

CAT® 777

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.

WORK IN COMFORT

Completely redesigned cab for a whole new standard in visibility, comfort, and productivity. The new operator seat placement provides easier operation and comfort to the operator. Improvements in visibility gain enlarged views of the work area and its surroundings.

POWER TO THE GROUND

Put more power to the ground with a 7% increase in torque. Advanced Productivity Electronic Control Strategy (APECS) transmission controls carry more torque through the shifts, producing faster cycle times, most noticeably on grades. Enjoy greater productivity while using a more responsive Traction Control System (TCS).

DESIGNED FOR SAFETY

Improvements in accessibility with safe ground-level access to fuel fill and daily maintenance points. Ensure three points of contact when entering and exiting the machine with strategically placed walkways and grab rails. Wet disc braking is standard on all four corners of the truck.

STREAMLINED SERVICEABILITY

Ground-level refueling requires no climbing on the machine to fill the fuel tank. Resolve problems before failure occurs with VIMS notifications. Hydraulic oil filter life is extended to 1,000 hours under normal operating conditions.

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 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 J1995:2014	765 kW	1,025 hp
Net Power – SAE J1349:2011/ISO 9249:2007 (HRC)	683 kW	916 hp
Net Power – SAE J1349:2011/ISO 9249:2007 (LRC)	704 kW	945 hp
Cylinders	12	
Bore	145 mm	5.7 in
Net Torque Rise	36%	
Net Torque Speed @ 1,200 rpm (HRC)	5101 N·m	3,762 lb-ft
Net Torque Speed @ 1,200 rpm (LRC)	5114 N·m	3,772 lb-ft
Stroke	162 mm	6.4 in
Displacement	32.1 L	1,959 in^3

- Net Power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator with engine speed at 1,800 rpm.
- Power rating applies at 1,800 rpm when tested under the specified condition for the specified standard.
- Ratings based on SAE J1995 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 2286 m (7,500 ft) for HRC and 4572 m (15,000 ft) for LRC machines.
- Available as Tier 4 Final/Stage V equivalent or Noncertified configuration that is equivalent to U.S. EPA Tier 2.

Weights - Approximate

Target Gross Machine Weight	164 654 kg	363,000 lb

Operating Weights – with Hoist Cylinders (LRC)

Bare Chassis Weight	51 740 kg	114,067 lb
Payload	112 914 kg	248,933 lb
Front Axle Bare Chassis Weight	26 698 kg	58,859 lb
Front Axle Payload	27 638 kg	60,931 lb
Rear Axle Bare Chassis Weight	24 990 kg	55,094 lb
Rear Axle Payload	85 328 kg	188,115 lb

Operating Weights – without Hoist Cylinders (LRC)

Bare Chassis Weight	50 578 kg	111,505 lb
Payload	114 076 kg	251,495 lb
Front Axle Bare Chassis Weight	26 098 kg	57,537 lb
Front Axle Payload	28 238 kg	62,253 lb
Rear Axle Bare Chassis Weight	24 429 kg	53,857 lb
Rear Axle Payload	85 889 kg	189,353 lb

Operating Weights – with Hoist Cylinders (HRC)

Bare Chassis Weight	52 262 kg	115,218 lb
Payload	112 392 kg	247,782 lb
Front Axle Bare Chassis Weight	26 976 kg	59,452 lb
Front Axle Payload	27 369 kg	60,337 lb
Rear Axle Bare Chassis Weight	25 243 kg	55,650 lb
Rear Axle Payload	85 076 kg	187,559 lb

Operating Weights – without Hoist Cylinders (HRC)

Bare Chassis Weight	51 100 kg	112,656 lb
Payload	113 550 kg	250,335 lb
Front Axle Bare Chassis Weight	26 368 kg	58,131 lb
Front Axle Payload	27 968 kg	61,659 lb
Rear Axle Bare Chassis Weight	24 681 kg	54,413 lb
Rear Axle Payload	85 637 kg	188,797 lb

- LRC = Lesser Regulated Countries. HRC = Highly Regulated Countries.
- Care must be taken when designing any attachments so that the axle weights are not exceeded.

