



CAT® 777⁽⁰⁷⁾

WATER SOLUTIONS TRUCK

THE CHALLENGE: DUST. THE ANSWER: CAT® WATER SOLUTIONS.

Cat® Water Solutions helps you efficiently reduce haul road dust to enhance safety and increase productivity at your job site, quarry, or mine. A fully integrated truck, tank, sprayer, and water delivery system – connected with scalable levels of technology helps you solve overwatering and underwatering issues with a focus on sustainable operations.

This turnkey solution with Cat branded tank offerings is sold and supported by the local Cat dealer you know and trust.

FIRST FULLY INTEGRATED CAT WATER TRUCK TO THE MARKET

- + Built on a proven Cat 777 truck platform
- + Full system integration: truck, tank, and Cat Water Delivery System (WDS) connected with Cat MineStar Edge™ technology
- + Supported, offered, and validated by Caterpillar

SCALABLE CONNECTIVITY WITH CAT MINESTAR EDGE™

- + Gain an Edge with real-time information hosted in the cloud
- + Monitor water source and distribution, report status to remote management
- + Service-based offering with scalable levels of technology to fit your needs

GAIN EFFICIENCY WITH THE CAT WATER DELIVERY SYSTEM (WDS)

- + Provides variable water flow based on truck speed and determines appropriate flow to conserve water
- + Automatic start and stop eliminates over-watering at road intersections
- + Maintenance-free and self-cleaning water spray heads reduce truck downtime
- + The water cannon operates at idle, reducing fuel consumption by 50%

REDUCE COSTS, SUSTAINABLY

- + Gain more control of your operations using less water
- + Control water, control cost
- + Technology connected to our water delivery system increases efficiency to help optimize your water truck fleet size

ENHANCE SAFETY & PRODUCTIVITY AT YOUR QUARRY, MINE, OR JOB SITE

- + Lower dust levels, increase visibility, maintain haul road safety
- + Know where and when to water
- + With automated water delivery, the operator can remain focused on traffic and driving

CAT BRANDED TANK OFFERINGS WITH OPTIONS

- + Cat branded tanks include additional features and options commonly selected by customers in the industry
 - Splash guards, fill chute, and rock ejectors are standard
- + Hoist cylinder mounting on all tank offerings enhances serviceability
- + Manufactured and supplied by recognized tank providers – covered by a Caterpillar warranty

SUPPORTED & BACKED BY THE ONE YOU TRUST

- + 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 (07) Water Solutions Truck 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 | 683 kW | 916 hp |
| Engine Power – ISO 14396:2002 | 752 kW | 1,008 hp |
| Emissions Rating | Fuel Optimized | |
| Peak Torque Speed @ 1,200 rpm | 5044 N·m | 3,720 lbf·ft |
| Cylinders | 12 | |
| Bore | 145 mm | 5.7 in |
| 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).
- Available as Tier 4 Final/Stage V equivalent, Tier 3/Stage IIIA equivalent, or Tier 2/Stage II equivalent emission standards.

Weights – Approximate

| | | |
|-----------------------------------|------------|------------|
| Target Gross Machine Weight (GMW) | 164 654 kg | 363,000 lb |
| Chassis Weight (CW) | 52 262 kg | 115,217 lb |

Transmission

| | | |
|-----------|-----------|----------|
| Forward 1 | 10.7 km/h | 6.6 mph |
| Forward 2 | 14.6 km/h | 9.1 mph |
| Forward 3 | 19.2 km/h | 11.9 mph |
| Forward 4 | 26.7 km/h | 16.6 mph |
| Forward 5 | 36.2 km/h | 22.5 mph |
| Forward 6 | 48.6 km/h | 30.2 mph |
| Forward 7 | 65.9 km/h | 40.9 mph |
| Reverse | 12.1 km/h | 7.5 mph |

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

Final Drives

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

Braking System

| | | |
|-----------------------|-------------------------|------------------------|
| 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 | |

Weight Distributions – Approximate

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

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 ° | |

Steering

| | | |
|-----------------------------------|---------------|-------|
| Steering Standards | ISO 5010:2007 | |
| Steer Angle | 30.5° | |
| Turning Diameter – Front | 25.3 mm | 83 ft |
| Turning Circle Clearance Diameter | 28.4 m | 93 ft |

Tires

| | |
|---------------|---------------|
| Standard Tire | 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.

