B25E 6x6 23 000 L Articulated Water Tanker

ENGINE
Manufacturer
Mercedes Benz

Model
OM906LA

Configuration
Inline 6, turbocharged and intercooled.

Net Power
205 kW (275 hp) @ 2 200 rpm in accordance with UN ECE R120

Gross Torque
1 100 Nm (811 lbft)
@ 1 200 -1 600 rpm

Displacement
6,37 litres (389 cu.in)

Auxiliary Brake
Exhaust Valve Brake
Engine Valve Brake

Fuel Tank Capacity
379 litres (100 US gal)

Certification
OM906LA meets EU Stage II/EPA Tier 2 emissions regulations.

TRANSMISSION
Manufacturer
Allison

Model
3500PR ORS

Configuration
Fully automatic planetary transmission with integral retarder.

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
15T

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 dry disc brakes with 8 calipers (4F, 2M, 2R).

Maximum brake force:
184 kN (41 400 lbf)

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

Maximum brake force:
195 kN (43 900 lbf)

Auxiliary Brake
Automatic exhaust valve brake and engine valve brake. Automatic, adjustable, integral, hydrodynamic transmission retarder. Output shaft speed dependant.

Total Retardation Power
250kW (335 hp) Continuous
539 kW (723 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	7 km/h	4 mph
2nd	15 km/h	9 mph
3rd	23 km/h	14 mph
4th	35 km/h	22 mph
5th	47 km/h	29 mph
6th	50 km/h	31 mph
R	7 km/h	4 mph