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	42%
Front Axle – Loaded	33%
Rear Axle – Empty	58%
Rear Axle – Loaded	67%

Final Drives

Differential Ratio	2.736:1
Planetary Ratio	7.0:1
Total Reduction Ratio	19.1576:1

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	12.0 km/h	7.5 mph

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

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Brakes

Brake Surface – Front	40 846 cm^2	6,331 in^2
Brake Surface – Rear	102 116 cm^2	15,828 in^2
Brake Standards	ISO 3450:2011	

Body Hoists

Pump Flow – High Idle	458 L/min	120.9 gal/min
Relief Valve Setting – Raise	18 950 kPa	2,750 psi
Relief Valve Setting – Lower	3450 kPa	500 psi
Body Raise Time – High Idle	15.0 seconds	
Body Lower Time – Float	13.0 seconds	
Body Power Down – High Idle	13.0 seconds	

Service Refill Capacities

Fuel Tank	1136 L	300 gal
Fuel Tank (optional)	1325 L	350 gal
Cooling System – Tier 4 Final	231 L	61 gal
Cooling System – Tier 2	219 L	57.9 gal
Crankcase	109 L	28.7 gal
Differentials	227 L	59.9 gal
Final Drives (each)	76 L	20 gal
Steering System (includes tank)	53.6 L	14.1 gal
Hoist and Brake Hydraulic System	444 L	117 gal
Front Wheels (each)	7.5 L	1.98 gal
Torque Converter/Transmission System	138.5 L	36.5 gal

Suspension

Empty Loaded Cylinder Stroke Front	74.7 mm	2.9 in
Empty Loaded Cylinder Stroke Rear	66.0 mm	2.5 in
Rear Axle Oscillation	+/- 5.4°	

Cab

Operator Sound Pressure Level (ISO 6396:2008)		70 dB(A)
ROPS Certification Rating		Tractor ROPS Rating
777 WTR (Tractor)	60 365 kg	133,082 lb

- Operator sound pressure level was measured according to ISO 6396:2008. The measurement was conducted at 70% of the maximum engine cooling fan speed. Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.
- ROPS for 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 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.

Steering

Steering Standards	ISO 5010:2019	
Steer Angle	30.5°	
Turning Diameter – Front	25.3 m	83 ft
Turning Circle Clearance Diameter	28.4 m	93 ft

Cat® Water Delivery System (WDS) - optional

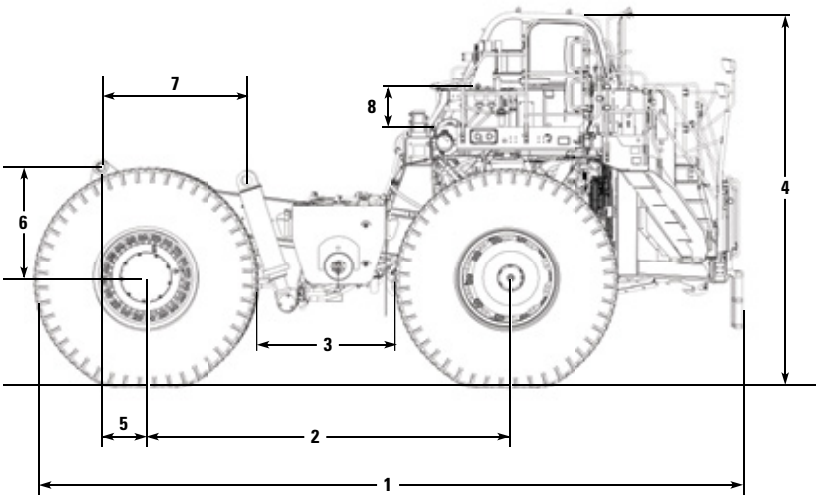
Operator selectable coverage	0.2-0.8 L/m^2 (4 kph - 40 kph)	0.05-0.2 gal/ft^2 (3 mph - 25 mph)
Maximum water flow	6814 L/min	1,800 gal/min
Water per spray head (minimum)	132.5 L/min	35 gal/min
Water per spray head (maximum)	2271 L/min	600 gal/min
Spray head opening range (minimum)	1 mm	0.04 in
Spray 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		

