

CAT® 777 (05)

OFF-HIGHWAY TRUCK BARE CHASSIS

Caterpillar offers off-highway truck bare chassis designed for specialty machines in a variety of applications — including water trucks, tow tractors, and fuel / lube trucks. When configured as a water truck, the tank capacity is 20,000 gallons (75 700 liters).

These partial machine configurations allow construction, quarry, and mining customers to purchase complete solutions from our global Cat® dealer network — with support every step of the way.

PROVEN CAT® TRUCK PLATFORM

Cat trucks are built for durability, reliability, and efficiency to deliver the performance you need in some of the toughest applications around the world.

APPLICATION-SPECIFIC CAB & ROPS CERTIFICATION

Cat Off-Highway Truck Bare Chassis ROPS is certified to ISO 3471 Tractor criteria, to provide a higher level of protection for towing applications.

EASY TO OPERATE

- Best-in-class touchscreen display for the operator to navigate through machine control system during interaction and service of the machine.
- Improved rear visibility for the operator with new mirror package on both sides of the machine.

ACHIEVE GREATER PRODUCTIVITY

- Advanced Productivity Electronic Control Strategy (APECS) transmission controls carry more torque through the shifts, producing faster cycle times, most noticeably on grades.
- Adaptive economy mode determines the most efficient engine operating point when the truck is operating at steady state condition. The most efficient operating point is determined by customer inputs on fuel saving to max expected production limitation.

DESIGNED FOR SAFETY

- Integrated ladder access, extended catwalk, and aggressive tread plates on all steps ensure safe entry and egress.
- Seat belt indicator implements both visual and audible alerts to the operator when seat belt is not fastened.
- Cat Detect system with cameras and radar monitors objects that appear within designated machine blind spots, helps safe machine operation.

STREAMLINED SERVICEABILITY

- Hydraulically actuated brake system improves brake component life and reduces maintenance costs.
- Convenient filters and fluid refill help make servicing of the machine faster.

SUPPORTED BY THE CAT DEALER NETWORK

- Full support of Cat dealer and parts network
- Cat dealer installation & retrofit kits available
- Eligible for Equipment Protection Plans (EPP) & Customer Value Agreements (CVAs)

777 (05) OFF-HIGHWAY TRUCK BARE CHASSIS SPECIFICATIONS

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

Engine

Engine Model	Cat® C32B	
Rated Engine Speed	1,800 rpm	
Gross Power – SAE J1995	765 kW	1,026 hp
Net Power – SAE J1349/ISO 9249	711 kW	953 hp
Cylinders	12	
Bore	145 mm	5.7 in
Stroke	162 mm	6.4 in
Displacement	32.1 L	1,959 in^3

- 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 equipped with air intake system, exhaust system, and alternator.
- Power rating applies at 1,800 rpm when tested under the specified condition for the specified standard in effect at the time of manufacture.
- Ratings based on SAE J1349:2011 standard air conditions of 25°C (77°F) and 100 kPa (29.61 Hg) barometer. Power based on fuel having API gravity of 35 at 16°C (60°F) and an LHV of 42 780 kJ/kg (18,390 BTU/lb) when engine used at 30°C (86°F).
- No engine derating required up to 3048 m (10,000 ft) altitude.
- Meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2.

Operating Weights – with Hoist Cylinders

Bare Chassis Weight	51 321 kg	113,143 lb
Payload	112 039 kg	247,003 lb
Gross Vehicle Weight	163 360 kg	360,147 lb
Front Axle Bare Chassis Weight	27 097 kg	59,740 lb
Front Axle Payload	26 811 kg	59,109 lb
Front Axle Gross Vehicle Weight	53 909 kg	118,848 lb
Rear Axle Bare Chassis Weight	24 224 kg	53,404 lb
Rear Axle Payload	85 228 kg	187,895 lb
Rear Axle Gross Vehicle Weight	109 451 kg	241,298 lb

Operating Weights – without Hoist Cylinders

Bare Chassis Weight	49 747 kg	109,673 lb
Payload	113 613 kg	250,473 lb
Gross Vehicle Weight	163 360 kg	360,147 lb
Front Axle Bare Chassis Weight	26 266 kg	57,907 lb
Front Axle Payload	27 642 kg	60,941 lb
Front Axle Gross Vehicle Weight	53 909 kg	118,848 lb
Rear Axle Bare Chassis Weight	23 481 kg	51,766 lb
Rear Axle Payload	85 971 kg	189,533 lb
Rear Axle Gross Vehicle Weight	109 451 kg	241,298 lb

- The payload includes anything added to the bare chassis.
- Care must be taken when designing any attachments so that the axle weights are not exceeded.

