

B45E 4x4 Articulated Dump Truck

ENGINE Manufacturer Mercedes Benz (MTU) Model OM471LA (MTU 6R 1300) Configuration Inline 6, turbocharged and intercooled Maximum Net Power 390 kW (523 hp) at 1 600 rpm in accordance with UN ECE R120 Gross Torque 2 600 Nm (1 917 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 emission level equivalent.	TRANSFER CASE Manufacturer Kessler Series W2400 Layout Remote mounted Gear Layout Three in-line helical gears Output Differential Interaxle 29/71 proportional differential. Automatic inter-axle differential lock.	Automatic retardation through electronic activation of wet brake system. Total Retardation Power Continuous: 442 kW (593 hp) Maximum: 854 kW (1 145 hp)	Lock to lock turns 5,5 Steering Angle 42°																								
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	AXLES Manufacturer Bell Model Front: Bell 30T Rear: Kessler D106 Differential Front: High input controlled traction Differential with spiral bevel gears. Rear: High input limited slip differential with spiral bevel gears. Traction control functionality provided through speed sensors and brake activation. Final Drive Outboard heavy duty planetary on all axles	WHEELS Type Radial Earthmover Tyre Front: 775/65 R 29 (26.5 R 25 optional) Rear: 21.00 R 35 Dual FRONT SUSPENSION Semi-independent, leading A-frame supported by hydropneumatic suspension struts. Optional: Active dual springrate Comfort Ride suspension, including height control.	DUMPING SYSTEM Two double-acting, two stage telescopic, dump cylinders Raise Time 18 s Lowering Time 16,5 s Tipping Angle 55° standard, or any lower angle programmable																								