777 (07) Water Solutions Truck Specifications

Service Refill Capacities

| | | |
|--------------------------------------|---------|----------|
| Fuel Tank | 1136 L | 300 gal |
| Fuel Tank | 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 |

Cab

| | | |
|--------------------|--------------|---------------|
| Air Conditioning | 42 789 kJ/kg | 18,390 BTU/lb |
| Heater / Defroster | 11 070 kCal | 43,930 BTU |

- The operator Equivalent Sound Pressure Level (Leq) is 73 dB(A) when SAE J1166 FEB2008 is used to measure the value for an enclosed cab. This is a work cycle sound exposure level. The cab was properly installed and maintained. The test was conducted with the cab doors and the cab windows closed.
- The exterior sound pressure level for the standard machine measured at a distance of 15 m (49 ft) according to the test procedures specified in SAE J88:2008, mid-gear moving operation is 83 dB(A).
- 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.
- Rollover Protective Structure (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 FOPS criteria and ISO 13459:2012 Level II FOPS for trainer.

Cat® Water Delivery System (WDS)

| | | |
|----------------------------------------------------|----------------------------------------------|--------------------------------------------------|
| 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 | 3785 L/min | 1,200 gal/min |
| Water per spray head (minimum) | 130 L/min | 35 gal/min |
| Water per spray head (maximum) | 2270 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 (recommended 3) | 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) | 4732 L/min | 1,250 gal/min |
| Maximum cannon spray distance | 61 m | 200 ft |
| Wet water pump/hydraulic motor coupling | | |

- Coverage rates above 0.6 L/m² may not be available at higher speeds depending on head count and configuration.
- Opening is automatically controlled by the system to achieve AutoMode Coverage or Manual Mode Flow Rate.
- AutoMode Spray controls water coverage automatically to the number of heads being used and ground speed achieved.
- Manual Mode allows the operator to set a water flow rate that is constant regardless of ground speed.
- 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 (07) Water Solutions Truck Specifications

Tank Configurations

Multiple tank configurations are offered based on customer preference and regional locations.

| | Americas, Europe, Africa, Middle East | | Global | | Australia / New Zealand | |
|------------------------------------------------------------|---------------------------------------|------------|------------|------------|-------------------------|------------|
| Water Tank Capacity | 75 700 L | 20,000 gal | 75 700 L | 20,000 gal | 75 400 L | 19,900 gal |
| Bare Chassis Weight | 52 262 kg | 115,217 lb | 52 262 kg | 115,217 lb | 52 262 kg | 115,217 lb |
| Water Tank - Max Empty Weight (no WDS) | 20 000 kg | 44,092 lb | 20 412 kg | 45,000 lb | 19 497 kg | 42,983 lb |
| Empty Machine Weight (with water tank) | 72 262 kg | 159,310 lb | 72 674 kg | 160,217 lb | 71 759 kg | 158,201 lb |
| Machine Weight (with water tank full) | 148 762 kg | 327,964 lb | 148 719 kg | 327,867 lb | 147 172 kg | 324,458 lb |
| Fuel tank capacity | 1136 L | 300 gal | 1136 L | 300 gal | 1136 L | 300 gal |
| Fuel tank - 100% fill | 955 kg | 2,106 lb | 955 kg | 2,106 lb | 955 kg | 2,106 lb |
| Empty Machine Operating Weight (without water / with fuel) | 73 217 kg | 161,416 lb | 73 629 kg | 162,323 lb | 72 714 kg | 160,307 lb |
| Target Gross Machine Weight (GMW)* | 164 654 kg | 363,000 lb | 164 654 kg | 363,000 lb | 164 654 kg | 363,000 lb |

NOTE: Machine weights based on configuration. *Target GMW not to exceed weight in above table after attachments are installed.

