B30E 6x6 27 000 L Articulated Water Truck

ENGINE

Manufacturer
Mercedes Benz

Model
OM926LA

Configuration
Inline 6, turbocharged and intercooled.

Net Power
240 kW (322 hp) @ 2 200 rpm in accordance with UN ECE R120

Gross Torque
1 300 Nm (959 lbft)
@ 1 200 -1 600 rpm

Displacement
7,2 litres (439 cu.in)

Auxiliary Brake
Exhaust Valve Brake
Engine Valve Brake

Fuel Tank Capacity
379 litres (100 US gal)

Certification
OM926LA meets EU Stage II/EPA Tier 2 emissions regulations.

TRANSMISSION

Manufacturer
Allison

Model
3400P ORS

Configuration
Fully automatic planetary transmission

Layout
Engine mounted

Gear layout
Constant meshing planetary gears, clutch operated

Gears
6 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

Series
W1400

Layout
Remote mounted

Gear Layout
Three in-line helical gears

Output Differential
Interaxle 33/67 proportional differential. Automatic inter-axle differential lock.

AXLES

Manufacturer
Bell

Model
18T

Differential
High input limited slip 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:
187 kN (42 000 lbf)

Park & Emergency
Spring applied, air released driveline mounted disc.

Maximum brake force:
251 kN (56 400 lbf)

Auxiliary Brake
Automatic engine valve brake. Automatic retardation through electronic activation of wet brake system.

Total Retardation Power
265 kW (355 hp) Continuous
494 kW (662 hp) Maximum

WHEELS

Type
Radial Earthmover

Tyre
23.5 R 25

FRONT SUSPENSION

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

REAR SUSPENSION

Pivoting walking beams with laminated rubber suspension blocks

HYDRAULIC SYSTEM

Full load sensing system serving the prioritized 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
165 l/min (44 gal/min)

Pressure
28 Mpa (4 061 psi)

Filter
5 microns

STEERING SYSTEM

Double acting cylinders, with ground-driven emergency steering pump.

Lock to lock turns
4,1

Steering Angle
45°

PNEUMATIC SYSTEM

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

System Pressure
810 kPa (117 psi)

ELECTRICAL SYSTEM

Voltage
24 V

Battery Type
Two AGM (Absorption Glass Mat) type

Battery Capacity
2 X 75 Ah

Alternator Rating
28 V 80 A

VEHICLE SPEEDS

1st	8 km/h	5 mph
2nd	14 km/h	9 mph
3rd	20 km/h	12 mph
4th	29 km/h	18 mph
5th	43 km/h	26 mph
6th	50 km/h	31 mph
R	8 km/h	5 mph

