

# PRODUCT SPECIFICATIONS FOR 777 (05) WATER TRUCK



## ENGINE

<b>Engine Model</b>	Cat® C32B
<b>Gross Power - SAE J1995</b>	765 kW
<b>Engine Speed</b>	1800 r/min
<b>Net Power - SAE J1349</b>	711 kW
<b>Emissions</b>	Fuel Optimized
<b>Cylinders</b>	12
<b>Bore</b>	145 mm
<b>Stroke</b>	162 mm
<b>Displacement</b>	32.1 l
<b>Note (1)</b>	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.
<b>Note (2)</b>	No engine derating required up to 3048 m (10,000 ft) altitude.
<b>Note (3)</b>	Meets China Nonroad Stage III emission standards equivalent to U.S. EPA Tier 2.

## CAT WATER DELIVERY SYSTEM (WDS)

<b>Maximum water flow</b>	3785 l/min
<b>Water per spray head (minimum)</b>	130 l/min

**Water per spray head  
(maximum)** 2270 l/min

**Spray head opening range  
(minimum)** 1 mm

**Spray head opening range  
(maximum)** 19 mm

**Maximum size debris  
flushed through spray head** 19 mm

**Spray system hydraulic  
tank capacity** 27.5 l

**Maximum number of rear  
spray heads** 5

**Minimum number of rear  
spray heads  
(recommended 3)** 2

**Minimum number of  
front/side spray heads** 2

**Maximum number of  
front/side spray heads** 0

**Maximum water from  
cannon (idle)** 2271 l/min

**Maximum water from  
cannon (high idle)** 4732 l/min

**Maximum cannon spray  
distance** 61 m

**Type** Wet water pump/hydraulic motor coupling

**Note** Operator selectable coverage: 0.2-0.8 L/m<sup>2</sup> (4 kph - 40 kph) / 0.05-0.2 gal/ft<sup>2</sup> (3 mph - 25 mph). Coverage rates above 0.6 L/m<sup>2</sup> may not be available at higher speeds depending on head count and configuration.

**Note (1)** Opening is automatically controlled by the system to achieve AutoMode Coverage or Manual Mode Flow Rate.

**Note (2)** AutoMode Spray controls water coverage automatically to the number of heads being used and ground speed achieved.

**Note (3)** Manual Mode allows the operator to set a water flow rate that is constant regardless of ground speed.

**Note (4)** 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.

**Note (5)** Water flow is continually adjusted during operation to conserve water and achieve desired coverage and flow rate

## TANK CONFIGURATIONS

**Water Tank Capacity** up to 75 700 L (20,000 gal)

**Note** Multiple tank configurations are offered based on customer preference and regional locations. Water Tank Capacity Range: 75 400 - 75 700 L (19,900 - 20,000 gal)

**Machine Weight (with water tank full)** 315,365 - 327,964 lb / 143 047 - 148 762 kg

**Empty Machine Operating Weight (without water / with fuel)** 151,204 - 153,221 lb / 68 585 - 69 500 kg

**Water Tank - Max Empty Weight (no WDS)** 42,983 - 44,092 lb / 19 497 - 20 000 kg

**Note (1)** Cat branded tanks include additional features and options commonly selected by customers in the industry. Splash guards, fill chute, and rock ejectors are standard.

**Note (2)**

Hoist cylinder mounting on all tank offerings enhances serviceability.

## OPERATING SPECIFICATIONS

**Top Speed - Loaded** 67.1 km/h

**Note** Water Tank Capacity Range: 69 700 - 75 700 L (18,400 - 20,000 gal)

**Note (2)** Operator selectable coverage: 0.2-0.8 L/m<sup>2</sup> (4 kph - 40 kph) / 0.5-0.2 gal/ft<sup>2</sup> (3 mph - 25 mph)

## WEIGHTS - APPROXIMATE

**Target Gross Machine Weight** 163360 kg

**Chassis Weight** 82022 kg

## TRANSMISSION

**Forward - 1** 10.9 km/h

**Forward - 2** 14.8 km/h

**Forward - 3** 20.1 km/h

**Forward - 4** 27.1 km/h

**Forward - 5** 36.8 km/h

**Forward - 6** 49.4 km/h

**Forward - 7** 67.1 km/h

**Reverse** 12.1 km/h

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

## FINAL DRIVES

Differential Ratio	2.74:1
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Planetary Ratio	7.00:1
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Total Reduction Ratio	19.16:1
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## BRAKING SYSTEM

Brake Surface - Front	2787 cm <sup>2</sup>
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Brake Surface - Rear	102116 cm <sup>2</sup>
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Brake Standards	ISO 3450:2011
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## BODY HOISTS

Body Raise Time - High Idle	15 s
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Body Lower Time - Float	13 s
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Body Lower Time - High Idle	13 s
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## WEIGHT DISTRIBUTIONS - APPROXIMATE

Front Axle - Empty	46 %
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Front Axle - Loaded	30 %
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Rear Axle - Empty	54 %
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Rear Axle - Loaded	70 %
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## SUSPENSION

Effective Cylinder Stroke - Front	318 mm
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Effective Cylinder Stroke - Rear	165 mm
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Rear axle - Oscillation	5.4 °
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## STEERING

<b>Steering Standards</b>	ISO 5010:2007
<b>Steer Angle</b>	30.5 °
<b>Turning Diameter - Front</b>	25.3 m
<b>Turning Circle - Clearance Diameter</b>	28.4 m

## TIRES

<b>Standard Tire</b>	27.00R49 (E4)
<b>Note (1)</b>	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.
<b>Note (2)</b>	Caterpillar recommends the customer evaluate all job conditions and consult the tire manufacturer for proper tire selection.

