

# 2306D

ARTICULATED TRACTOR  
4X4 MKVII



- Gross Power: 170 kW
- Gross Torque: 810 Nm
- Gross Combined Mass: 56 000 kg

**BELL**

# 2306D

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## ENGINE

Configuration	Mercedes Benz OM906LA I-6 with exhaust brake and Engine Valve Brake (EVB)
Aspiration	Turbocharged and intercooled
Cooling System	Liquid cooled with single pass radiator as well as charge air cooler
Gross power	170 kW ( 228 hp) @ 2 200 rpm SAE J1349
Net Power	163 kW (219 hp) @ 2 200 rpm
Gross torque	810 Nm (596 lbf) @ 1 200 - 1 600 rpm SAE J1349
Net Torque	780 Nm (574 lbf) @ 1 200 - 1 600 rpm
Displacement	6,37 litres (389 cu.in)
Fuel tank capacity	198,5 litres (52.4 US gal)

## TRANSMISSION

Layout	ZF 6HP592C with integral retarder Engine mounted box with rear output
Gear layout	Constant meshing planetary gears, clutch operated
Gears	6 Forward, 1 Reverse
Clutch type	Hydraulically operated multi-disc
Control type	Electronic
Torque converter layout	Hydrodynamic, with lock-up in all gears
Vehicle speeds	1st 2nd 3rd 4th 5th 6th R 7.2 11.8 20.1 28.4 40.3 48.6 8.3 km/h 4.5 7.3 12.5 17.6 25 30.2 5.2 mph

## TRANSFER CASE

Output differential	VGR 13 200 Three in-line helical gears. Interaxle 50/50 proportional differential, pneumatically lockable whilst stationary or on the move.
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## AXLES

Differential type	Bell 14T
Final drive type	Spiral bevel type with Limited Slip
Housing type	Outboard heavy duty planetary Steel fabricated

## BRAKING SYSTEM

SERVICE BRAKE	Dual circuit, full hydraulic actuation caliper brakes on all wheels
Maximum brake force	125,62 kN ( 28,241 lbf)
PARK & EMERGENCY	Spring applied, air released driveline-mounted disc.
Maximum brake force	368,42 kN (82,824 lbf)
AUXILIARY BRAKE	Automatic exhaust brake and Engine Valve Brake (EVB)

## WHEELS

Standard Tyre	Size	23.5X25
	Type	SRG
Optional Tyre	Size	620/75R26; Dual 15X34
	Type	Traction

## SUSPENSION

Front type	Semi-independent leading arm type linkages supported by nitrogen/oil struts
Rear type	Rigidly mounted

## 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, loadsensing piston
Application	Steering, hydraulic brake charging
Flow	84 l/min (48.6 US gal/min)
Pressure	25 MPa (3,625 psi)
Filter	10 micron

## PNEUMATIC SYSTEM

System pressure	Air drier with heater and integral unloader valve, serving park brake and auxiliary functions 810 kPa (117 psi)
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## ELECTRICAL SYSTEM

Voltage	24 V
Battery type	Two maintenance free permanently sealed
Battery capacity	2 x 105 Ah (optional 2 extra batteries)
Alternator rating	28 V 80 A

## STEERING SYSTEM

	Hydrostatically actuated by two double acting cylinders, with ground-driven emergency steering pump.
Angle	+ - 45 degrees
Lock to lock turns	4,1

## OPERATING WEIGHTS

Empty:	Front	7 970 kg (17 571 lbs)
	Rear	4 710 kg (10 384 lbs)
	Total	12 680 kg (27 955 lbs)
Laden:	Front	8 200 kg (18 078 lbs)
	Rear	8 830 kg (19 467 lbs)
Gross Vehicle Mass		17 030 kg (37 545 lbs)
Gross Combined Mass		56 000 kg (123 459 lbs)

## STANDARD EQUIPMENT

Cab	ROPS/FOPS certification • Protective rear window guard • Tilt cab for service access • Gas strut supported door • Tinted safety glass • Sliding windows • Rear view mirrors - regular and wide angle • Sun visor • Wiper/washer with intermittent control • Tilt and telescoping steering wheel • Adjustable, air suspension seat with retractable seat belt • Fold-away trainer seat with retractable seat belt • HVAC climate control system with filtered and ducted air • Rotating beacon • 12 V power outlet/12 V cigarette lighter • Ash tray • Drinks holder • Cooled/heated lunch box • Sound insulated to 76 dB(A) to ISO 6396 • Radio/CD • Memory Module • Fleetmatic Satellite Monitoring System
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## MDU Features

