Cat C4.4	
Net Power – ISO 9249	108 kW	145 hp
Net Power – ISO 9249 (DIN)	147 hp (metric)	
Engine Power – Maximum – ISO 14396	110 kW	148 hp
Engine Power – ISO 14396 (DIN)	150 hp (metric)	
Bore	105 mm	4.1 in
Stroke	127 mm	5 in
Displacement	4.4 L	268.5 in <sup>3</sup>
Biodiesel Capability	Up to B20 <sup>1</sup>	
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 2,000 rpm. Advertised power is tested per the specified standard in effect at the time of manufacture.

<sup>1</sup>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.

\*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.

## Transmission

Maximum Travel Speed	20 km/h	12.4 mile/h
Drawbar Pull	127 kN-m	28,551 lb/ft
Maximum Gradeability	65%	

## Hydraulic System

Maximum Pressure – Implements	35 000 kPa	5,076 psi
Maximum Pressure – Swing	36 500 kPa	5,294 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi

## Swing Mechanism

Swing Speed	8 r/min	
Maximum Swing Torque	54 kN-m	39,553 lb/ft

## Weights

Operating Weight	24 500 kg	54,000 lb
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Operating weight includes full fuel tank, operator, 1400 kg (3,100 lb) work tool. Weight varies depending on configuration.

## Service Refill Capacities

Fuel Tank Capacity	350 L	92.5 gal
Cooling System	36 L	9.5 gal
Engine Oil	13 L	3.4 gal
Rear Axle – Housing (Differential)	14 L	3.7 gal
Final Drive – Each	2.5 L	0.7 gal
Powershift Transmission	2.5 L	0.7 gal
Hydraulic System – Including Tank	345 L	91.1 gal
Hydraulic Tank	155 L	40.9 gal
Diesel Exhaust Fluid (DEF) Tank	30 L	7.9 gal

## Dimensions

Boom	MH 5.35 m (17'7")	
Stick	4.3 m (14'1") Straight	
Shipping Length	8300 mm	27.2 ft
Machine Length	4950 mm	16.2 ft
Tail Swing Radius	2600 mm	8.5 ft
Counterweight Clearance	1300 mm	4.3 ft
Cab Height- Lowered	3350 mm	11 ft
Cab Height-Lowered with OPG	3350 mm	11 ft
Cab Height-Raised	5750 mm	18.9 ft
Cab Height-Raised with OPG	5750 mm	18.9 ft
Wheel Base	2600 mm	8.5 ft
Shipping Width	2540 mm	8.3 ft
Ground Clearance	310 mm	1 ft
Undercarriage Length	4900 mm	16.1 ft

## Working Ranges

Boom	MH 5.35 m (17'7")	
Stick	4.3 m (14'1") Straight	
Maximum Reach	9280 mm	30.4 ft
Maximum Height	10 760 mm	35.3 ft
Minimum Dump Height	3310 mm	10.9 ft
Maximum Depth	1460 mm	4.8 ft
Boom Pin Height	7120 mm	23.4 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 1.05 kg (2.31 lb) of refrigerant which has a CO<sub>2</sub> equivalent of 1.502 metric tonnes (1.655 tons).

# STANDARD & OPTIONAL EQUIPMENT

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

	Standard	Optional		Standard	Optional
<b>BOOMS AND STICKS</b>			<b>CAT TECHNOLOGY</b>		
5.26 m (17'3") Variable Angle boom		✓	VisionLink®	✓	
5.65 m (18'6") One-piece boom		✓	Remote Flash and Remote Troubleshoot	✓	
5.35 m (17'7") MH boom		✓	Cat Payload	✓	
6.4 m (21') MH boom		✓	<b>ELECTRICAL SYSTEM</b>		
4.0 m (13'1") Drop Nose stick		✓	Maintenance-free batteries	✓	
4.5 m (14'9") Drop Nose stick		✓	LED chassis light, left-hand/right-hand boom and stick lights, cab lights	✓	
5.0 m (16'5") Drop Nose stick		✓	Centralized electrical disconnect switch	✓	
2.5 m (8'2") Straight stick		✓	Programmable time delay LED working lights	✓	
2.9 m (9'6") Straight stick		✓	<b>SERVICE AND MAINTENANCE</b>		
4.3 m (14'1") Straight stick		✓	Scheduled Oil Sampling (S-O-S <sup>SM</sup> ) ports	✓	
No Stick Configuration		✓	Automatic lubrication system for implement and swing system	✓	
<b>CAB</b>			Integrated vehicle health management system	✓	
Advanced sound suppressed Tip Over Protective Structure (TOPS) certified cab	✓		<b>UNDERCARRIAGE AND STRUCTURES</b>		
High-resolution 254 mm (10") LCD touch screen monitor	✓		All wheel drive	✓	
Automatic bi-level air conditioner	✓		Automatic brake/axle lock	✓	
Jog dial and shortcut keys for monitor control	✓		Creeper speed	✓	
Keyless push-to-start engine control	✓		Electronic swing and travel lock	✓	
Heated seat with air suspension (Deluxe cab)	✓		Heavy-duty axles, advanced disc brake system, and travel motor with adjustable braking force	✓	
Heated and cooled seat with automatic adjustable suspension (Premium cab)	✓		Lockable, oscillating front axle with remote greasing point	✓	
Advanced Cab Filtration		✓	Two speed hydrostatic transmission	✓	
Fixed one-piece laminated windshield (P5A glass)		✓	Counterweight 3700 kg (8,160 lb)	✓	
Fixed two-piece laminated windshield (P8B glass)		✓	Wide undercarriage 2.55 m (8'4")	✓	
Operator Protective Guards (OPG)		✓	10.00-20 16 PR, dual tires		✓
<b>SAFETY AND SECURITY</b>			10.00-20, dual, solid rubber tires		✓
Rear and right-side-view cameras	✓		Push Blade		✓
Signal/warning horn	✓		Rear and front end steps		✓
Neutral lever (lock out) for all controls	✓		<b>ENGINE</b>		
Ground-level accessible secondary engine shutoff switch in cab	✓		Cat C4.4 diesel engine	✓	
2D E-fence (Available with MH booms only)	✓		Three selectable modes: Power, Smart, Eco	✓	
Cab Avoidance (Available with MH booms only)	✓		Up to 3000 m (9,840 ft) altitude capability without engine power de-rate	✓	
Swing Assist	✓		Cold start capability –18°C (0°F)	✓	
360° visibility		✓	52°C (125°F) high-ambient cooling capacity	✓	
Inspection lighting		✓	On-demand electric cooling fans with auto-reverse function	✓	
Rotating beacon on cab		✓	Waste cooling system		✓
<b>HYDRAULIC SYSTEM</b>					
Boom and stick lowering control check valves	✓				
Electronic main control valve	✓				
Automatic hydraulic oil warm up	✓				
Heavy lift mode	✓				



For more complete information on Cat products, dealer services and industry solutions, visit us on the web at [www.cat.com](http://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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