

# B30E 4x4 Articulated Dump Truck



## ENGINE

**Manufacturer**  
Mercedes Benz

**Model**  
OM936LA

**Configuration**  
Inline 6, turbocharged and intercooled

**Maximum net power**  
348 hp (260 kW) @ 1,800 rpm in accordance with UN ECE R120

**Gross Torque**  
1,069 lbft (1,450 Nm) @ 1,200-1,800 rpm

**Displacement**  
469 cu.in (7.7 liters)

**Auxiliary Brake**  
Jacobs Engine Brake®

**Fuel Tank Capacity**  
79.78 US gal (302 liters)

**AdBlue® Tank Capacity**  
8.2 US gal (31 liters)

**Certification**  
OM936LA meets EPA Tier 4 final / EU Stage V emissions regulations

## TRANSMISSION

**Manufacturer**  
Allison

**Model**  
3400 P 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**  
Front: Bell 18T  
Rear: Bell 36T

**Front 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 rear axles. Wet brake oil is circulated through a filtration and cooling system.

Maximum brake force:  
63,859 lbf (284 kN)

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

Maximum brake force:  
89,000 lbf (396 kN)

**Auxiliary Brake**  
Jacobs Engine Brake®.  
Automatic retardation through

electronic activation of wet brake system.

**Total Retardation Power**  
Continuous: 445 hp (332 kW)  
Maximum: 969 hp (723 kW)

## WHEELS

**Type**  
Radial Earthmover

**Tire**  
Front: 23.5 R25  
Rear: 875/65 R29

## FRONT SUSPENSION

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

Optional active dual springrate Comfort Ride suspension available, including height control.

## 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**  
53 gal/min (202 L/min)

**Pressure**  
4,500 psi (310 Bar)

**Filter**  
5 microns

## STEERING SYSTEM

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

**Lock to lock turns**  
4.1

**Steering Angle**  
45°

## DUMPING SYSTEM

Two double-acting, single stage, dump cylinders

**Raise Time**  
12 s

**Lowering Time**  
10 s

**Tipping Angle**  
70° standard, or any lower angle programmable

## PNEUMATIC SYSTEM

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

**System Pressure**  
117 psi (8.1 Bar)

## ELECTRICAL SYSTEM

**Voltage**  
24 V

**Battery Type**  
Two AGM (Absorption Glass Mat) type

**Battery Capacity**  
2 X 75 Ah

**Alternator Rating**  
28V 100A

## VEHICLE SPEEDS

1st	5 mph	8 km/h
2nd	9 mph	14 km/h
3rd	12 mph	19 km/h
4th	18 mph	29 km/h
5th	26 mph	42 km/h
6th	30 mph	49 km/h
R	4 mph	7 km/h