	• Operator / Site selected speed control • Tipping counter • Trip timer • Trip distance • Transmission gear selection • Fuel Consumption • Diagnostics • Intermittent wiper timing control • Speedo calibration for alternative tyre sizes • Metric /Imperial unit selection • Warning lights with audible buzzer
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## Gauges

	• Engine coolant temperature • Engine oil pressure • Transmission oil temperature • Fuel • Tachometer • Battery voltage • Hourmeter • Odometer • System air pressure
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## Retarder

	Integral transmission retarder with 6 settings
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## Other

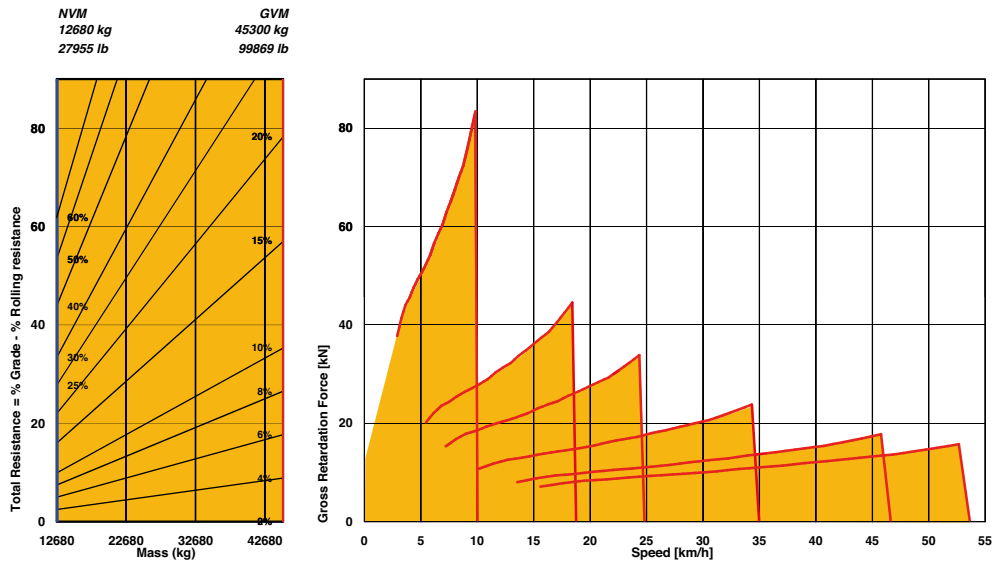
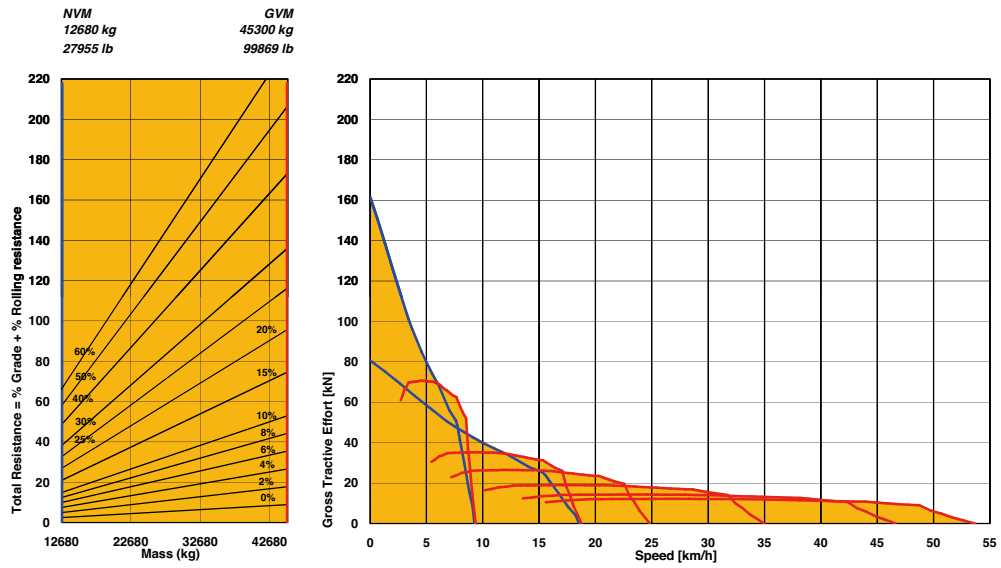
	Ground driven emergency steering Articulation lock
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## OPTIONAL EQUIPMENT