## SERVICE REFILL CAPACITIES

<b>Fuel Tank (1)</b>	1140 l
<b>Cooling System</b>	212 l
<b>Crankcase</b>	115 l
<b>Differentials</b>	222 l
<b>Steering System - Including Tank</b>	60 l
<b>Brake Hoist System</b>	420 l
<b>Torque Converter - Transmission System</b>	125 l

## CAB

<b>Air Conditioning</b>	42789 Btu/kWh
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**Heater /  
Defroster**

11070 kJ/kg

**ROPS Standards  
(1)**

Rollover protective structure (ROPS) cab offered by Caterpillar meets ISO 3471:2008 for operator and ISO 13459:2012 for trainer.

**FOPS Standards**

Falling objects protective structure (FOPS) meets ISO 3449:2005 Level II for operator and ISO 13459:2012 Level II FOPS for trainer.

**Note (1)**

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.

## **777 (05) WATER TRUCK STANDARD EQUIPMENT**

### **NOTE**

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

### **POWERTRAIN**

Autostall

Engine idle shutdown

Air-To-Air Aftercooler (ATAAC)

Air cleaner with precleaner (2)

Automatic cold mode idle control

Electric priming pump

Electric cold weather start (two starters and four batteries)

Ether starting aid

Exhaust, muffler

Fuel filter/water separator

Turbocharger (2)

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, multiple disc (front/rear)
  - Parking
  - Secondary
  - Service
- Transmission
- Auto neutral idle
  - APECS Software
  - ECPC

### 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

## **SUSPENSION SYSTEMS**

Suspension, rear

## **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

## **OPERATOR ENVIRONMENT**

Air conditioning

Ashtray and cigarette lighter

Coat hook

Cup holders (4)

Diagnostic connection port, 24V

Entertainment Radio Ready

- 5 amp converter
- Speakers
- Antenna
- Wiring harness



## Gauges/indicators

- Brake oil temperature gauge
- Coolant temperature gauge
- Hour meter
- Tachometer
- Engine overspeed indicator
- Fuel level
- Speedometer with odometer
- Transmission gear indicator

Heater/defroster (11 070 kCal/43,930 BTU)

Auto temp control

Fluid level monitoring

Hoist lever

Horn, electric

Light - dome

Light - courtesy

Load counter, automatic

Advisor display

VIMS

TPMS

Foot rest

Mirrors - heated

Power port, 24V and 12V (2)

ROPS cab, insulated/sound suppressed

Cat Comfort Series III

- Full air suspension
- Retractable 3-point seat belt with shoulder harness

Steering wheel, padded, tilt and telescopic

Storage compartment

Sun visor

Throttle lock

Window, right side, hinged access/egress

Electric left side window control

Windshield wiper (intermittent) and washer

Tinted, laminated glass

## **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)\*

\*Basic connectivity package comes standard on all Cat Water Solutions trucks with a 6-month complimentary service-based offering

## **GUARDS**

Engine crankcase  
Driveline  
Fan and A/C

## **FLUIDS**

Extended Life Coolant to -35° C (-30° F)

## **OTHER STANDARD EQUIPMENT**

Body mounting group  
Body safety pin (secures body in up position)  
Body down indicator  
CD-ROM parts book  
Center-mounted rims  
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 × 49  
Rock ejectors  
Supplemental steering (automatic)  
Tie down eyes  
Tow hooks (front)/Tow pin (rear)  
Vandalism protection locks  
Wiggins fast fuel  
Traction Control System (TCS) (new version)  
Attachment Zone

## **CAT WATER DELIVERY SYSTEM (WDS)**

Controls: Factory installed and 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 with auto shut-off and soft startup  
Stainless Steel Spray Heads: maintenance free, patented design resists corrosion  
Independent Hydraulic Cooling System: minimizes overheating  
Water Cannon: hydraulically controlled, integrated joystick with cab controls, optional nozzles  
Parts & service available through global Cat dealer network

## **CAT BRANDED WATER 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)

## **777 (05) WATER TRUCK OPTIONAL EQUIPMENT**

### **NOTE**

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

### **OPTIONAL EQUIPMENT**

Cab precleaner  
Cat Engine Brake  
Clustered grease fittings  
Cold weather packages  
Fluid fill service center  
HID lights  
Mirrors, convex  
Mirrors, heated  
Spare rim  
Visibility package (meets ISO 5006 requirements)  
Wheel chocks  
Work Area Vision System (WAVS)

### **CAT TECHNOLOGY PRODUCTS**

Cat MineStar Edge™: Level 2 - Premium (Production Recording)\*\*

\*\*Phased introduction 2022