	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: 352 kN (79 132 lbf) Park & Emergency Spring applied, air released driveline mounted disc Maximum brake force: 426 kN (95 768 lbf) Auxiliary Brake Jacobs Engine Brake®	REAR SUSPENSION Trailing arm cradle supported by hydro-pneumatic suspension struts, with an additional lateral stabiliser. 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 300 L/min (79 gal/min) Pressure 280 Bar (4 060 psi) Filter 5 microns STEERING SYSTEM Double acting cylinders, with ground-driven emergency steering pump.	PNEUMATIC SYSTEM Air drier with heater and integral unloader valve, serving park brake and auxiliary functions. System Pressure 8,1 Bar (117 psi) 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 <table><tr><td>1st</td><td>3,5 km/h</td><td>2,1 mph</td></tr><tr><td>2nd</td><td>8 km/h</td><td>5 mph</td></tr><tr><td>3rd</td><td>15 km/h</td><td>9 mph</td></tr><tr><td>4th</td><td>21 km/h</td><td>13 mph</td></tr><tr><td>5th</td><td>31 km/h</td><td>19 mph</td></tr><tr><td>6th</td><td>42 km/h</td><td>26 mph</td></tr><tr><td>7th</td><td>48 km/h</td><td>30 mph</td></tr><tr><td>R</td><td>6 km/h</td><td>3,7 mph</td></tr></table> CAB ROPS/FOPS certified 77 dBA internal sound pressure measured according to ISO 6396.	1st	3,5 km/h	2,1 mph	2nd	8 km/h	5 mph	3rd	15 km/h	9 mph	4th	21 km/h	13 mph	5th	31 km/h	19 mph	6th	42 km/h	26 mph	7th	48 km/h	30 mph	R	6 km/h	3,7 mph
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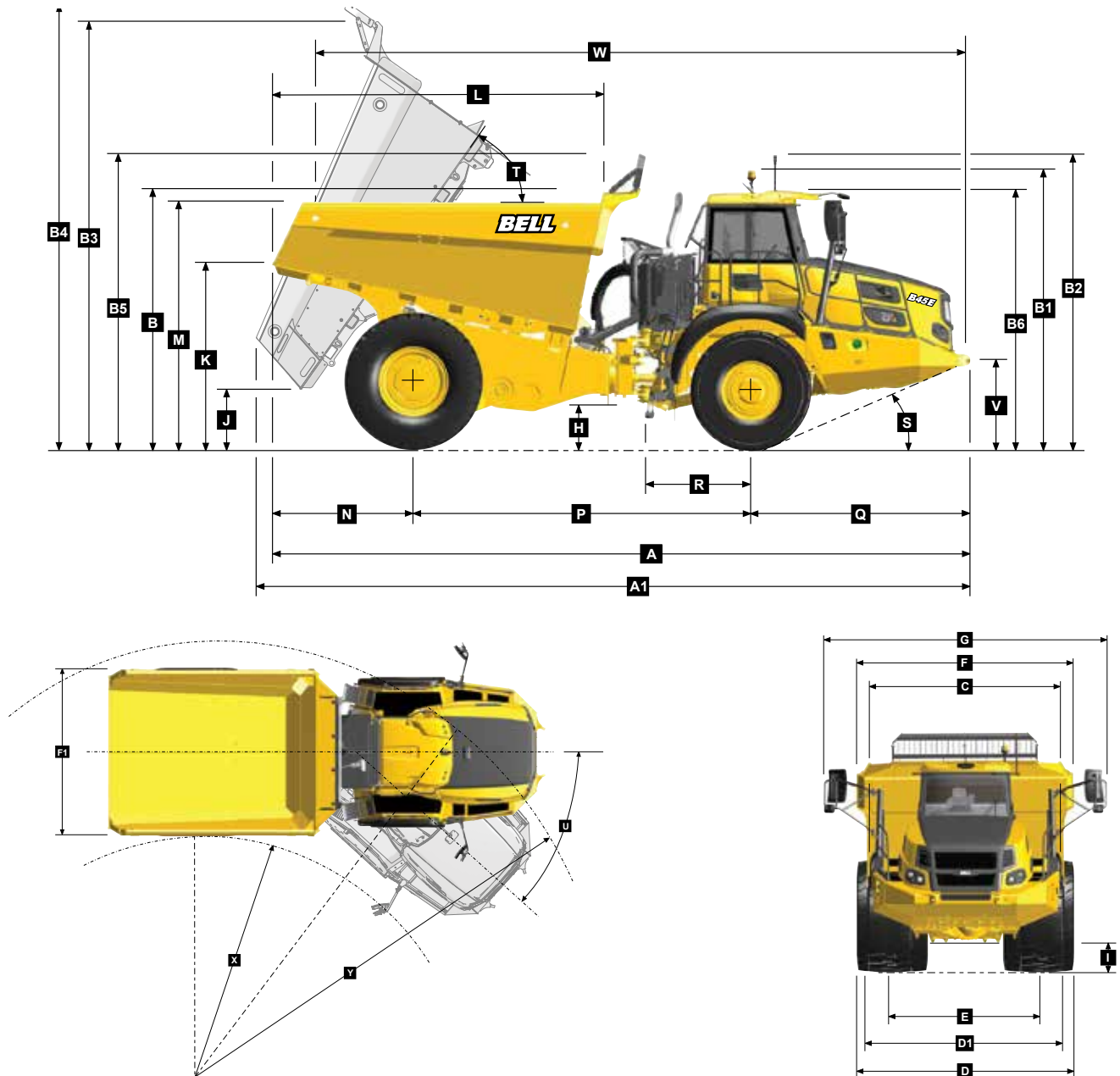
Load Capacity & Ground Pressure

