

# B30E Articulated Dump Truck



## ENGINE

**Manufacturer**  
Mercedes Benz

**Model**  
OM936LA

**Configuration**  
Inline 6, turbocharged and intercooled

**Gross Power**  
260 kW (348 hp) @ 2,200 rpm

**Net Power**  
250 kW (335 hp) @ 2,200 rpm

**Gross Torque**  
1,450 Nm (1,069 lbft) @  
1,150 - 1,800 rpm

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

**Auxiliary Brake**  
Jacobs Engine Brake®

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

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

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

## TRANSMISSION

**Manufacturer**  
Allison

**Model**  
3400 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**  
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:  
178 kN (40,000 lbf)

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

Maximum brake force:  
214 kN (48,200 lbf)

## Auxiliary Brake

Automatic Jacobs Engine  
Brake®.

Automatic retardation through  
electronic activation of wet  
brake system.

## Total Retardation Power

Continuous: 335 kW (449 hp)  
Maximum: 494 kW (662 hp)

## WHEELS

**Type**  
Radial Earthmover

**Tire**  
23.5 R 25 (750/65 R 25 optional)

## 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°

## DUMPING SYSTEM

Two double-acting, single stage,  
dump cylinders

**Raise Time**  
14.5 s

**Lowering Time**  
7.5 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**  
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**  
28V 80A

## VEHICLE SPEEDS

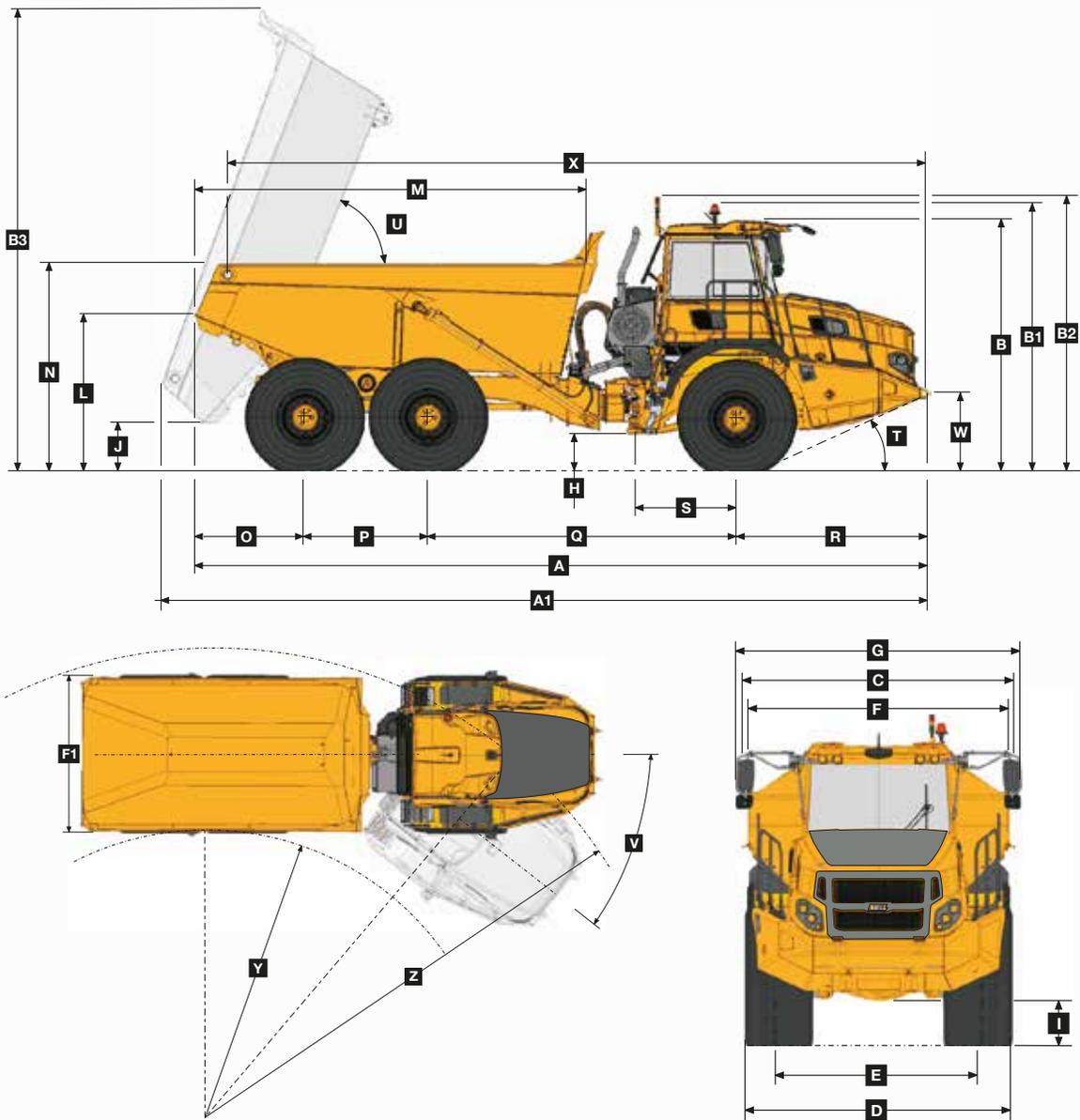
	km/h	mph
1st	7	4
2nd	15	9
3rd	23	14
4th	35	22
5th	47	29
6th	50	31
R	7	4

