B45E 6x6 38 000 L Articulated Water Truck

ENGINE
Manufacturer
Mercedes Benz (MTU)

Model
OM471LA (MTU 6R 1300)

Configuration
Inline 6, turbocharged and intercooled

Net Power
390 kW (523 hp) @ 1 600 rpm

Gross Torque
2 600 Nm (1 918 lbft) @ 1 300 rpm

Displacement
12,8 litres (781 cu.in)

Auxiliary Brake
Jacobs Engine Brake®

Fuel Tank Capacity
533 litres (140.8 US gal)

Certification
OM471LA (MTU 6R 1300) is EU Stage IIIA / EPA Tier 3 emission level equivalent

TRANSMISSION
Manufacturer
Allison

Model
4700 ORS

Configuration
Fully automatic planetary transmission

Layout
Engine mounted

Gear Layout
Constant meshing planetary gears, clutch operated

Gears
7 Forward, 1 reverse

Clutch Type
Hydraulically operated multi-disc

Control Type
Electronic

Torque Control
Hydrodynamic with lock-up in all gears

TRANSFER CASE
Manufacturer
Kessler

Model
W2400

Layout
Remote mounted

Gear Layout
Three in-line helical gears

Output Differential
Interaxle 29/71 proportional differential. Automatic inter-axle differential lock.

AXLES
Manufacturer
Bell

Model
30T

Differential
High input controlled traction differential with spiral bevel gears

Final Drive
Outboard heavy duty planetary on all axles

BRAKING SYSTEM
Service Brake
Dual circuit, full hydraulic actuation wet disc brakes on front and middle axles. Wet brake oil is circulated through a filtration and cooling system.

Maximum brake force:
330 kN (74 187 lbf)

Park & Emergency
Spring applied, air released driveline mounted disc

Maximum brake force:
218 kN (49 008 lbf)

Auxiliary Brake
Jacobs Engine Brake®.
Automatic retardation through electronic activation of wet brake system.

Total Retardation Power
Continuous: 442 kW (593 hp)
Maximum: 854 kW (1 145 hp)

WHEELS
Type
Radial Earthmover

Tyre
29.5 R 25 (875/65 R 29 optional)

FRONT SUSPENSION
Semi-independent, leading A-frame supported by hydro-pneumatic suspension struts

Option: Electronically controlled adaptive suspension with ride height adjustment

REAR SUSPENSION
Pivoting walking beams with laminated rubber suspension blocks

Option: Comfort Ride suspension walking beams, with two-stage sandwich block

HYDRAULIC SYSTEM
Full load sensing system serving the prioritised steering, body tipping and brake functions. A ground-driven, load sensing emergency steering pump is integrated into the main system.

Pump Type
Variable displacement load sensing piston

Flow
330 L/min (87 gal/min)

Pressure
315 bar (4 569 psi)

Filter
5 microns

STEERING SYSTEM
Double acting cylinders, with ground-driven emergency steering pump

Lock to lock turns
5

Steering Angle
42°

PNEUMATIC SYSTEM
Air drier with heater and integral unloader valve, serving park brake and auxiliary functions

System Pressure
810 kPa (117 psi)

ELECTRIC SYSTEM
Voltage
24 V

Battery Type
Two AGM (Absorption Glass Mat) type

Battery Capacity
2 X 75 Ah

Alternator Rating
28V 80A

MAX VEHICLE SPEED

1st	4 km/h	2,5 mph
2nd	9 km/h	6 mph
3rd	17 km/h	11 mph
4th	23 km/h	14 mph
5th	33 km/h	21 mph
6th	44 km/h	27,3 mph
7th	51 km/h	32 mph
R	7 km/h	4 mph