Weights – Approximate

Target Gross Machine Weight	163 360 kg	360,147 lbs
Nominal Rated Payload (NRP)	97.3 tonnes	107.2 tons

- Consult your tire manufacturer for maximum tire load.

Tires

27.00R49 (E4)

- Productive capabilities of the 777 truck are such that, under certain job conditions, TKPH (TMPH) capabilities of standard or optional tires could be exceeded and, therefore, limit production.
- Caterpillar recommends the customer evaluate all job conditions and consult the tire manufacturer for proper tire selection.

Weight Distributions – Approximate

Front Axle – Empty*	46%
Front Axle – Loaded	30%
Rear Axle – Empty*	54%
Rear Axle – Loaded	70%

*Depends on configuration.

Final Drives

Differential Ratio	2.74:1
Planetary Ratio	7.00:1
Total Reduction Ratio	19.16:1

Transmission

Forward 1	10.9 km/h	6.8 mph
Forward 2	14.8 km/h	9.2 mph
Forward 3	20.1 km/h	12.5 mph
Forward 4	27.1 km/h	16.9 mph
Forward 5	36.8 km/h	22.9 mph
Forward 6	49.4 km/h	30.7 mph
Forward 7	67.1 km/h	41.7 mph
Reverse	12.1 km/h	7.5 mph

- Maximum travel speeds with standard 27.00R49 (E4) tires.

Braking System

Brake Surface – Front Dry	2787 cm^2	432 in^2
Brake Surface – Rear	102 116 cm^2	15,828 in^2
Brake Surface – Front Wet (optional)	40 225 cm^2	6,235 in^2
Brake Standard	ISO 3450:2011	

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Body Hoists

Body Raise Time – High Idle	15 seconds
Body Lower Time – Float	13 seconds
Body Power Down – High Idle	13 seconds

Suspension

Effective Cylinder Stroke – Front	318 mm	12.5 in
Effective Cylinder Stroke – Rear	165 mm	6.5 in
Rear Axle Oscillation	±5.4°	

Service Refill Capacities

Fuel Tank	1140 L	300 gal
Cooling System	212 L	56 gal
Crankcase	115 L	30 gal
Differentials	222 L	59 gal
Final Drives (each)	42 L	11 gal
Steering System (includes tank)	60 L	16 gal
Brake/Hoist System	420 L	110 gal
Torque Converter/ Transmission System	125 L	33 gal
Front wheel (each)	7.5 L	2 gal

Steering

Steer Angle	30.5°	
Turning Diameter – Front	25.3 m	83 ft
Turning Circle Clearance Diameter	28.4 m	93.2 ft
Steering Standards	ISO 5010:2019	

Cab

Sound Standards		ISO 6396:2008
ROPS Certification Rating		Tractor ROPS Rating
777 WTR (Tractor)	55 000 kg	121,254 lb

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.0 kg (4.4 lbs) of refrigerant, which has a CO_2 equivalent of 2.86 metric tonnes (3.152 tons).
- The dynamic operator sound pressure level is 80 dB(A) as per ISO 6396:2008 for cab offered by Caterpillar. The cab was properly installed and maintained. The test was conducted with the cab doors and the cab windows closed.
- Rollover protective structure (ROPS) cab offered by Caterpillar meets ISO 3471:2008 for operator and ISO 13459:2012 for trainer.
- Falling objects protective structure (FOPS) meets ISO 3449:2005 Level II for operator and ISO 13459:2012 Level II FOPS for trainer.
- Note: Welding on ROPS or making modifications to the ROPS may void the ROPS certification. Please contact Caterpillar OEM Solutions if the application requires welding on the machine frame.