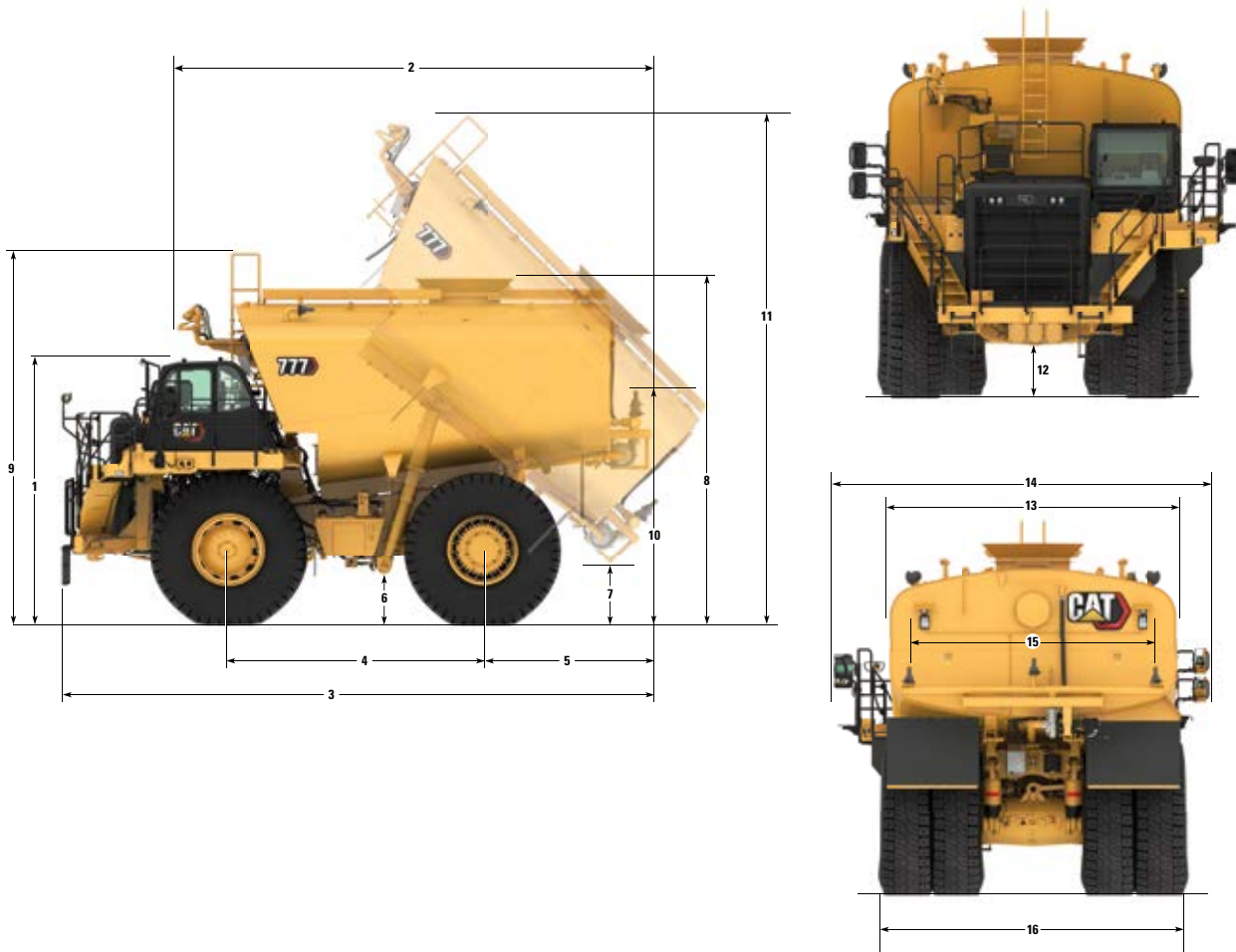
For truck rimpull and retarding curves, please reference the 777 Off-Highway technical specifications document.