WATER TANKER PLUMBING

Standard centrifugal water pump

Rate of Flow
1 800 L/min

Head
50 m

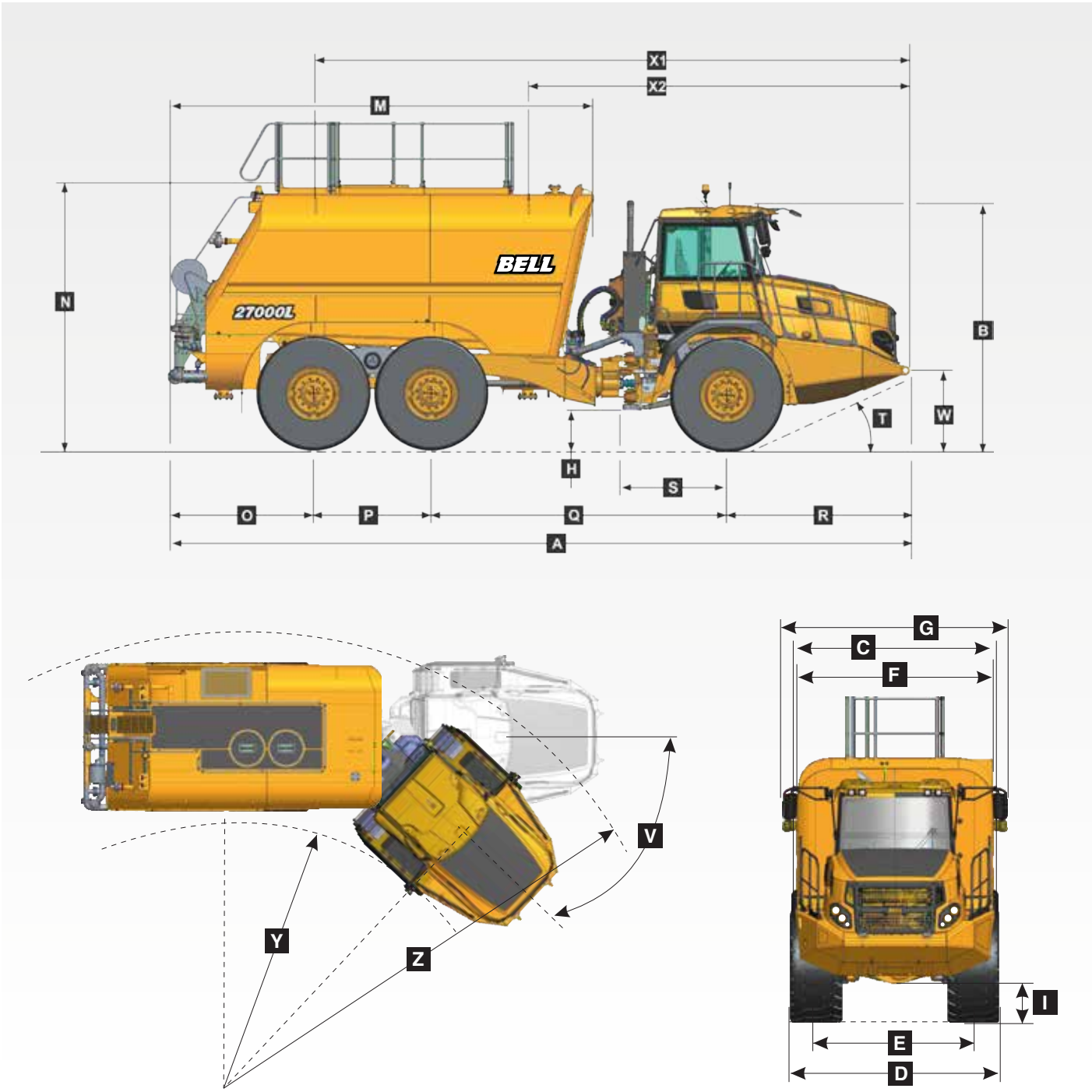
CAB

ROPS/FOPS certified 72 dBA internal sound level measured according to ISO 6396.

Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE		LOAD CAPACITY	
UNLADEN - kg (lb)		LADEN (No sinkage)			
Front	9 750 (21 495)	23.5 R 25	kPa (Psi)	Rated Payload	27 000 litres
Middle	4 800 (10 582)	Front	280 (41)		(7 100 gallons)
Rear	4 760 (10 494)	Middle	378 (55)		
Total	19 310 (42 571)	Rear	378 (55)		
LADEN - kg (lb)					
Front	13 120 (28 925)				
Middle	17 115 (37 732)				
Rear	17 075 (37 644)				
Total	47 310 (104 301)				