Cat® Water Delivery System (WDS) - optional

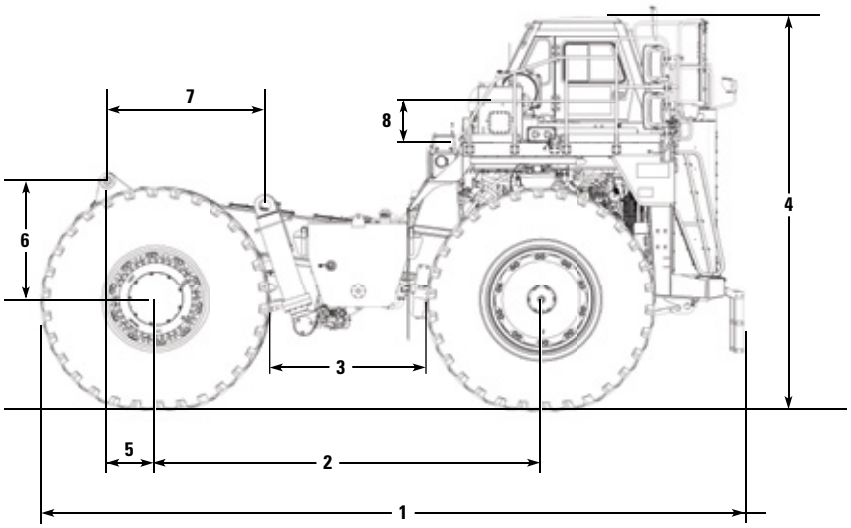
Operator selectable coverage	0.2-0.8 L/m² (4 kph - 40 kph)	0.05-0.2 gal/ft² (3 mph - 25 mph)
Maximum water flow	6814 L/min	1,800 gal/min
Water per spray head (minimum)	132.5 L/min	35 gal/min
Water per spray head (maximum)	2271 L/min	600 gal/min
Spray head opening range (minimum)	1 mm	0.04 in
Spray head opening range (maximum)	19 mm	0.75 in
Maximum size debris flushed through spray head	19 mm	0.75 in
Spray width per head (dependent on flow)	4.5-9.1 m	15-30 ft
Spray system hydraulic tank capacity	27.5 L	7.25 gal
Maximum number of rear spray heads	5	
Minimum number of rear spray heads (3 recommended)	2	
Maximum number of front/side spray heads	2	
Minimum number of front/side spray heads	0	
Maximum water from cannon (idle)*	2271 L/min	600 gal/min
Maximum water from cannon (high idle)*	6246 L/min	1,650 gal/min
Maximum cannon spray distance*	61 m	200 ft
Wet water pump/hydraulic motor coupling		

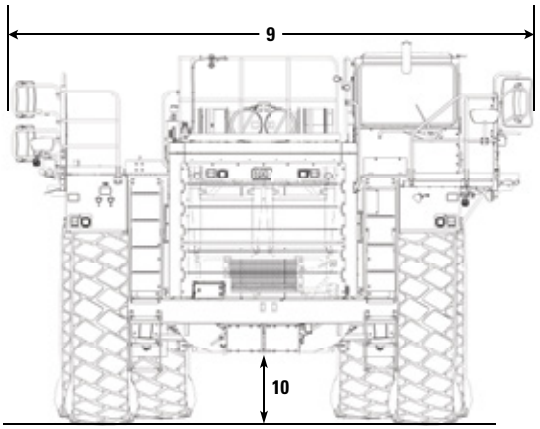
*Depends on nozzle orifice and pipe size.