OPERATING WEIGHTS*		GROUND PRESSURE		LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	kg (lb)	LADEN		BODY	m³ (yd³)		kg (lb)
Front	17 803 (39 249)	No Sinkage/Total Contact Area		Struck Capacity	19,5 (25.5)	Bin liner	1 022 (2 253)
Rear	15 162 (33 426)	775/65 R29	kPa (Psi)	SAE 2:1 Capacity	25 (32.7)	Tailgate	1 373 (3 026)
Total	32 964 (72 675)	Front	297 (43,1)	SAE 1:1 Capacity	29,5 (38.6)		
				SAE 2:1 Capacity		EXTRA WHEELSET	
LADEN		21.00 R35	kPa (Psi)	with Tailgate	26 (34)	775/65 R29	888 (1 958)
Front	23 362 (51 504)	Rear	405 (58,7)			21.00 R35	1 012 (2 231)
Rear	50 603 (111 561)			Rated Payload	41 000 kg		
Total	73 964 (163 065)				(90 390 lbs)		

* including additional equipment (tailgate)

B45E Narrow 4x4

Dimensions

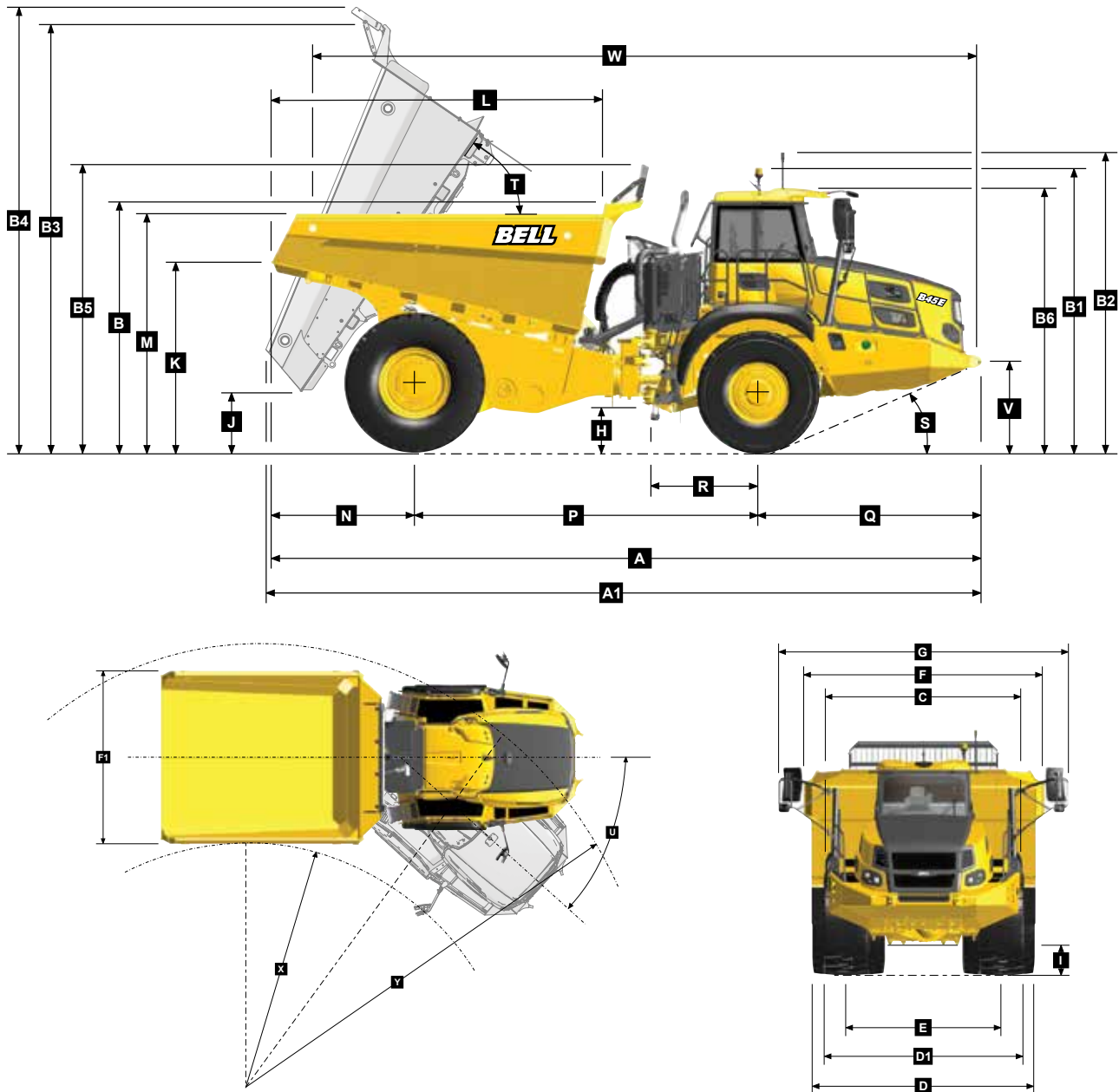


Machine Dimensions

A	Length - Transport Position with Tailgate	10 352 mm (33 ft. 12 in.)	F1	Width over Tailgate	4 275 mm (14 ft.)
A	Length - Transport Position w/o Tailgate	10 336 mm (33 ft. 11 in.)	G	Width over Mirrors - Operating Position	5 184 mm (17 ft.)
A1	Length - Bin Fully Tipped	10 576 mm (34 ft. 8 in.)	H	Ground Clearance - Artic	545 mm (21,5 in.)
B	Height - Transport Position w/o Rock Guard	3 874 mm (12 ft. 9 in.)	I	Ground Clearance - Front Axle	543 mm (21,4 in.)
B	Height - Transport Position with Rock Guard	4 374 mm (14 ft. 4 in.)	J	Ground Clearance - Bin Fully Tipped	879 mm (34,6 in.)