777 (07) Water Solutions Truck Specifications

Dimensions

All dimensions are approximate. Shown with Ground Force Tank.



| | Ground Force | | Mega | | SVA | |
|------------------------------------------------------------------|------------------|---------|------------------|---------|------------------|---------|
| | 60 degree raised | 15' 6" | 53 degree raised | 25' 1" | 60 degree raised | 26' 2" |
| 1 Height to Top of ROPS | 4730 mm | 15' 6" | 4730 mm | 15' 6" | 4730 mm | 15' 6" |
| 2 Overall Tank Length | 8434 mm | 27' 8" | 7642 mm | 25' 1" | 7982 mm | 26' 2" |
| 3 Overall Machine Length (front ladder to tank hose reel) | 10 643 mm | 34' 11" | 10 308 mm | 33' 10" | 10 769 mm | 35' 4" |
| 4 Wheelbase | 4560 mm | 14' 11" | 4560 mm | 14' 11" | 4560 mm | 14' 11" |
| 5 Rear Axle to Tail | 2987 mm | 9' 10" | 2820 mm | 9' 3" | 3289 mm | 10' 9" |
| 6 Ground Clearance | 896 mm | 2' 11" | 896 mm | 2' 11" | 896 mm | 2' 11" |
| 7 Ground Clearance (tank raised) | 666 mm | 2' 2" | 815 mm | 2' 8" | 228 mm | 0' 9" |
| 8 Height to Tank Fill/Coaming | 6135 mm | 20' 2" | 5980 mm | 19' 7" | 6526 mm | 00' 00" |
| 9 Height to Tank Handrails / Ladder on Top | 6595 mm | 21' 8" | 6562 mm | 21' 6" | 6526 mm | 21' 5" |
| 10 Ground Height to Spray Heads | 3880 mm | 12' 9" | 3024 mm | 9' 11" | 2607 mm | 8' 7" |
| 11 Overall Height (tank raised) | 9240 mm | 30' 4" | 8955 mm | 29' 5" | 8983 mm | 29' 6" |
| 12 Engine Guard Clearance | 864 mm | 2' 10" | 864 mm | 2' 10" | 864 mm | 2' 10" |
| 13 Base Fabricated Tank Width | 5002 mm | 16' 5" | 5547 mm | 18' 2" | 5674 mm | 18' 7" |
| 14 Standard Truck Operating Width to Outside Mirrors | 7157 mm | 23' 6" | 7157 mm | 23' 6" | 7157 mm | 23' 6" |
| 15 Outside Spray Head Centerline Width | 4267 mm | 14' | 5061 mm | 16' 7" | 4250 mm | 13' 11" |
| 16 Overall Tire Width | 5223 mm | 17' 2" | 5223 mm | 17' 2" | 5223 mm | 17' 2" |

*Handrails shown are optional attachments

777 (07) Water Solutions Truck Specifications

Standard and Optional Equipment

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

| | Standard | Optional |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|
| POWERTRAIN | | |
| Air cleaner 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 engine brake | | • |
| Cold weather packages | | • |
| Electric cold weather start (two starters and four batteries) | • | |
| Electric priming pump | • | |
| Engine Idle Shutdown | • | |
| Ether starting aid | • | |
| Exhaust, muffler | • | |
| Extended life coolant to -35° C (-30° F) | • | |
| Fuel filter/water separator | • | |
| Part throttle shifting: 7-speed automatic powershift with torque shift management Electronic Clutch Pressure Control, body up-shift inhibitor, directional shift management, downshift inhibitor, neutral start switch, neutral coast inhibitor, reverse shift inhibitor, reverse neutralizer during dumping, programmable top gear selection | • | |
| Transmission: auto neutral idle, APECS software, ECPC | • | |
| Turbocharger (2) | • | |
| ELECTRICAL | | |
| Alarm, backup | • | |
| Alternator, 115 ampere | • | |
| Auxiliary jump start receptacle | • | |
| Batteries, maintenance-free, 12V (4), 190 amp-hour | • | |
| Electrical system, 25 amp, 24V to 12V converter | • | |
| Lighting system: backup light (halogen), directional signals/hazard warning (front and rear LED), headlights (halogen) with dimmer, payload (indicator lights), operator access courtesy lights, side profile lights, stop/tail lights (LED), service lights | • | |