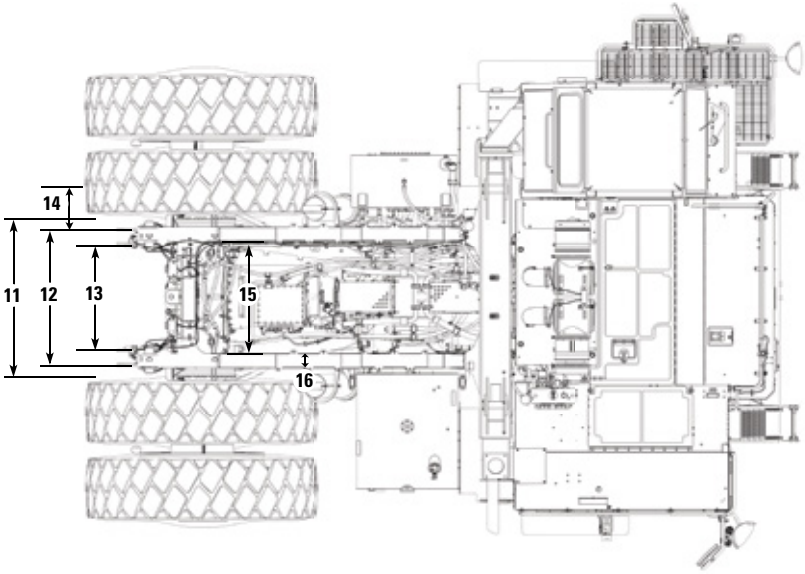
- Coverage rates above 0.6 L/m² may not be available at higher speeds depending on head count and configuration.
- The Auto Mode setting controls water coverage and automatically adjusts to the number of spray heads being used — independent of ground speed. This is an exclusive feature designed into the Cat® WDS software to help water more efficiently.
- Alternatively, manual mode allows the operator to set a water flow rate that is constant regardless of ground speed. This mode is not recommended for daily operation and will reduce watering efficiency and may increase fuel usage.
- Spray head opening is automatically controlled by the system to achieve Auto Mode Coverage or manual mode flow rate.
- Spray heads on competitive water distribution systems require tools and maintenance to change flow and spray pattern. Caterpillar is the only company to have variable active spray heads to regulate water spray.
- Water flow is continually adjusted during operation to conserve water and achieve desired coverage and flow rate.
- Water tanks are offered by local 3rd party providers with customization based on water application and regional customer requirements. Please contact your local Cat dealer, regional OEM Solutions Account manager, or email OEM_Solutions@cat.com for more information on water tank options and attachments.

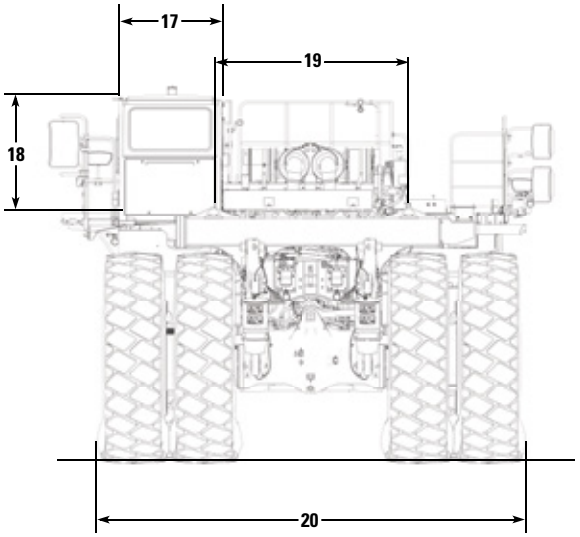
777 (05) OFF-HIGHWAY TRUCK BARE CHASSIS DIMENSIONS

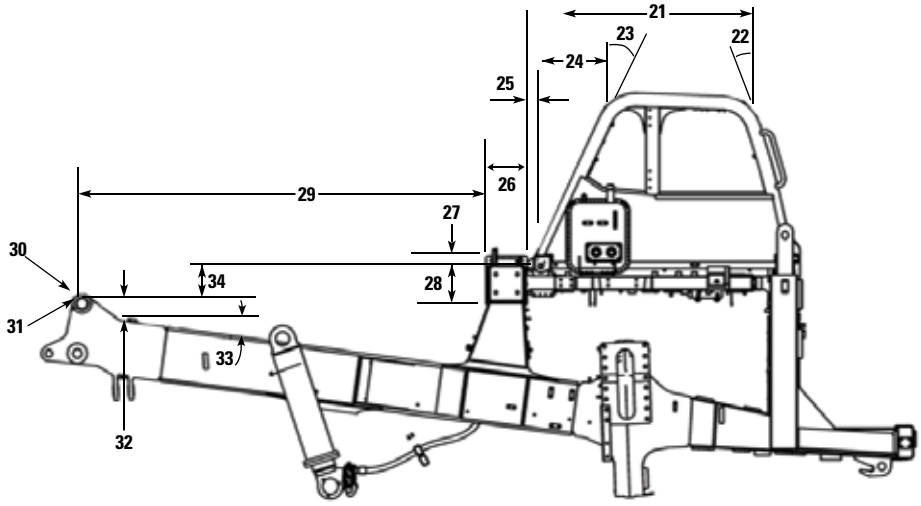
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777 (05) OFF-HIGHWAY TRUCK BARE CHASSIS DIMENSIONS

All dimensions are approximate.