WATER TANK
Tank capacity
23 000 Litres

WATER TANKER PLUMBING
Centrifugal water pump

Rate of Flow
Standard:
1 800 L/min with 50 m head

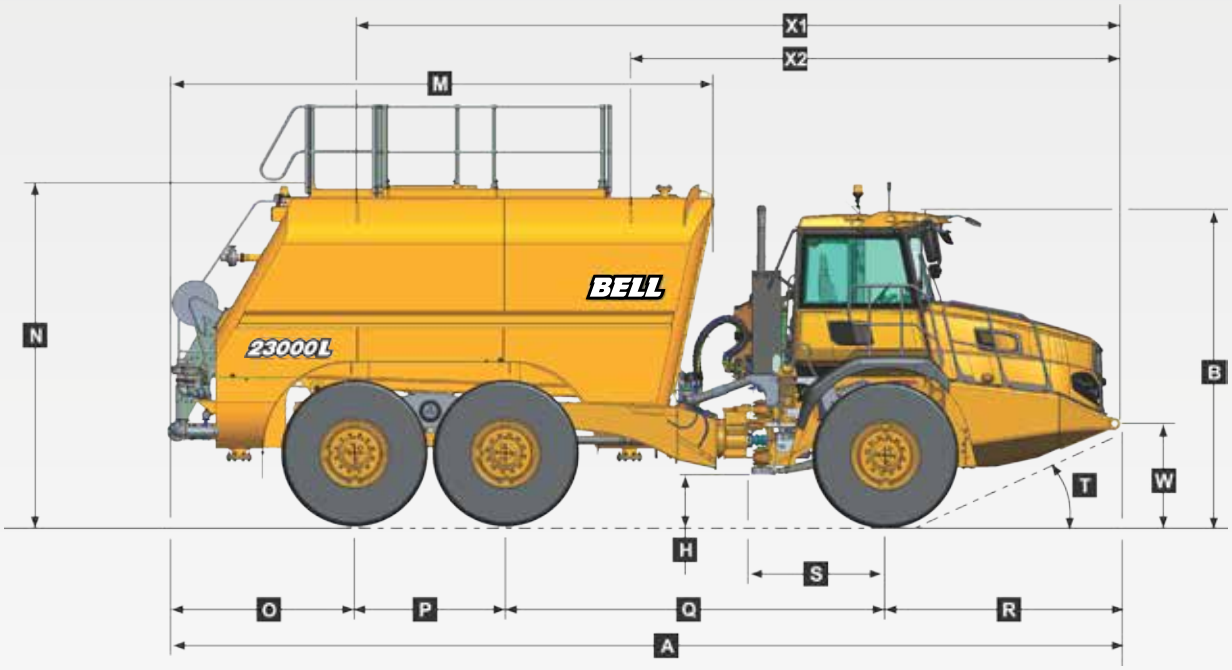
Option:
5 400 L/min with 70 m head

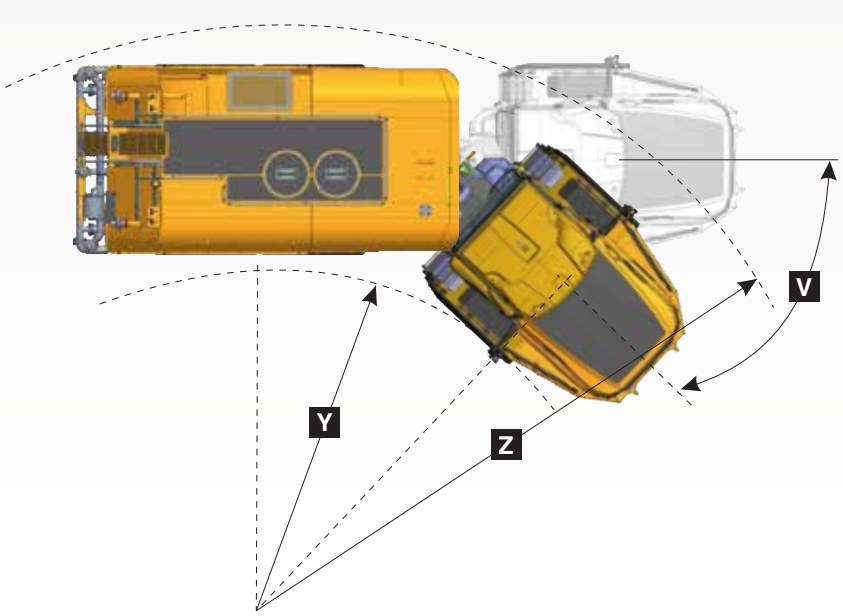
CAB
ROPS/FOPS certified 72 dBA internal sound level measured according to ISO 6396.

Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE		LOAD CAPACITY	
UNLADEN		LADEN (No sinkage/Total Contact Area Method)			
	kg (lb)	23.5 R 25	kPa (Psi)	Rated Payload	23 000 litres
Total	20 728 (45 697)	Front	267 (38,7)		(6 000 gallons)
		Middle/Rear	357 (51,8)		
LADEN					
	kg (lb)	Calculation method used by competition			
Front	12 372 (27 276)	Front	131 (19)		
Middle	16 198 (35 710)	Middle/Rear	155 (22,5)		
Rear	16 158 (35 622)				
Total	44 728 (98 608)				