## CAB

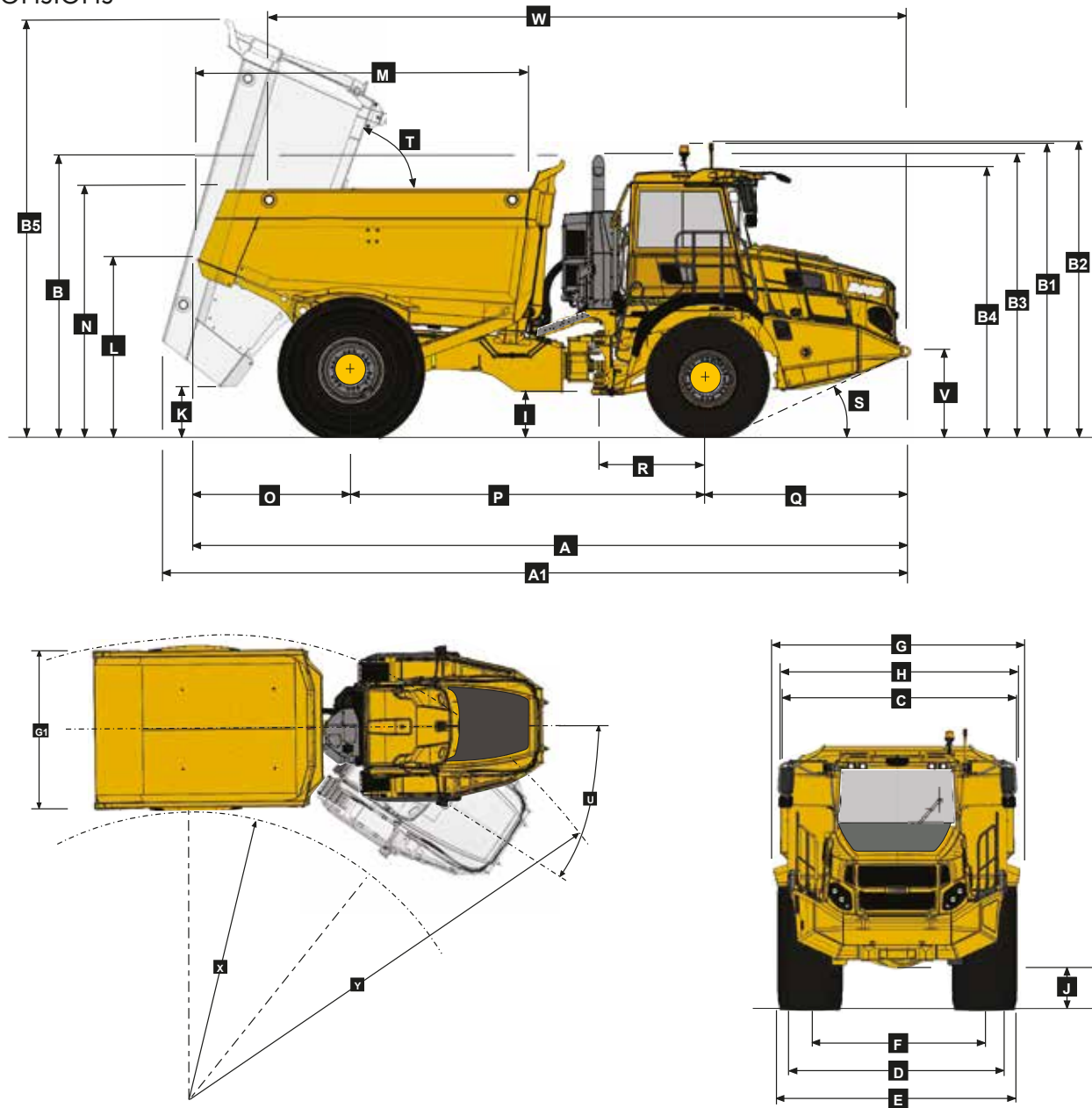
ROPS/FOPS certified 74 dBA internal sound level measured according to ISO 6396.

## Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE		LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	kg (lb)	LADEN-No Sinkage		BODY	m³ (yd³)		kg (lb)
Front	11,499 (25,355)	23.5 R 25	kPa (Psi)	Struck Capacity	15 (19.5)	Bin liner	1,380 (3,042)
Rear	12,127 (26,740)	Front	295 (42.8)	SAE 2:1 Capacity	18.5 (24)	Tailgate	1,051 (2,317)
Total	23,626 (52,095)			SAE 1:1 Capacity	21.5 (28)		
		875/65 R 29	kPa (Psi)	SAE 2:1 Capacity		EXTRA WHEELSET	
LADEN		Rear	442 (64)	with Tailgate	19.5 (25.5)	23.5 R25	544 (1,199)
Front	13,951 (30,762)					875/65 R29	1,338 (2,950)
Rear	37,675 (83,073)			Rated Payload	28,000 kg		
Total	51,626 (113,835)				(61,729 lbs)		

\* including additional equipment (tailgate)