B1	Height - Rotating Beacon	4 038 mm (13 ft. 3 in.)	K	Bin Lip Height - Transport Position	2 618 mm (8 ft. 7 in.)
B2	Height - Load Light	4 127 mm (13 ft. 6 in.)	L	Bin Length	4 913 mm (16 ft. 1 in.)
B3	Bin Height - Fully Tipped w/o Rock Guard	6 327 mm (20 ft. 9 in.)	M	Load over Height	3 671 mm (12 ft.)
B4	Bin Height - Fully Tipped with Rock Guard	6 585 mm (21 ft. 7 in.)	N	Rear Axle Centre to Bin Rear	2 084 mm (6 ft. 10 in.)
B5	Height - Rock Guard Operating Position	4 374 mm (14 ft. 4 in.)	P	Rear Axle Centre to Front Axle Centre	5 000 mm (16 ft. 5 in.)
B6	Height - Cab	3 802 mm (12 ft. 6 in.)	Q	Front Axle Centre to Machine Front	3 256 mm (10 ft. 8 in.)
C	Width over Mudguards	3 603 mm (11 ft. 10 in.)	R	Front Axle Centre to Artic Centre	1 558 mm (5 ft. 1 in.)
D	Width over Front Tyres 775/65R29	3 556 mm (11 ft. 8 in.)	S	Approach Angle	24 °
D1	Width over Front Tyres 26.5R25	3 425 mm (11 ft. 3 in.)	T	Maximum Bin Tip Angle	55 °
D	Width over Rear Tyres 21.00R35	3 960 mm (12 ft. 12 in.)	U	Maximum Articulation Angle	42 °
E	Tyre Track Width Front 775/65R29	2 905 mm (9 ft. 6 in.)	V	Front Tie Down Height	1 262 mm (4 ft. 2 in.)
E1	Tyre Track Width Front 26.5R25	2 793 mm (9 ft. 2 in.)	W	Machine Lifting Centres	9 697 mm (31 ft. 10 in.)
E	Tyre Track Width Rear 21.00R35	2 677 mm (8 ft. 9 in.)	X	Inner Turning Circle Radius	3 956 mm (12 ft. 12 in.)
F	Width over Bin	3 960 mm (12 ft. 12 in.)	Y	Outer Turning Circle Radius	8 655 mm (28 ft. 5 in.)

