B25E Articulated Dump Truck

ENGINE

Manufacturer
Mercedes Benz

Model
OM926LA

Configuration
Inline 6, turbocharged and intercooled.

Maximum 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.

Maximum brake force:
160,5 kN (36 081 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 (750/65 R 25 Optional)

FRONT SUSPENSION

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

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

REAR SUSPENSION

Pivoting walking beams with laminated rubber suspension blocks.

Optional passive dual-springrate Comfort Ride walkingbeam available.

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
202 L/min (53 gal/min)

Pressure
310 Bar (4 500 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
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
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
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

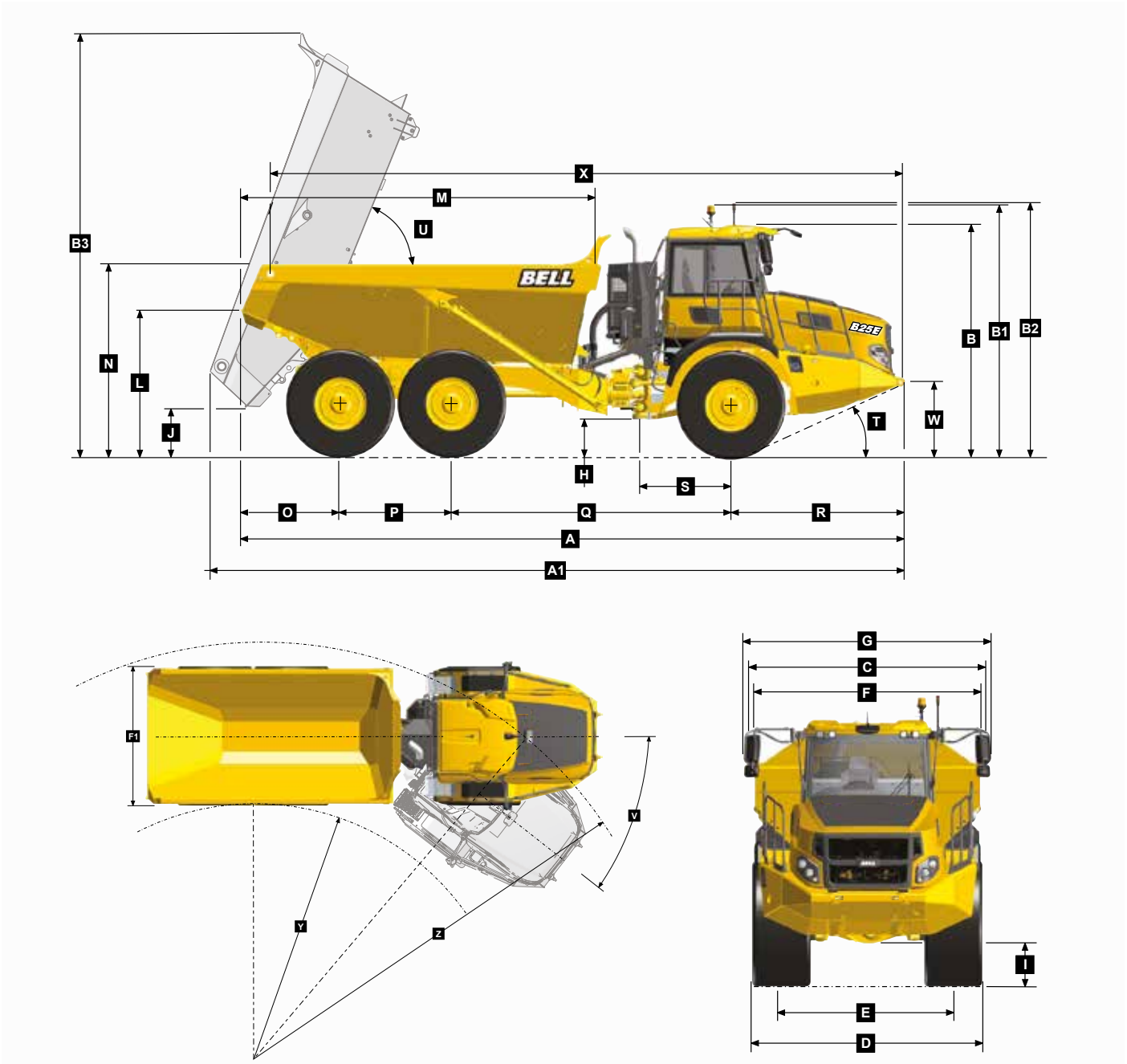
CAB

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

Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE				LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	kg (lb)	LADEN				BODY	m³ (yd³)		kg (lb)
Front	9 832 (21 676)	No sinkage/Total Contact Area (as recommended by tyre manufacturer)		Calculation method used by competition		Struck Capacity	11,5 (15)	Bin liner	751 (1 656)