WATER TANKER PLUMBING
Centrifugal water pump

Rate of Flow
5 400 L/min

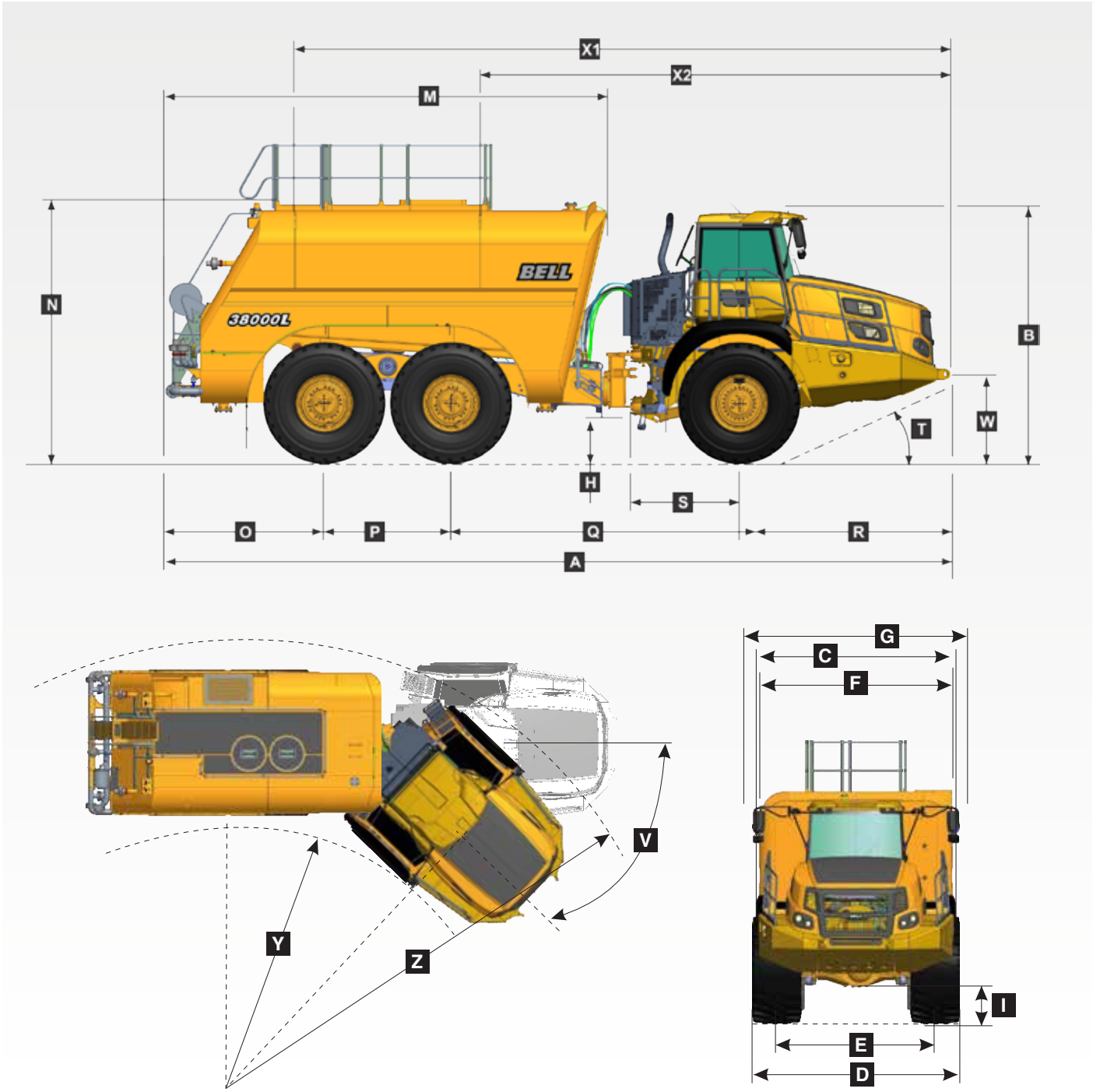
Head
70 m

CAB
ROPS/FOPS certified 76 dBA internal sound level measured according to ISO 6396

Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE		LOAD CAPACITY	
UNLADEN		LADEN (No sinkage/Total Contact Area Method)			
	kg (lb)	29.5 R 25	kPa (Psi)		
Front	15 743 (34 707)	Front	321 (47)	Rated Payload	38 000 litres
Middle	10 046 (22 147)	Middle	370 (54)		(10 000 gallons)
Rear	9 528 (21 005)	Rear	370 (54)		
Total	35 317 (77 859)				
LADEN					
Front	18 342 (40 438)	875/65 R29	kPa (Psi)		
Middle	27 391 (60 386)	Front	294 (43)		
Rear	27 584 (60 811)	Middle	331 (48)		
Total	73 317 (161 636)	Rear	331 (48)		