B45E Wide 4x4

Dimensions

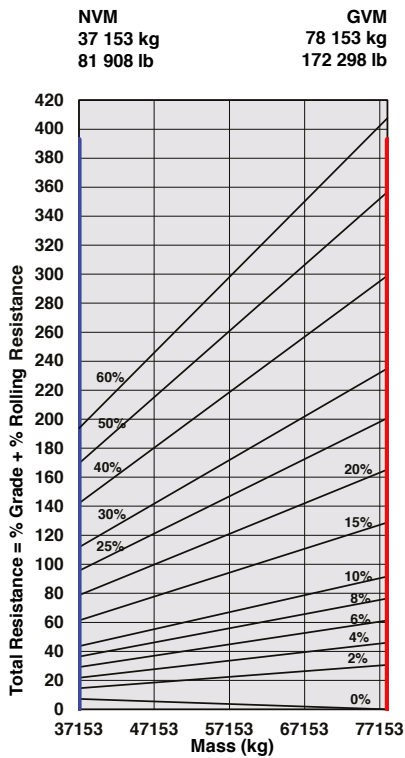


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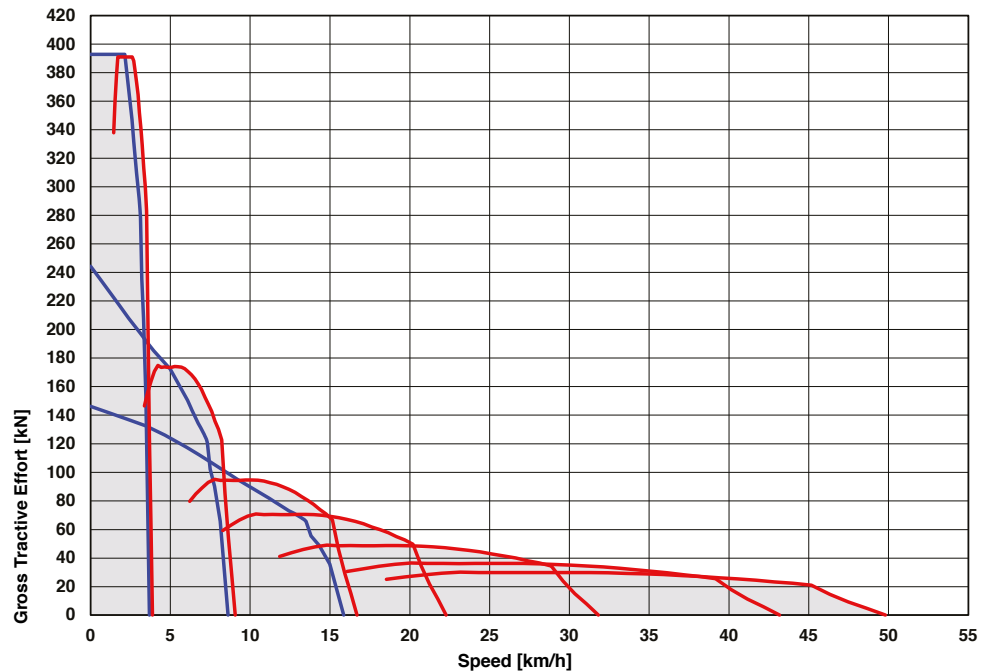
A	Length - Transport Position with Tailgate	10 405 mm (34 ft. 2 in.)	F1	Width over Tailgate	4 639 mm (15 ft. 3 in.)
A	Length - Transport Position w/o Tailgate	10 339 mm (33 ft. 11 in.)	G	Width over Mirrors - Operating Position	5 184 mm (17 ft.)
A1	Length - Bin Fully Tipped	10 427 mm (34 ft. 3 in.)	H	Ground Clearance - Artic	545 mm (21.5 in.)
B	Height - Transport Position w/o Rock Guard	3 703 mm (12 ft. 2 in.)	I	Ground Clearance - Front Axle	543 mm (21.4 in.)
B	Height - Transport Position with Rock Guard	4 176 mm (13 ft. 8 in.)	J	Ground Clearance - Bin Fully Tipped	890 mm (35 in.)
B1	Height - Rotating Beacon	4 038 mm (13 ft. 3 in.)	K	Bin Lip Height - Transport Position	2 630 mm (8 ft. 8 in.)
B2	Height - Load Light	4 127 mm (13 ft. 6 in.)	L	Bin Length	4 833 mm (15 ft. 10 in.)
B3	Bin Height - Fully Tipped w/o Rock Guard	6 228 mm (20 ft. 5 in.)	M	Load over Height	3 485 mm (11 ft. 5 in.)
B4	Bin Height - Fully Tipped with Rock Guard	6 485 mm (21 ft. 3 in.)	N	Rear Axle Centre to Bin Rear	2 084 mm (6 ft. 10 in.)
B5	Height - Rock Guard Operating Position	4 206 mm (13 ft. 10 in.)	P	Rear Axle Centre to Front Axle Centre	5 000 mm (16 ft. 5 in.)
B6	Height - Cab	3 802 mm (12 ft. 6 in.)	Q	Front Axle Centre to Machine Front	3 256 mm (10 ft. 8 in.)
C	Width over Mudguards	4 000 mm (13 ft. 1 in.)	R	Front Axle Centre to Artic Centre	1 558 mm (5 ft. 1 in.)
D	Width over Front Tyres 775/65R29	3 556 mm (11 ft. 8 in.)	S	Approach Angle	24 °
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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.