## CAB

ROPS/FOPS certified 72 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		LADEN-15% sinkage		BODY	m³ (yd³)	kg (lb)	
Front	10,790 (23,788)	23.5 R 25	kPa (Psi)	23.5 R 25	kPa (Psi)	Struck Capacity	14 (18.3)	Bin liner	1,182 (2,606)
Middle	4,990 (11,001)	Front	282 (41)	Front	246 (36)	SAE 2:1 Capacity	17.5 (22.9)	Tailgate	825 (1,818)
Rear	4,530 (9,987)	Middle	380 (55)	Middle	317 (46)	SAE 1:1 Capacity	21 (27.5)	Extra wheelset	565 (1,246)
Total	20,310 (44,779)	Rear	380 (55)	Rear	317 (46)	SAE 2:1 Capacity	18 (23.5)	(23.5 R 25)	
<b>LADEN</b>						with Tailgate			Extra wheelset
Front	13,500 (29,760)	750/65 R 25	kPa (Psi)	750/65 R 25	kPa (Psi)	Rated Payload	28,000 kg (61,729 lbs)	(750/65 R 25)	
Middle	17,405 (38,371)	Front	235 (34)	Front	213 (31)				
Rear	17,365 (38,283)	Middle	310 (45)	Middle	274 (40)				
Total	48,310 (106,505)	Rear	310 (45)	Rear	274 (40)				