Dimensions





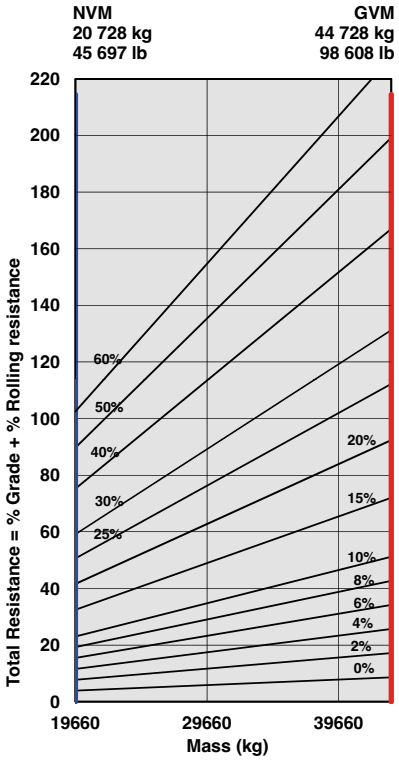
Machine Dimensions

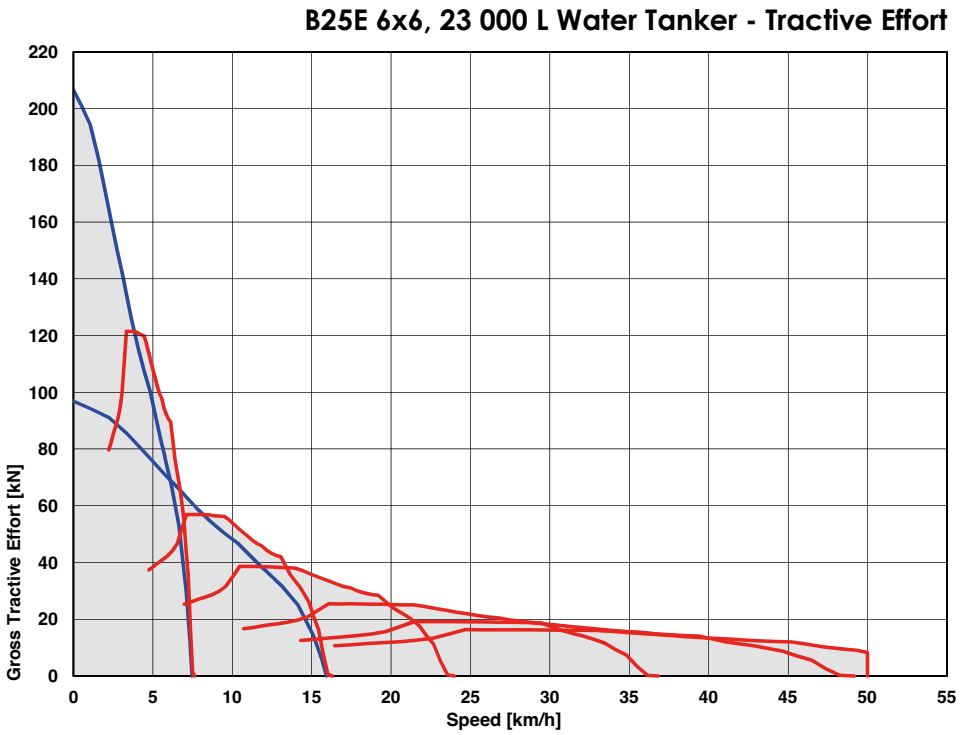
A	Length - Transport Position	10355 mm	(34 ft. 6 in.)
B	Height - Transport Position	3 436 mm	(11 ft. 3 in.)
C	Width over Mudguards	2 985 mm	(9 ft. 6 in.)
D	Width over Tyres - 23.5R25	2 940 mm	(9 ft. 8 in.)
E	Tyre Track Width - 23.5R25	2 356 mm	(7 ft. 9 in.)
F	Width over Tank / Bowser	2 855 mm	(9 ft. 4 in.)
F	Width over Tank / Bowser (with hose)	3 005 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	6 020 mm	(19 ft. 9 in.)
N	Maximum Tank Height	3 510 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

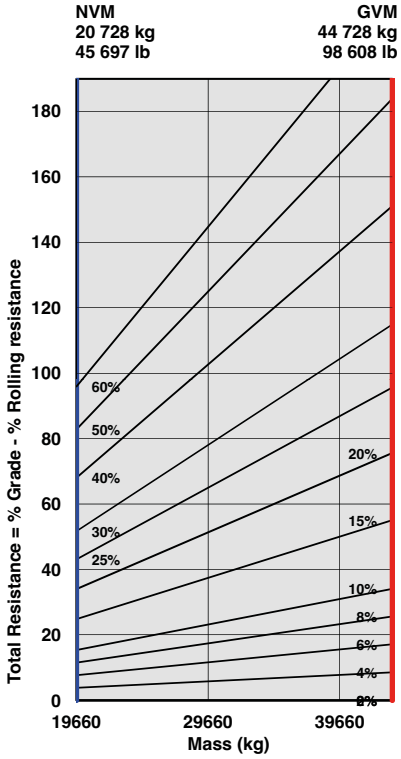
1. Determine tractive resistance by finding intersection of vehicle mass line and grade line. NOTE: 2% typical rolling resistance is already assumed in chart and grade line.
2. From this intersection, move straight right across charts until line intersects rimpull curve.
3. Read down from this point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