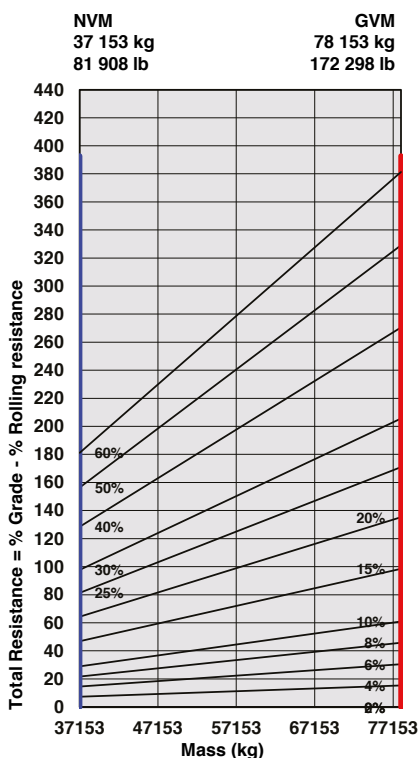


ADT, B45E 4X4 - Tractive Effort

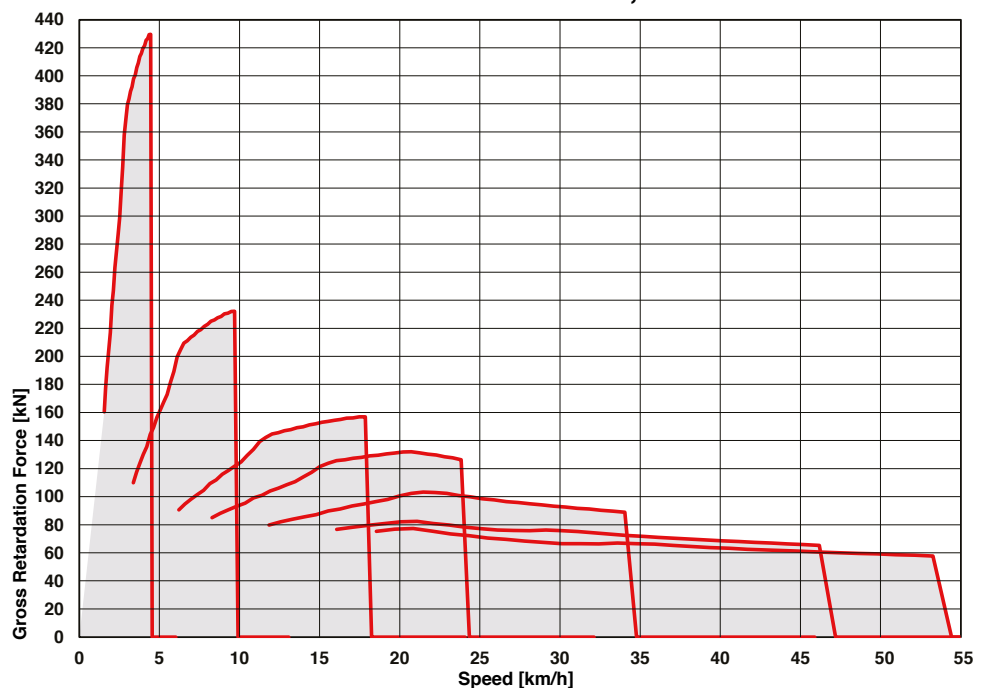


Retardation

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, B45E 4x4 - Retardation



B30E 4x4	B45E 4x4	B60E 4x4		
			ENGINE	
●	●	●	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	
			COOLING	
●	●	●	Crankshaft mounted electronically controlled viscous fan drive	
●	●	●	Fan guard	
			PNEUMATIC SYSTEM	
●	●	●	Engine-mounted compressor	
●	●	●	Air drier with heater	
●	●	●	Integral unloader valve	
			ELECTRICAL SYSTEM	
●	●	●	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	
			STEERING SYSTEM	
●	●	●	Bi-directional ground-driven secondary steering pump	
			CAB	
●	●	●	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	
●	●	●	Manually adjusted mirrors	
▲	▲	▲	Electric adjustable and heated mirrors	
			CAB (continued)	
●	●	●	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	
			DUMP BODY	
●	●	●	Dump body mechanical lock	
▲	▲	▲	Partial body liner	
▲	▲	▲	Tailgate	
▲	▲	▲	Body heater	
	▲	▲	Bin pole lockout	
	▲	▲	Narrow bin body	
	●	●	Rear wheel mudguards	
	▲	▲	Rear wheel bin rock guards	
			OTHER	
●	●	●	Automatic Traction Control (ATC)	
●	●	●	Wet disc brakes	
●			23.5 R25 Radial Earthmover tyres (Front)	
	●		775/65 R29 Radial Earthmover tyres (Front)	
		●	875/65 R29 Radial Earthmover tyres (Front)	
			26.5 R25 Radial Earthmover tyres (Front-optional)	
●			875/65 R29 Radial Earthmover tyres (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)	
	●	●	Hydro-pneumatic 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 2 years	
●	●	●	Electronic bonnet opening	
▲	▲	▲	Engine oil quick drain connector	