## Dimensions



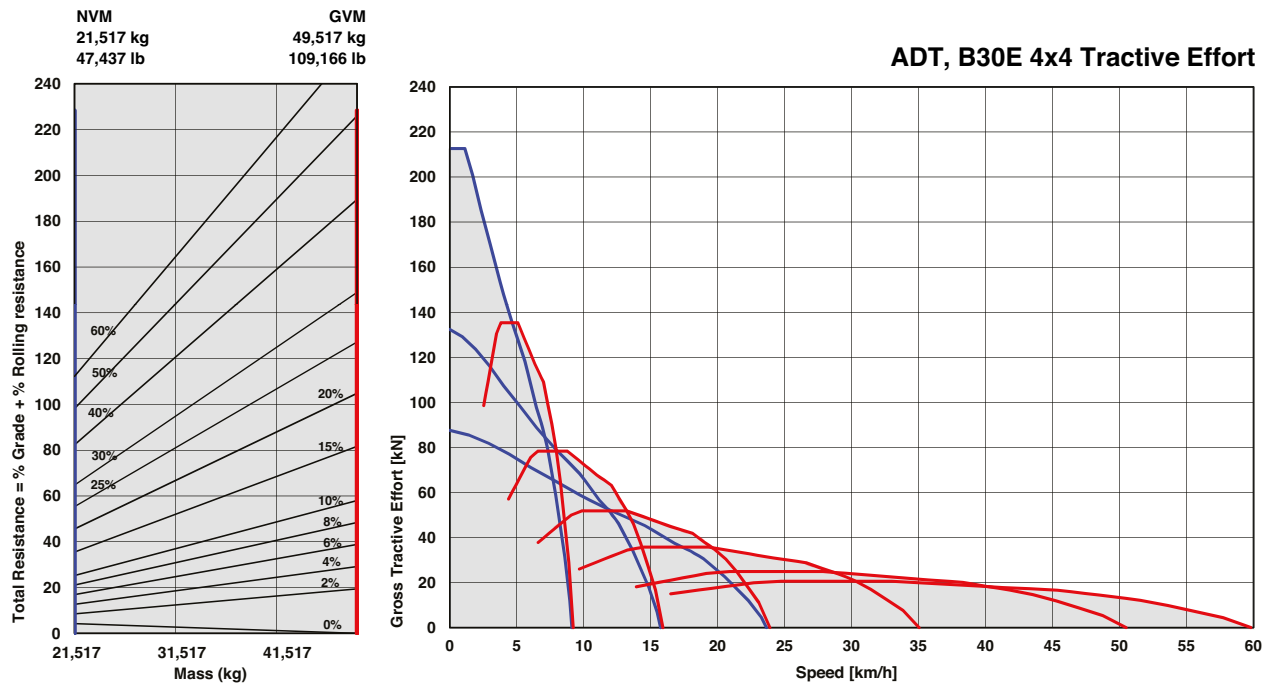
### Machine Dimensions

A	Length - Transport Position	9,122 mm	(29.11 ft.)	J	Ground Clearance - Front Axle	480 mm	(18.9 in.)
A1	Length - Bin Fully Tipped	9,709 mm	(31.10 ft.)	K	Ground Clearance - Bin Fully Tipped	444mm	(17.5 in.)
B	Height - Transport Position (no exhaust stack)	3,548 mm	(11.8 ft.)	L	Bin Lip Height - Transport Position	2,331 mm	(7.8 ft.)
B1	Height - Rotating Beacon	3,718 mm	(12.2 ft.)	M	Bin Length	4,271 mm	(14.00 ft.)
B2	Height - Load Light	3,740 mm	(12.3 ft.)	N	Load over Height	3,207 mm	(10.6 ft.)
B3	Height - Exhaust Stack	3,605 mm	(11.10 ft.)	O	Rear Axle Center to Bin Rear	1,957 mm	(6.5 ft.)
B4	Height - Cab	3,418 mm	(11.3 ft.)	P	Rear Axle Center to Front Axle Center	4,560 mm	(14.12 ft.)
B5	Bin Height - Fully Tipped	5,310 mm	(17.5 ft.)	Q	Front Axle Center to Machine Front	2,605 mm	(8.7 ft.)
C	Width Over Mudguards	2,985 mm	(9.10 ft.)	R	Front Axle Center to Artic Center	1,360 mm	(4.6 ft.)
D	Width Over Tires - Front - 875/65 R29	2,998 mm	(9.10 ft.)	S	Approach Angle	25 °	
E	Width Over Tires - Rear - 875/65 R29	3,270 mm	(10.9 ft.)	T	Maximum Bin Tip Angle	70 °	
F	Tire Track Width - Front	2,390 mm	(7.10 ft.)	U	Maximum Articulation Angle	45 °	
F	Tire Track Width - Rear	2,386 mm	(7.10 ft.)	V	Front Tie Down Height	1,040 mm	(3.5 ft.)
G	Width over Bin	3,383 mm	(11.2 ft.)	W	Machine Lifting Centers	8,126 mm	(26.8 ft.)
G1	Width over Tailgate	3,480 mm	(11.5 ft.)	X	Inner Turning Circle Radius	3,488 mm	(11.5 ft.)
H	Width over Mirrors - Operating Position	3,260 mm	(10.9 ft.)	Y	Outer Turning Circle Radius	7,385 mm	(24.3 ft.)
I	Ground Clearance - Artic	539 mm	(21.22 in.)				