Dimensions			
1	Overall Length	8315 mm	27 ft 3 in
2	Wheel Base	4570 mm	15 ft 0 in
3	Distance Between Tires	1875 mm	6 ft 2 in
4	Height to Top of ROPS	4730 mm	15 ft 6 in
5	Rear Axle to Body Pivot	591 mm	1 ft 11 in
6	Vertical Distance Between Body Pivot and Rear Axle	1393 mm	4 ft 7 in
7	Distance Between Body Pivot and Hoist Cylinders - Horizontal	1886 mm	6 ft 3 in
8	Vertical Distance between main beam and engine hood	477 mm	1 ft 7 in
9	Overall Width	6973 mm	22 ft 11 in
10	Engine Guard Clearance	864 mm	2 ft 10 in
11	Distance Between Hoist Cylinders	1946 mm	6 ft 5 in
12	Distance Between Body Pivots -Outer	1613 mm	5 ft 4 in
13	Distance Between Body Pivots -Inner	1232 mm	4 ft 1 in
14	Body Pivot Bearing Width	540 mm	1 ft 9 in
15	Distance Between Frame Rails	1320 mm	4 ft 4 in
16	Frame Rail Width	165 mm	0 ft 7 in
17	Cab Width	1310 mm	4 ft 4 in
18	Height of the Cab from Main Beam	1534 mm	5 ft 0 in
19	Distance between Rocker Pads	1705 mm	5 ft 7 in
20	Overall Tire Width	5262 mm	17 ft 3 in
21	Distance Between Main Beam and Cab Front	1965 mm	6 ft 5 in
22	Cab Front Angle		18 degrees
23	Cab Rear Angle		25 degrees
24	Distance between Main Beam and Cab Roof	874 mm	2 ft 10 in
25	Distance Between Main Beam and Cab Rear	151 mm	0 ft 6 in
26	Main Beam Width	335 mm	1 ft 1 in
27	Rocker Pad Height	327 mm	1 ft 1 in
28	Main Beam Height	335 mm	1 ft 1 in
29	Distance Between Body Pivot and Main Beam	3841 mm	12 ft 7 in
30	Body Pivot Outer Radius	89 mm	0 ft 4 in
31	Body Pivot Pin Diameter	101.2 mm	0 ft 4 in
32	Distance Between Body Pivot and Frame	292 mm	1 ft 0 in
33	Frame Slope Angle		7.5 degrees
34	Distance between Main Beam and Body Pivot Pin	266 mm	0 ft 11 in

** These dimensions may vary based on tire size, pressure and load. All dimensions are for reference only and may change for different machine configurations.

Standard and Optional Equipment

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

POWERTRAIN	Standard	Optional
Cat® C32B Engine	●	
Auto electric fuel priming pump	●	
Biodiesel compatibility, B40	●	
Brake release motor (towing)	●	
Braking system: Hydraulically actuated brakes with oil cooled multiple disc (rear) and caliper disc (front), hydraulically applied and spring released	●	
Cat transmission: 7F/1R speed planetary powershift, ECPC control, APECS software, programmable top gear/speed selection, body upshift inhibitor, directional shift management, neutral start switch, neutral coast inhibitor, reverse shift inhibitor, body-up reverse neutralizer, 2nd gear drive, torque shift management, and part throttle shifting	●	
Economy mode/adaptive economy mode	●	
Emergency/parking brake, spring applied and hydraulically released	●	
Engine overspeed protection	●	
Retarder control – manual	●	
Water/fuel separator	●	
Front oil cooled disc brake		○
Traction control system		○
Retarder control – automatic		○