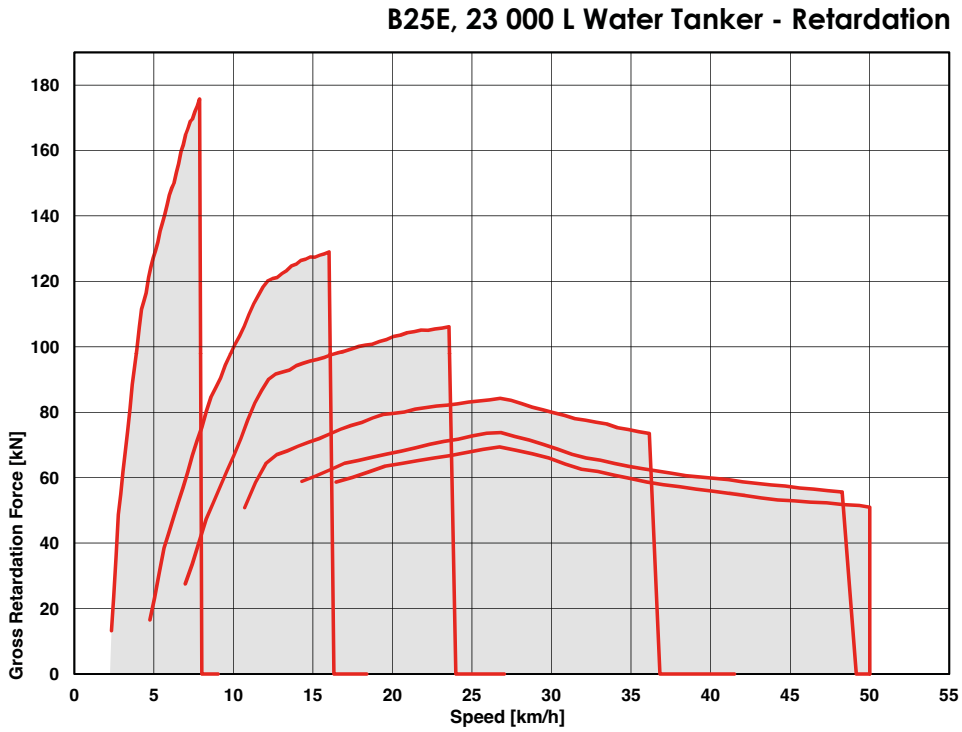




Retardation

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.





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

- 30m hose reel
- 1.5" 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 between 250 and 700 GPM
- Remotely controlled via a joystick inside the cab
- High quality components built to last in heavy duty applications

MANUAL WATER CANNON

- Long range spray nozzle
- High quality components built to last in heavy duty applications

Features and Options

● STANDARD ▲ OPTION

16 000 L	18 000 L	23 000 L	27 000 L	35 000 L	38 000 L	45 000 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
▲	▲	▲	▲	●	●	●	Halogen artic reverse light
▲	▲	▲	▲	▲	▲	▲	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	18 000 L	23 000 L	27 000 L	35 000 L	38 000 L	45 000 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 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
▲	▲	▲	▲	▲	▲	▲	Manual water canon
▲	▲	▲	▲	▲	▲	▲	Remote control water canon
▲	▲	▲	▲	▲	▲	▲	Hose reel
							OTHER
	●						20.5 R 25 Radial earthmover tyres
●		●	●				23.5 R 25 tyres
▲							620/75 R26 tyres
				●	●	▲	29.5 R 25 Radial Earthmover tyres
				▲	▲	●	875/65 R 29 Radial Earthmover tyres
●			●				Remote grease banks
▲	▲	▲	▲	▲	▲	▲	Automatic greasing
●	●	●	●	●	●	●	Cab peak
▲	▲	▲	▲	▲	▲	▲	High pressure hydraulic filter
▲	▲	▲	▲	▲	▲	▲	Fuel heater
●	●	●	●	●	●	●	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.