| | Standard | Optional |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|
| OPERATOR ENVIRONMENT | | |
| Advanced Health | • | |
| Advisor display | • | |
| Air conditioning | • | |
| 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 | • | |
| Fluid fill service center | | • |
| Fuel level monitoring | • | |
| 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) | • | |
| Hoist lever | • | |
| Horn, electric | • | |
| Lights: dome, courtesy | • | |
| Lights, HID | | • |
| Load counter, automatic | • | |
| Mirrors, convex | | • |
| Mirrors, heated | • | |
| Power port, 24V and 12V (2) | • | |
| ROPS cab, insulated/sound suppressed | • | |
| Seat, Cat Comfort Series III: full air suspension, retractable 4-point seat belt with shoulder harness | • | |
| Spare rim | | • |
| Steering wheel, padded/tilt/telescopic | • | |
| Storage compartment | • | |
| Sun visor | • | |
| Throttle lock | • | |
| Tinted, laminated glass | • | |
| TPMS | • | |
| Visibility package (meets ISO 5006 requirements) | | • |
| Window, right side, hinged access/egress | • | |
| Windshield wiper, intermittent, and washer | • | |

777 (07) Water Solutions Truck Specifications

Standard and Optional Equipment

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

| | Standard | Optional |
|----------------------------------------------------------------------------------------------------------------------------------|----------|----------|
| CAT TECHNOLOGY PRODUCTS | | |
| Adaptive economy mode | • | |
| Object detection (4 cameras, 4 radars) | | • |
| Product Link™ Ready (Level 1) | • | |
| TKPH/TMPH (Tons Kilometer Per Hour/ Tons Mile Per Hour) | | • |
| Work Area Vision System (WAVS) | • | |
| Cat MineStar Edge™ : | | |
| • Level 1 - Basic (Equipment Tracking)* | • | |
| • Level 2 - Premium (Production Recording) | | • |
| *Basic connectivity package comes standard on all Cat Water Solutions trucks with a 6-month complimentary service-based offering | | |

| CAT WATER DELIVERY SYSTEM (WDS) | | |
|---------------------------------------------------------------------------------------------|---|---|
| Controls: | | |
| • Factory installed | • | |
| • Integrated into cab | • | |
| Water System Monitor: | | |
| • Integrated into cab | • | |
| • Programmable spray configurations | • | |
| • Automatic diagnostic messages | • | |
| Variable Hydraulic Pump Drive: | | |
| • 1,200 gpm at speeds of 3 to 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 & service available through global Cat dealer network

| | Standard | Optional |
|-----------------------------------------------------------------------------|----------|----------|
| OTHER EQUIPMENT | | |
| Attachment zone | | • |
| Body down indicator | | • |
| Body mounting group | • | |
| Body safety pin (secures body in up position) | | • |
| Cab precleaner | | • |
| CD-ROM parts book | | • |
| Center-mounted rims | | • |
| Clustered grease fittings | | • |
| Driveline guards | • | |
| Engine crankcase guards | • | |
| Fan and AC guards | • | |
| Fuel tank (1136 L/300 gal) | • | |
| Ground-level battery disconnect | | • |
| Ground-level engine shutdown | | • |
| Ground-level grease fittings | | • |
| Reservoirs (separate): brake/hoist, steering, transmission/torque converter | • | |
| Rims 19.5 x 49 | • | |
| Rock ejectors | | • |
| 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 | • | |

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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