Dimensions

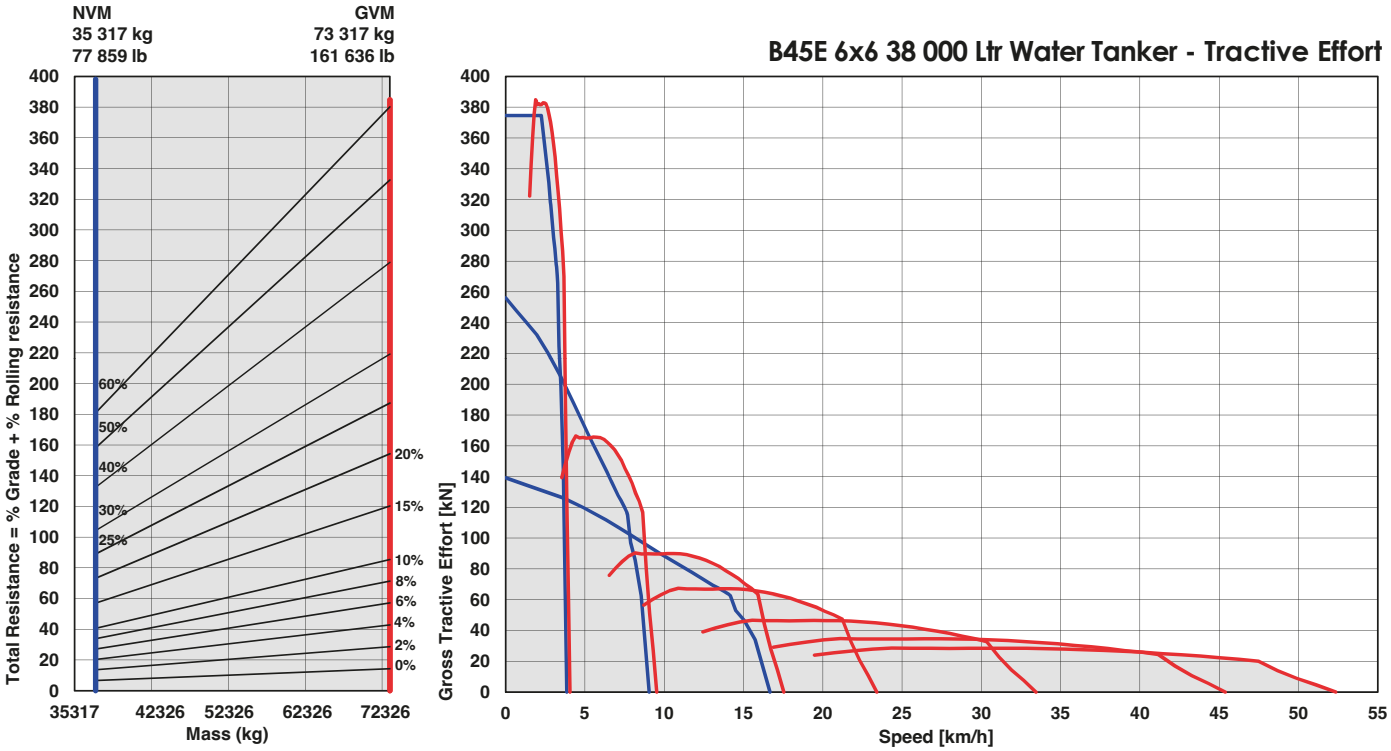


Machine Dimensions

A	Length - Transport Position	12 084 mm	(39 ft. 8 in.)
B	Height - Transport Position	3 802 mm	(12 ft. 6 in.)
C	Width over Mudguards	3 495 mm	(11 ft. 6 in.)
D	Width over Tyres - 875/65 R29	3 656 mm	(11 ft. 12 in.)
D	Tyre Track Width - 29.5R25	3 487 mm	(11 ft. 5 in.)
E	Tyre Track Width - 875/65 R29	2 773 mm	(9 ft. 1 in.)
E	Tyre Track Width - 29.5R25	2 725 mm	(8 ft. 11 in.)
F	Width over Tank / Bowser	3 379 mm	(11 ft. 1 in.)
G	Width over Mirrors - Operating Position	4 027 mm	(13 ft. 3 in.)
H	Ground Clearance - Artic	545 mm	(1 ft. 9 in.)
I	Ground Clearance - Front Axle	543 mm	(1 ft. 9 in.)
M	Tank / Bowser Length	6 797 mm	(22 ft. 4 in.)
N	Maximum Tank Height	4 002 mm	(13 ft. 2 in.)
O	Rear Axle Centre to Bowser / Tank Rear	2 443 mm	(8 ft. 0 in.)
P	Mid Axle Centre to Rear Axle Centre	1 950 mm	(6 ft. 5 in.)
Q	Mid Axle Centre to Front Axle Centre	4 438 mm	(14 ft. 7 in.)
R	Front Axle Centre to Machine Front	3 253 mm	(10 ft. 8 in.)
S	Front Axle Centre to Artic Centre	1 558 mm	(5 ft. 1 in.)
T	Approach Angle	25°	
V	Maximum Articulation Angle	45°	
W	Front Tie Down Height	1 282 mm	(4 ft. 2 in.)
X1	Tank Lifting Centres	10 023 mm	(32 ft. 10 in.)
X2	Front Lifting Centres to Tank Lifting Centre	7 173 mm	(23 ft. 6 in.)
Y	Inner Turning Circle Radius - 875/65 R29	4 782 mm	(15 ft. 8 in.)
Y	Inner Turning Circle Radius - 29.5R25	4 866 mm	(15 ft. 12 in.)
Z	Outer Turning Circle Radius - 875/65 R29	9 320 mm	(30 ft. 7 in.)
Z	Outer Turning Circle Radius - 29.5R25	9 235 mm	(30 ft. 4 in.)