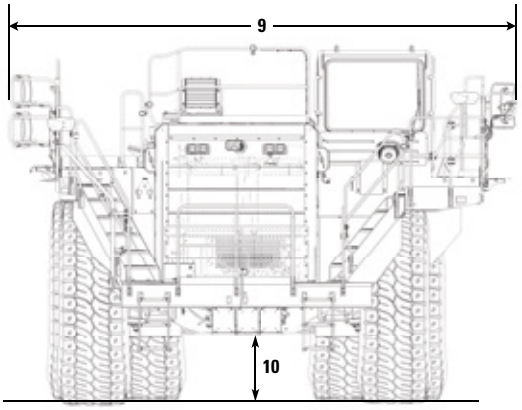
*Depends on nozzle orifice and pipe size.

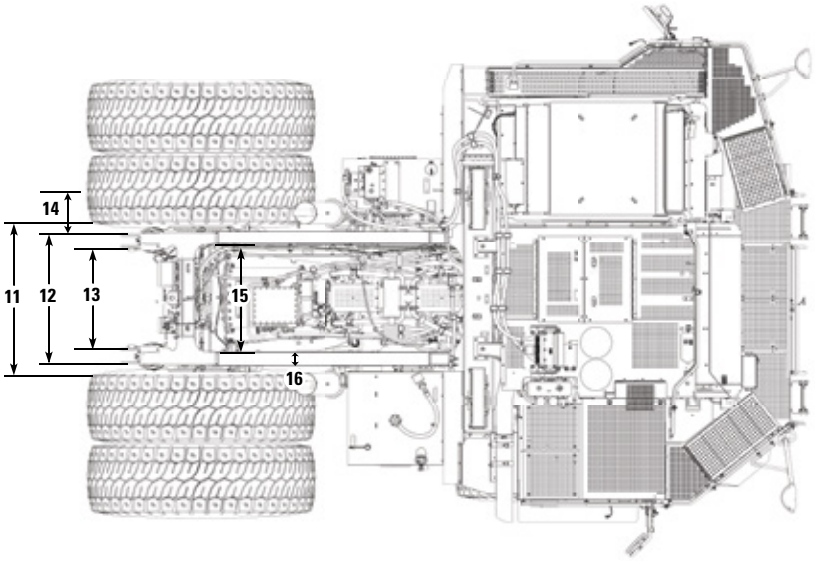
- Coverage rates above 0.6 L/m^2 may not be available at higher speeds depending on head count and configuration.
- The Auto Mode setting controls water coverage and automatically adjusts to the number of spray heads being used — independent of ground speed. This is an exclusive feature designed into 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.