# B30E 4x4

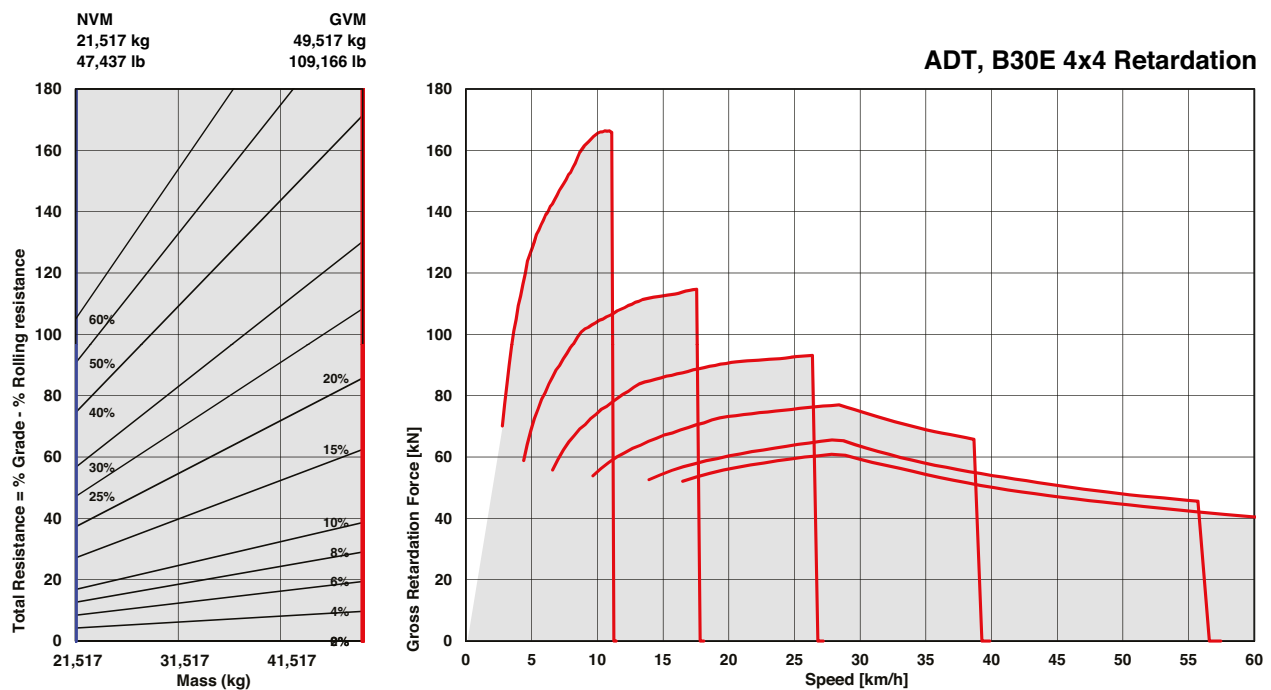
## Gradeability/Rimpull

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.