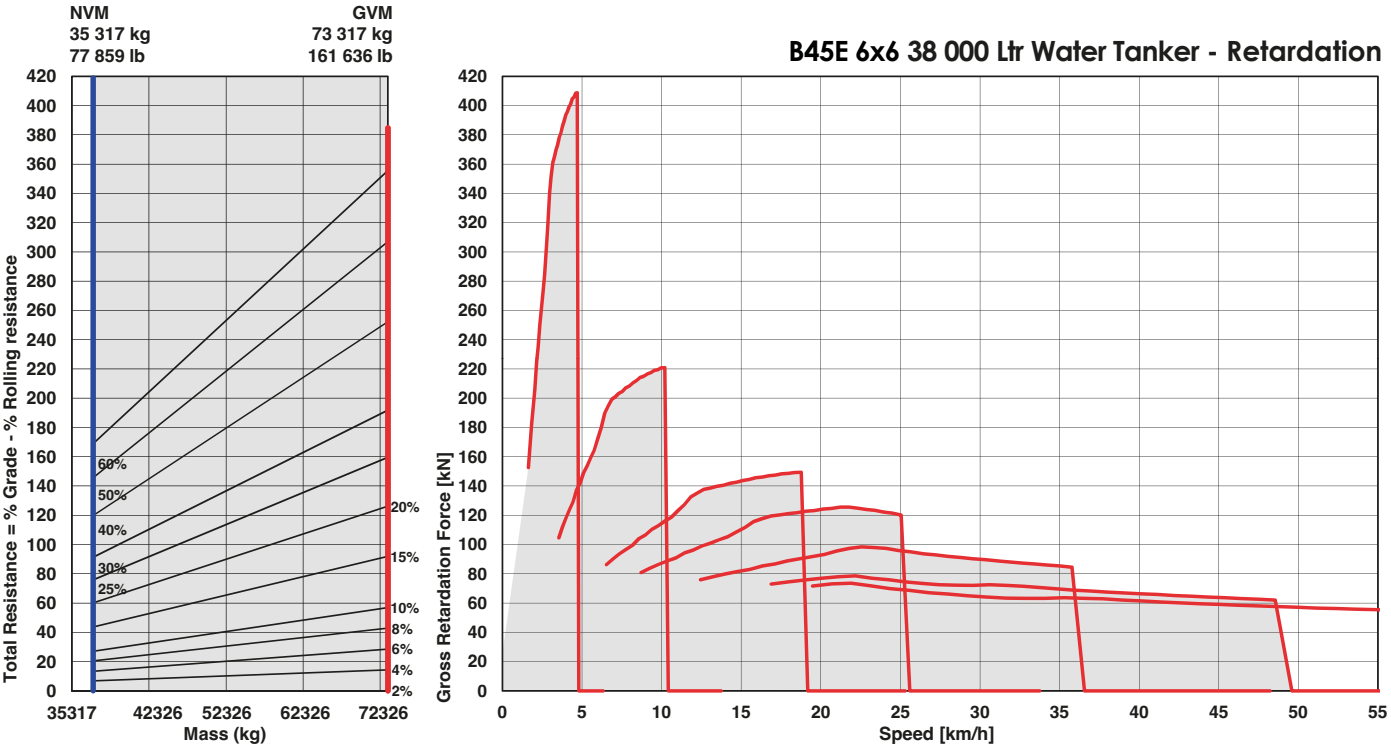
Gradeability/Rimpull

1. Determine tractive resistance by finding intersection of vehicle mass line and grade line. NOTE: 2% typical rolling resistance is already assumed in chart and grade line.
2. From this intersection, move straight right across charts until line intersects rimpull curve.
3. Read down from this point to determine maximum speed attained at that tractive resistance.



Retardation

1. Determine retardation force required by finding intersection of vehicle mass line.
2. From this intersection, move straight right across charts until line intersects the curve. NOTE: 2% typical rolling resistance is already assumed in chart.
3. Read down from this point to determine maximum speed.



Features and Options

● STANDARD ▲ OPTION

16 000 L	27 000 L	35 000 L	38 000 L	43 000 L	
					ENGINE
●	●	●	●	●	Engine valve brake and exhaust brake
●	●	●	●	●	Dual element air cleaner with dust ejector valve
●	●	●	●	●	Precleaner with auto dust scavenging
●	●	●	●	●	Water separator
●	●	●	●	●	Serpentine drive belt with automatic tensioner
▲	▲	●	●	●	Provision for fast fill
▲	▲	●	●	●	Wet-sleeve cylinder liners
					COOLING
●	●	●	●	●	Crank-shaft mounted viscous-drive fan
●	●	●	●	●	Fan guard