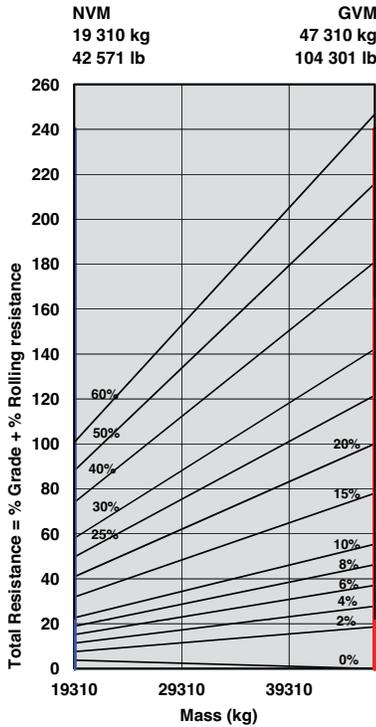


**Machine Dimensions**

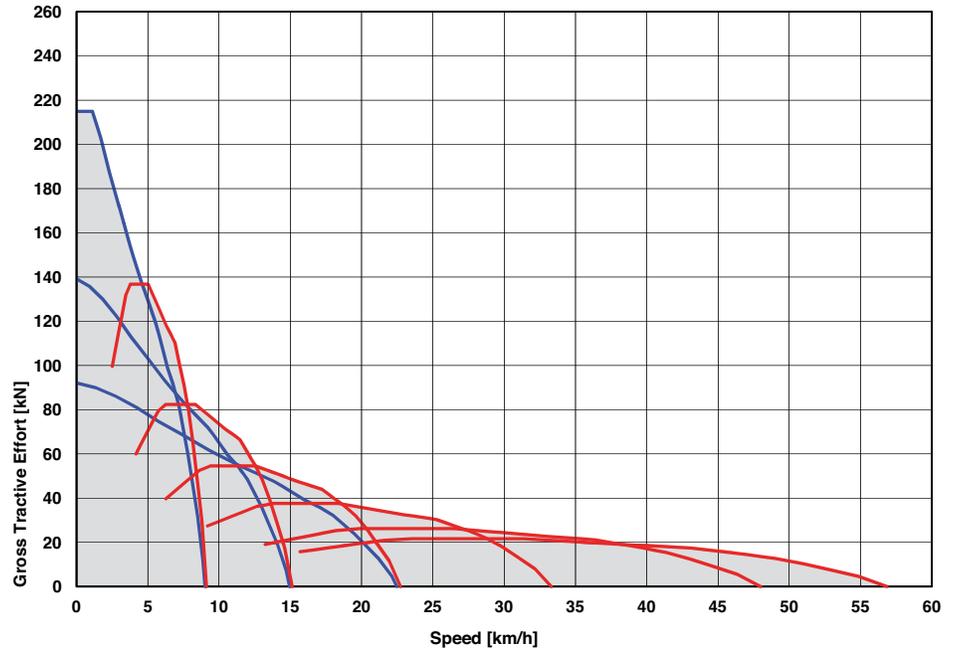
A	Length - Transport Position	9,953 mm (32 ft. 7 in.)	L	Bin Lip Height - Transport Position	2,176 mm (7 ft. 1 in.)
A1	Length - Bin Fully Tipped	10,395 mm (34 ft. 1 in.)	M	Bin Length	5,294 mm (17 ft. 4 in.)
B	Height - Transport Position	3,426 mm (11 ft. 2 in.)	N	Load over Height	2,864 mm (9 ft. 4 in.)
B1	Height - Rotating Beacon	3,661 mm (12 ft.)	O	Rear Axle Center to Bin Rear	1,500 mm (4 ft. 11 in.)
B2	Height - Load Light	3,747 mm (12 ft. 3 in.)	P	Mid Axle Center to Rear Axle Center	1,670 mm (5 ft. 5 in.)
B3	Bin Height - Fully Tipped	6,307 mm (20 ft. 8 in.)	Q	Mid Axle Center to Front Axle Center	4,181 mm (13 ft. 8 in.)
C	Width over Mudguards	2,985 mm (9 ft. 9 in.)	R	Front Axle Center to Machine Front	2,602 mm (8 ft. 6 in.)
D	Width over Tires - 23.5 R25	2,940 mm (9 ft. 7 in.)	S	Front Axle Center to Artic Center	1,362 mm (4 ft. 5 in.)
D1	Width over Tires - 750/65 R25	2,998 mm (9 ft. 10 in.)	T	Approach Angle	25°
E	Tire Track Width - 23.5 R25	2,356 mm (7 ft. 8 in.)	U	Maximum Bin Tip Angle	70°
E1	Tire Track Width - 750/65 R25	2,260 mm (7 ft. 4 in.)	V	Maximum Articulation Angle	45°
F	Width over Bin	2,968 mm (9 ft. 8 in.)	W	Front Tie Down Height	1,075 mm (3 ft. 6 in.)
F1	Width over Tailgate	3,268 mm (10 ft. 8 in.)	X	Machine Lifting Centers	9,443 mm (30 ft. 11 in.)
G	Width over Mirrors - Operating Position	3,260 mm (10 ft. 8 in.)	Y	Inner Turning Circle Radius - 23.5 R25	4,110 mm (13 ft. 5 in.)
H	Ground Clearance - Artic	537 mm (21.14 in.)	Y1	Inner Turning Circle Radius - 750/65 R25	4,081 mm (13 ft. 4 in.)
I	Ground Clearance - Front Axle	488 mm (19.21 in.)	Z	Outer Turning Circle Radius - 23.5 R25	8,000 mm (26 ft. 2 in.)
J	Ground Clearance - Bin Fully Tipped	670 mm (26.38 in.)	Z1	Outer Turning Circle Radius - 750/65 R25	8,029 mm (26 ft. 4 in.)
K	Ground Clearance - Under Run Bar	N/A			

# 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.

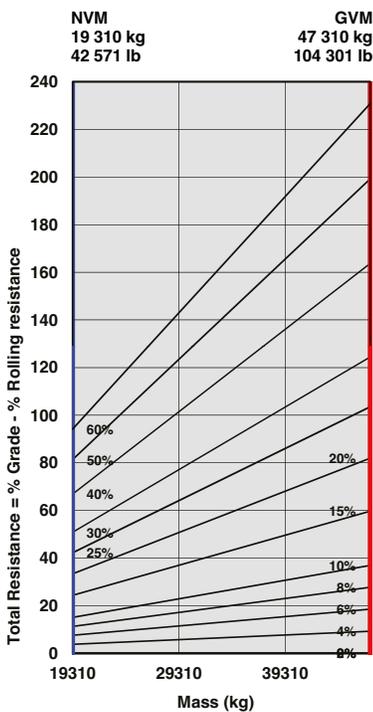


ADT, B30E 6x6, Tier 4f - Tractive Effort



# 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.



ADT, B30E 6X6, Tier 4f - Retardation