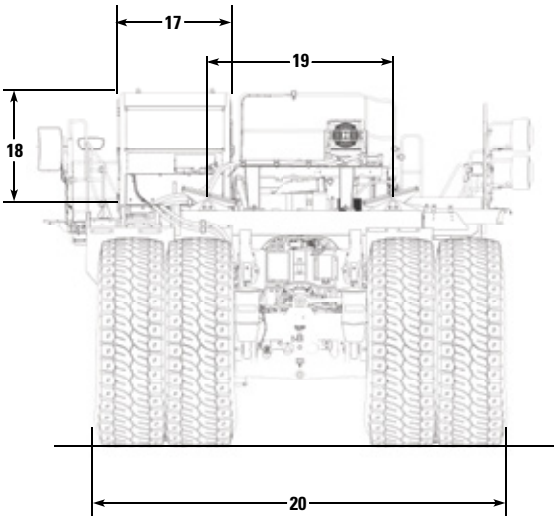
777 OFF-HIGHWAY TRUCK BARE CHASSIS DIMENSIONS

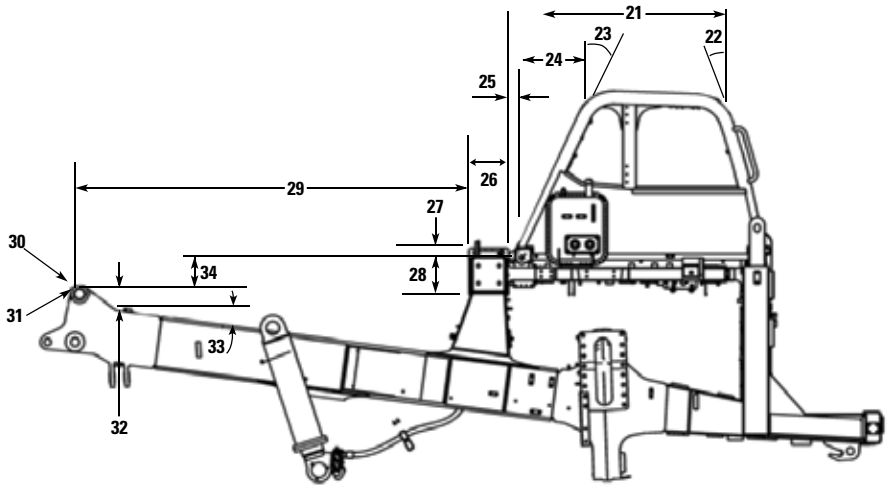
All dimensions are approximate.











777 OFF-HIGHWAY TRUCK BARE CHASSIS DIMENSIONS

All dimensions are approximate.

Dimensions			
1	Overall Length	8808 mm	28 ft 11 in
2	Wheel Base	4557 mm	14 ft 11 in
3	Distance Between Tires	1867 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	1893 mm	6 ft 3 in
8	Vertical Distance between main beam and engine hood	508 mm	1 ft 8 in
9	Overall Width	6684 mm	21 ft 11 in
10	Engine Guard Clearance	912 mm	3 ft 0 in
11	Distance Between Hoist Cylinders	1987 mm	6 ft 6 in
12	Distance Between Body Pivots -Outer	1634 mm	5 ft 4 in
13	Distance Between Body Pivots -Inner	1160 mm	3 ft 10 in
14	Body Pivot Bearing Width	237 mm	0 ft 9 in
15	Distance Between Frame Rails	1324 mm	4 ft 4 in
16	Frame Rail Width	165 mm	0 ft 7 in
17	Cab Width	1500 mm	4 ft 11 in
18	Height of the Cab from Main Beam	1619 mm	5 ft 4 in
19	Distance between Rocker Pads	2508 mm	8 ft 3 in
20	Overall Tire Width	5223 mm	17 ft 2 in
21	Distance Between Main Beam and Cab Front	2204 mm	7 ft 3 in
22	Cab Front Angle		17 degrees
23	Cab Rear Angle		25 degrees
24	Distance between Main Beam and Cab Roof	689 mm	2 ft 3 in
25	Distance Between Main Beam and Cab Rear	103 mm	0 ft 4 in
26	Main Beam Width	390 mm	1 ft 3 in
27	Rocker Pad Height	78 mm	0 ft 3 in
28	Main Beam Height	356 mm	1 ft 2 in
29	Distance Between Body Pivot and Main Beam	3813 mm	12 ft 6 in
30	Body Pivot Outer Radius	89 mm	0 ft 4 in
31	Body Pivot Pin Diameter	117.5 mm	0 ft 5 in
32	Distance Between Body Pivot and Frame	160 mm	0 ft 6 in
33	Frame Slope Angle		7.5 degrees
34	Distance between Main Beam and Body Pivot Pin	361 mm	1 ft 2 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
Air filter with precleaner (2)	•	
Air-to-Air Aftercooler (ATAAC)	•	
Automatic cold mode idle control	•	
Autostall	•	
Braking system: extended life brakes, brake wear indicator, Automatic Retarder Control (ARC) (utilizes oil-cooled, multiple disc brakes), brake release motor (towing), manual retarder (utilizes oil-cooled, multiple disc brakes), oil cooled and multiple disc (front/rear), parking, secondary, service	•	
Cat® C32B Engine (Tier 4 Final / EU Stage V / Tier 2 / EU Stage II)	•	
Cat engine compression brake		○
Cold weather packages		○
Electric cold weather start (two starters and four batteries)	•	
Electric priming pump	•	
Engine Idle Shutdown	•	
Ether starting aid	•	
Extended life coolant to -35° C (-30° F)	•	
Fan - variable speed (Tier 4)	•	
Fan - variable speed (Tier 2)		○
Fuel filter/water separator	•	
Muffler, exhaust (Tier 2)	•	
Muffler, sound suppression (Tier 2)		○
Transmission: 7-speed automatic powershift with Electronic Clutch Pressure Control (ECPC), torque shift management, part throttle shifting, body upshift inhibitor, directional shift management, downshift inhibitor, neutral start switch, neutral coast inhibitor, reverse shift inhibitor, reverse neutralizer during dumping, programmable top gear selection, Advanced Productivity Electronic Control Strategy (APECS software), auto neutral Idle	•	
Turbocharger (2)	•	