					PNEUMATIC SYSTEM
●	●	●	●	●	Engine-mounted compressor
●	●	●	●	●	Air drier with heater
●	●	●	●	●	Integral unloader valve
					ELECTRICAL SYSTEM
●	●	●	●	●	Battery disconnect
●	●	●	●	●	Drive lights
●	●	●	●	●	Air horn
●	●	●	●	●	Reverse alarm
	●	●	●	●	White noise reverse alarm
●	●	●	●	●	Rotating beacon
●	●	●	●	●	Pitch roll sensor
		●	●	●	LED drive lights
●	●	●	●	●	LED artic reverse light
●	●	●	●	●	LED reverse light
					STEERING SYSTEM
●	●	●	●	●	Uni-directional ground-driven secondary steering pump
▲	▲	▲	▲	▲	Bi-directional ground-driven secondary steering pump
					CAB
●	●	●	●	●	ROPS/FOPS certification
●	●	●	●	●	Tilt cab
●	●	●	●	●	Gas strut-supported door
●	●	●	●	●	HVAC Climate control system
●	●	●	●	●	AM/FM radio/CD player + USB
●	●	●	●	●	Rear window guard
●	●	●	●	●	Wiper/washer with intermittent control
●	●	●	●	●	Tilt and telescoping steering wheel
●	●	●	●	●	Centre-mount air-suspension seat
●	●	●	●	●	Halogen work lights
●	●	●	●	●	LED work lights
▲	▲	▲	▲	▲	Rotating beacon: seat belt installation
▲	●	●	●	●	Remote engine and machine isolation
●	●	●	●	●	Remote battery jump start
		●	●	●	High visibility mirrors
●	●	●	●	●	Retractable 3-point seat belt
●	●	●	●	●	Foldaway trainer seat with retractable seat belt