ELECTRICAL	Standard	Optional
Alternator, 150 amp	●	
Auxiliary jump start receptacle	●	
Backup alarm	●	
Backup light, LED	●	
Directional signal/hazard warning, LED lights	●	
Electrical system, 10 amp, 24V to 12V converter	●	
Four batteries, 12V, 190 amp-hour	●	
Ground-level battery disconnect switch	●	
Ground-level engine shutdown switch	●	
Headlights with dimmer, LED	●	
Operator courtesy lights, LED	●	
Stop/taillights, LED	●	
Switch, engine lockout	●	
Switch, machine lockout	●	
Two starter motors	●	
Working lights, LED	●	
Audio visual backup alarm		○
Fog lamp		○

OPERATOR ENVIRONMENT	Standard	Optional
Advisor, touchscreen display	●	
Ash tray	●	
Coat hook	●	
Combined gear shift/hoist/park brake lever	●	
Cup/bottle holder	●	
Diagnostic connection port	●	
Horn electric	●	
HVAC	●	
Liquid crystal display (LCD), cluster gauge: brake oil temperature, transmission oil temperature, engine coolant temperature, hour meter, tachometer, fuel level gauge, speedometer	●	
Left-side power window	●	
Mirrors, left and right	●	
Radio ready	●	
Right-side access door	●	
ROPS/FOPS cabin	●	
Seat, trainer with lap belt	●	
Seat: operator – fully adjustable, air suspension, 4-point seat belt with reminder	●	
Storage compartment	●	
Sun visor	●	
Switches: throttle lock, wipers/washers, hazard lights, headlights, secondary steering, back light adjust, AC on/off, spare, economy mode, egress lamp, Product Link™ disconnect	●	
Tilt and telescopic steering wheel	●	
Blind spot mirror		○
Heated mirror		○

CAT TECHNOLOGY PRODUCTS	Standard	Optional
Cat Product Link™	●	
Cat Detect system		○
Camera system		○
Vital Information Management System (VIMS™)		○
Cat Water Delivery System software		○
Cat MineStar™ hardware and connectivity packages:		
• Level 1 – Basic (Equipment Tracking)		○
• Level 2 – Premium (Equipment Tracking + Production Recording)		○

Standard and Optional Equipment

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

OTHER EQUIPMENT	Standard	Optional
Body down indicator	●	
Cluster/grouped lubrication system	●	
Driveline guard	●	
Engine crankcase guard	●	
Extended life coolant to -35°C (-30°F)	●	
Hydropneumatic suspension	●	
Load counter	●	
Tie down eyes/tow down hooks	●	
Vandalism protection lock	●	
Automatic lubrication system (27 kg/40 kg)		○
Cold weather package		○
Exhaust muffler		○
Fast fluid fill system		○
Fast fuel fill system		○
Fire extinguisher		○
Fuel tank 1325 L		○
Ground-level grease fittings		○
Hoist cylinders		○
Hoist quick disconnect		○
Oil change system – high speed		○
Oil renewal system (ORS)		○
Spare rim		○
Wheel chocks		○

CAT WATER DELIVERY SYSTEM (WDS) - OPTIONAL ATTACHMENT	Standard	Optional
Controls:		
• Factory installed	●	
• Integrated into cab	●	
Water System Monitor:		
• Integrated into cab	●	
• Programmable spray configurations	●	
• Automatic diagnostic messages	●	
Variable Hydraulic Pump Drive:		
• 1,800 gpm at speeds of 4 - 40 kph (3 - 25 mph)	●	
• Auto shut-off	●	
• Soft startup	●	
Stainless Steel Spray Heads:		
• Resists corrosion	●	
• Maintenance free	●	
• Patented design	●	
Independent Hydraulic Cooling System:		
• Minimizes overheating	●	
Water Cannon:		
• Hydraulically controlled	●	
• Optional nozzles		○
• Integrated joystick with cab controls	●	
WDS Camera System: includes three cameras, three camera washers and cable assemblies		○

Parts and service available through global Cat dealer network

For more information on Cat Truck Bare Chassis, contact OEM Solutions:

oem_solutions@cat.com | www.cat.com/oemsolutions

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

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