ELECTRICAL	Standard	Optional
Alarm, backup	•	
Alternator, 115 amperes	•	
Auxiliary jump start receptacle	•	
Batteries, maintenance-free, 12V (4), 200 amp-hour	•	
Electrical system, 25 amp, 24V to 12V converter	•	
Lighting system (LED): backup light, directional signals/hazard warning (front and rear), headlights, payload – indicator lights, operator access courtesy lights, side profile lights, stop/ tail lights, service lights	•	

OPERATOR ENVIRONMENT	Standard	Optional
Air conditioning	•	
Ashtray and cigarette lighter	•	
Auto temp control	•	
Coat hook	•	
Cup holders (4)	•	
Diagnostic connection port, 24V	•	
Electric left side window control	•	
Entertainment radio ready: 5 amp converter, speakers, antenna, wiring harness	•	
Foot rest	•	
Gauges/indicators: brake oil temperature, coolant temperature, hour meter, tachometer, engine overspeed indicator, fuel level, speedometer with odometer, transmission gear indicator	•	
Heater/defroster (11 070 kCal/43,930 BTU)	•	
Integrated hoist and transmission control	•	
Horn, electric	•	
Lights: dome, courtesy	•	
Load counter, automatic	•	
Mirrors, convex		○
Mirrors, heated	•	
Power port, 12V (2)	•	
ROPS cab, insulated/sound suppressed	•	
Seat, Cat Next Gen Deluxe, retractable 4-point seat belt with shoulder harness and seat belt reminder	•	
Spare rim		○
Steering wheel, padded/tilt/telescopic	•	
Storage compartment	•	
Sun visor	•	
Throttle lock	•	
Tinted, laminated glass	•	
Truck Production Management System (TPMS)	•	
Touchscreen display, 7-inch	•	
Trainer seat, lap belt, with seat belt reminder	•	
Visibility package (meets ISO 5006 requirements)		○
Window, right side, hinged access/egress	•	
Windshield wiper, intermittent, and washer	•	

Standard and Optional Equipment

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

OTHER EQUIPMENT	Standard	Optional
Auto-lube grease fittings		○
Body down indicator	●	
Cab precleaner		○
Center-mounted rims	●	
Clustered grease fittings	●	
Control, hoist		○
Driveline guards	●	
Engine crankcase guards	●	
Engine sound suppression (XQ) (Tier 4)		○
Fan and AC guards	●	
Fire suppression ready	●	
Fire suppression arrangement		○
Fluid fill service center		○
Fuel level monitoring		○
Fuel tank (1136 L / 300 gal)	●	
Fuel tank (1325 L / 350 gal)		○
Ground-level battery disconnect	●	
Ground-level engine shutdown	●	
Ground-level grease fittings	●	
Hoist Cylinders		○
Mud protection package		○
Oil Renewal System		○
Rear Axle Filtration (RAX)		○
Reservoirs (separate): brake/hoist, steering, transmission/torque converter	●	
Rims 19.5 x 49	●	
Supplemental steering, automatic	●	
Tie down eyes	●	
Tow hooks, front/tow pin, rear	●	
Traction Control System (TCS) (new version)		○
Vandalism protection locks	●	
Wheel chocks		○
Wiggins fast fuel	●	

CAT TECHNOLOGY PRODUCTS	Standard	Optional
Adaptive economy mode	●	
Advanced health	●	
Object detection (4 cameras)		○
Product Link™ ready (Level 1)	●	
Road analysis control (RAC)		○
Work Area Vision System (WAVS)		○
Cat Water Delivery System software		○
Cat MineStar™ hardware and connectivity packages:		
• Level 1 – Basic (Equipment Tracking)		○
• Level 2 – Premium (Equipment Tracking + Production Recording)		○

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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