Dimensions

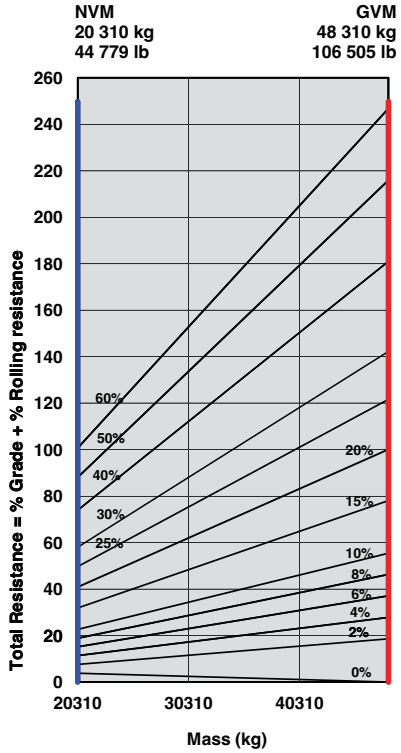


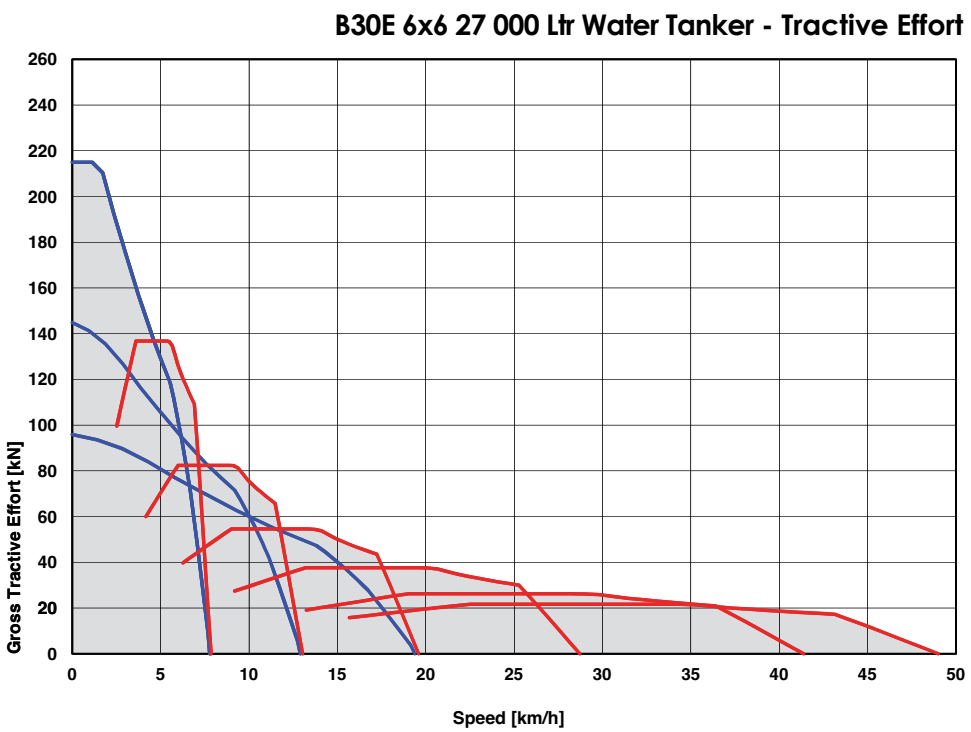
Machine Dimensions

A	Length - Transport Position	10 525 mm	(34 ft. 6 in.)
B	Height - Transport Position	3 436 mm	(11 ft. 3 in.)
C	Width over Mudguards	2 985 mm	(9 ft. 6 in.)
D	Width over Tyres - 23.5R25	2 940 mm	(9 ft. 8 in.)
E	Tyre Track Width - 23.5R25	2 356 mm	(7 ft. 9 in.)
F	Width over Tank / Bowser	2 855 mm	(9 ft. 4 in.)
G	Width over Mirrors - Operating Position	3 260 mm	(10 ft. 8 in.)
H	Ground Clearance - Artic	537 mm	(1 ft. 9 in.)
I	Ground Clearance - Front Axle	488 mm	(1 ft. 7 in.)
M	Tank / Bowser Length	6 030 mm	(19 ft. 9 in.)
N	Maximum Tank Height	3 780 mm	(12 ft. 8 in.)
O	Rear Axle Centre to Bowser / Tank Rear	2 072 mm	(6 ft. 10 in.)
P	Mid Axle Centre to Rear Axle Centre	1 670 mm	(5 ft. 6 in.)
Q	Mid Axle Centre to Front Axle Centre	4 181 mm	(13 ft. 9 in.)
R	Front Axle Centre to Machine Front	2 602 mm	(8 ft. 9 in.)
S	Front Axle Centre to Artic Centre	1 362 mm	(4 ft. 65 in.)
T	Approach Angle	25°	
V	Maximum Articulation Angle	45°	
W	Front Tie Down Height	1 075 mm	(3 ft. 6 in.)
X1	Tank Lifting Centres	8 359 mm	(27 ft. 5 in.)
X2	Front Lifting Centre to Tank Lifting Centre	5 334 mm	(17 ft. 6 in.)
Y	Inner Turning Circle Radius - 23.5R25	4 110 mm	(13 ft. 6 in.)
Z	Outer Turning Circle Radius - 23.5R25	8 000 mm	(26 ft. 3 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.