B30E 4x4	B45E 4x4	B60E 4x4	
<b>ENGINE</b>			
●	●	●	Jacobs Engine Brake®
●	●	●	Dual element air cleaner with dust ejector valve
●	●	●	Pre-cleaner with automatic dust scavenging
●	●	●	Water separator
●	●	●	Serpentine drive belt with automatic tensioner
●	●	●	Provision for fast fill
	●	●	Wet-sleeve cylinder liners
<b>COOLING</b>			
●	●	●	Crankshaft mounted electronically controlled viscous fan drive
●	●	●	Fan guard
<b>PNEUMATIC SYSTEM</b>			
●	●	●	Engine-mounted compressor
●	●	●	Air drier with heater
●	●	●	Integral unloader valve
<b>ELECTRICAL SYSTEM</b>			
●	●	●	Battery disconnect
●	●	●	Halogen drive lights
	▲	●	LED drive lights
●	●	●	Air horn
●	●	●	Reverse alarm
▲	▲	▲	White noise reverse alarm
●	●	●	Rotating beacon
●	●	●	Pitch roll sensor
▲	▲	●	LED Artic reverse light
●	●	●	Halogen artic reverse lights
●	●	●	LED reverse lights
<b>STEERING SYSTEM</b>			
●	●	●	Bi-directional ground-driven secondary steering pump
<b>CAB</b>			
●	●	●	ROPS/FOPS certification
●	●	●	Tilt cab
●	●	●	Gas strut-supported door
●	●	●	I-Tip programmable dump-body tip settings
●	●	●	HVAC Climate control system
●	●	●	AM/FM radio with Aux + USB
●	●	●	Rear window guard
●	●	●	Wiper/washer with intermittent control
●	●	●	Tilt and telescoping steering wheel
●	●	●	Center-mount air-suspension seat
●	●	●	Halogen work lights
▲	▲	●	LED work lights
▲	▲	▲	Rotating beacon: seat belt installation
▲	▲	▲	Remote engine and machine isolation
●	●	●	Remote battery jump start
●	●	●	Retractable 3 point seat belt
●	●	●	Heated seat
●	●	●	Foldaway trainer seat with retractable seat belt
●	●	●	12-volt power outlet
●	●	●	Cab utility bin (removable)
●	●	●	Cup holder
●	●	●	Cooled/heated lunch box
	▲	●	Heated mirrors

B30E 4x4	B45E 4x4	B60E 4x4	
<b>CAB (continued)</b>			
●	●	●	Electrically adjusted and heated mirrors
●	●	●	Deluxe 10" color 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 / Tip counter /
			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 /
			Dump-body tip limit / Automatic dump-body
			tip settings / Air conditioner/ Heater controls /
			Preselected Speed Control
<b>DUMP BODY</b>			
●	●	●	Dump body mechanical lock
▲	▲	▲	Partial body liner
▲	▲	▲	Tailgate
▲	▲	▲	Body heater
▲	▲	▲	Less dump body and cylinders
	▲	▲	Bin pole lockout
	●	●	Narrow bin body
			Rear wheel mudguards
<b>OTHER</b>			
●	●	●	Automatic Traction Control (ATC)
●	●	●	Wet disc brakes
●	●	●	23.5 R25 Radial Earthmover tires (Front)
	●	●	775/65 R29 Radial Earthmover tires (Front)
	●	●	875/65 R29 Radial Earthmover tires (Front)
	▲	●	26.5 R25 Radial Earthmover tires (Front-optional)
●	●	●	875/65 R29 Radial Earthmover tires (Rear)
	●	●	21.00 R35 Dual (Rear)
	●	●	24.00 R35 Dual (Rear)
●	●	●	Remote grease banks
▲	●	●	Automatic greasing
●	●	●	Onboard weighing
▲	▲	●	Load lights: stack
▲	●	●	Comfort ride suspension (Front)
	●	●	Comfort ride suspension (Rear)
▲	●	●	Reverse camera
●	●	●	Hand rails
●	●	●	Cab peak
●	●	●	High pressure hydraulic filter
▲	▲	▲	Fuel heater
●	●	●	Belly cover
●	●	●	Cross member cover
▲	▲	●	Remote transmission filters
●	●	●	Engine and transmission remote drain-gravity
	▲	▲	Engine and transmission remote drain-scavenge
▲	▲	▲	Window smash button
●	●	●	High visibility mirrors
●	●	●	Fleetm@tic® Classic Package for 5 years
●	●	●	Electronic bonnet opening