16 000 L	27 000 L	35 000 L	38 000 L	43 000 L	
					CAB (continued)
●	●	●	●	●	12-volt power outlet
●	●	●	●	●	Cup holder
●	●	●	●	●	Cooled/heated lunch box
●	●	●	●	●	Utility bin (removable)
●	●	●	●	●	Manually adjustable mirrors
●	●	●	●	●	Electric adjustable & heated mirrors
●	●	●	●	●	Deluxe 10" colour LCD: Speedometer / Fuel gauge / Transmission oil temperature gauge / Engine coolant temperature gauge / LED function/warning indicators and audible alarm / Transmission gear selection / Tachometer / Battery voltage / Hour meter / Odometer / Fuel consumption / Trip timer / Trip distance / Metric/English units / Service codes/diagnostics
●	●	●	●	●	Backlit sealed switch module functions with: Wiper control / Lights / Heated mirrors / Retarding aggressiveness / Transfer case differential lock / Transmission gear hold / Airconditioner/ Heater controls / Preselected Speed Control
●	●	●	●	●	Backlit Plumbing sealed switch module functions with: Battery / Spray / Pulse / Tank fill / Hose reel / Pump / Dribble bar
					PLUMBING
●	●	●	●	●	Dribble bar
●	●				1 800 lpm 50 m head pump
▲	▲	●	●	●	5 400 lpm 70 m head pump*
●	●	●	●	●	Pressurised dribble bar system
▲	▲	▲	▲	▲	Pressurised dribble bar system with nozzles
●	●	●	●	●	Spray valves (in-cab activation)
●	●	●	●	●	Batter spray valves
●	●	●	●	●	Fold down top rails
▲	▲	▲	▲	▲	Suction pipe for filling from dam
●	●	●	●	●	Step ladder access
●	●	●	●	●	Inspection access
●	●	●	●	●	Remote control water cannon
●	●	●	●	●	Hose reel
					OTHER
●	●				23.5 R 25 tyres
▲					620/75 R26 tyres
		●	●	▲	29.5 R 25 Radial Earthmover tyres
		▲	▲	●	875/65 R 29 Radial Earthmover tyres
●	●	●	●	●	Automatic greasing
●	●	●	●	●	Cab peak
●	●	●	●	●	Belly cover
●	●	●	●	●	Handrails
●	●	●	●	●	Remote transmission filter
●	●	●	●	●	Reverse camera

***** *(Option only): Larger centrifugal pump available if suction pipe option is not fitted.*

FEATURES OF THE ARTICULATED WATER TRUCK

• PRODUCTIVE: Powerful built-for hauling ADT drivetrains are well matched for pulling and retarding heavy loads. Nitrogen over oil strut suspension smooths the ride for operator and machine.

• ECONOMY: Modern fuel efficient engine, lockup torque converter and planetary transmission deliver more work per unit of fuel used

• EASY TO OPERATE: High quality cab is conducive to operator care. Simple to use controls and electronic interfaces protect the machine from accidental misuse.

BATTER SPRAYS

- Two additional spray valves that expand the spray patterns reach on the sides of the tank
- Remotely activated from inside the cab

HOSE REEL

- 25 m hose reel
- Adjustable fog/ stream nozzle
- Spring retractable

DRIBBLE BAR

- Gravity fed dribble bar
- Remotely activated from inside the cab
- Even spread pattern covering the width of the vehicle

PENETRATION SPRAY BARS

- Available with nozzles or holes
- Remotely activated from inside the cab
- Pressurised by the pump to create a jet of water

REMOTE WATER CANNON

- Adjustable fog/stream pattern
- A variety of flow settings
- Remotely controlled via a joystick inside the cab
- High quality components built to last in heavy duty applications