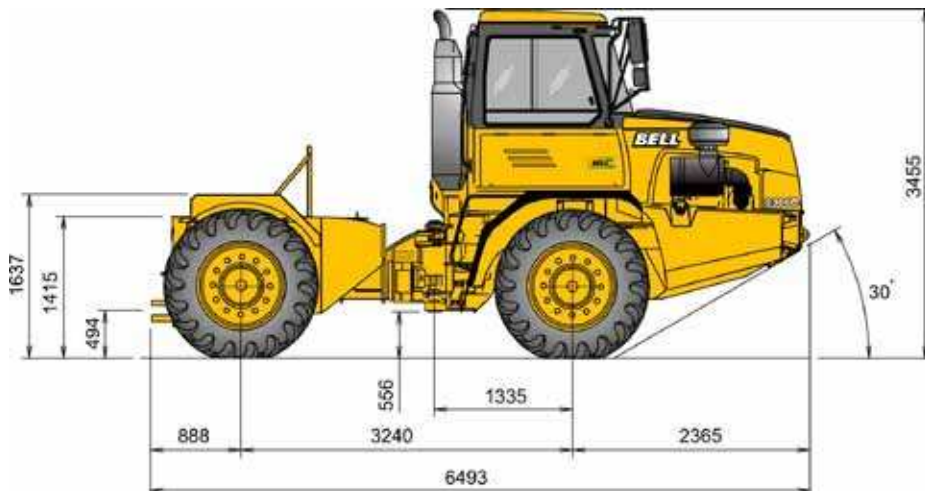
	(Factory or field installed) • On Board Weigh System (OBW) • Electrically adjustable rearview mirrors - one per side • Retractable sun visor • Forward working lights • Artic reverse light • Fuel heater • External windshield visor • Headlight protection grills • Rear window wiper • Antenna mounting bracket • System for reverse camera • Wiggins quick fuelling system • Tyre pressure monitoring • Fleetmatic production packages
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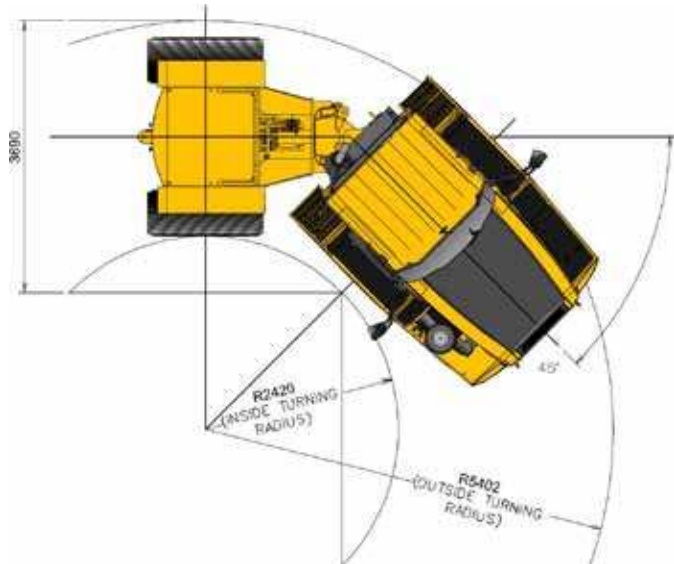
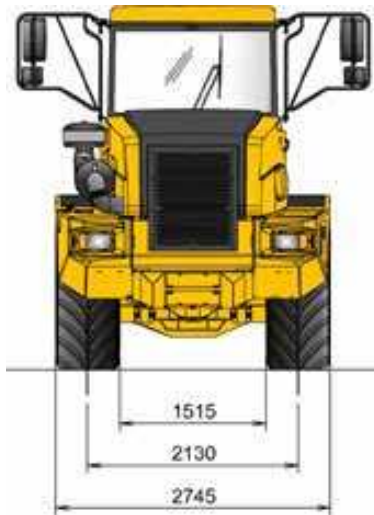
## DRAWBAR PULL GRAPH



## LINE DRAWING




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## Features of Articulated Tractors...


- **VALUE:** Bell tractors are not farm tractor derivatives. They are built from the ground up for trouble free operation and maximum durability in full-time heavy duty construction work.
- **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.


BELL INTERNATIONAL : Tel: +27 (0) 35 907 9431


 Tel: +27 11 928 9700

 Tel: +49 6631 911 30

 Tel: +33 555 89 23 56

 Tel: +34 918 796 019

 Tel: +7 495 647 20 90

 Tel: +44 1283 712 862

E-mail: [sales@bellequipment.com](mailto:sales@bellequipment.com) • [www.bellequipment.com](http://www.bellequipment.com)

All dimensions are shown in millimetres, unless otherwise stated between brackets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. Photographs featured in this brochure may include optional equipment.

**Strong Reliable Machines  
Strong Reliable Support**

**BELL**