Middle	4 697 (10 335)					SAE 2:1 Capacity	15 (19,5)	Tailgate	735 (1 621)
Rear	4 657 (10 267)	23.5 R 25	kPa (Psi)	23.5 R 25	kPa (Psi)	SAE 1:1 Capacity	18 (23,5)	Wheelset 750/65R25	
Total	19 186 (42 298)	Front	267 (38,7)	Front	131 (19)	SAE 2:1 Capacity		(per vehicle) Add	642 (1 415)
		Mid/Rear	357 (51,8)	Mid/Rear	155 (22,5)	with tailgate	15 (19,6)		
LADEN	kg (lb)							EXTRA WHEELSET	
Front	12 572 (27 716)	750/65 R 25		750/65 R 25		Rated Payload	24 000 kg	23.5 R 25	
Middle	15 327 (33 790)	Front	229 (33,2)	Front	106 (15,4)		(52 911 lbs)	(per vehicle) Add	544 (1 199)
Rear	15 287 (33 702)	Mid/Rear	270 (39,1)	Mid/Rear	128 (18,6)			750/65R25	
Total	43 186 (95 209)							(per vehicle) Add	656 (1 446)

Dimensions



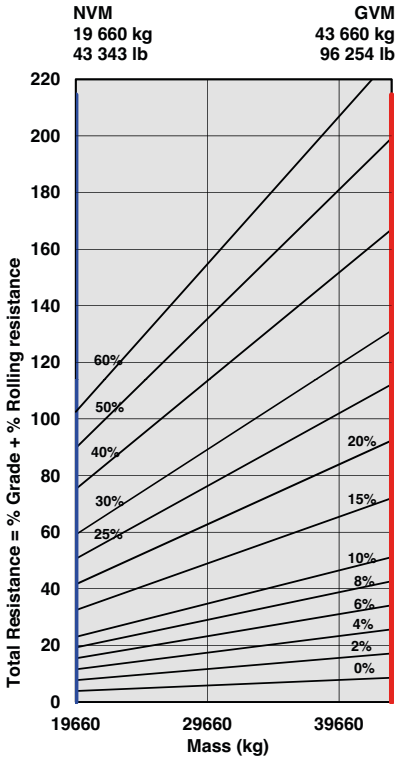
Machine Dimensions

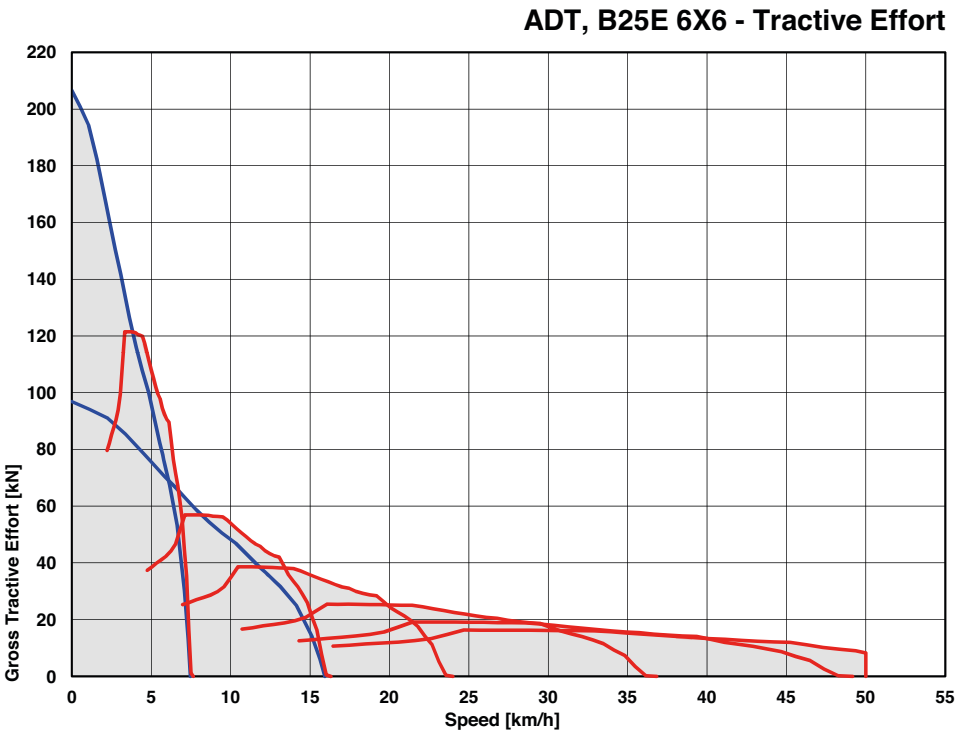
A	Length - Transport Position w/o Tailgate	9 953 mm	(32 ft. 7 in.)
A	Length - Transport Position with Tailgate	10035 mm	(32 ft. 11 in.)
A1	Length - Bin Fully Tipped	10 311 mm	(33 ft. 9 in.)
B	Height - Transport Position S5	3 426 mm	(11 ft. 2 in.)
B	Height - Transport Position S2	3 500 mm	(11 ft. 6 in.)
B1	Height - Rotating Beacon	3 723 mm	(12 ft. 3 in.)
B2	Height - Load Light	3 748 mm	(12 ft. 4 in.)
B3	Bin Height - Fully Tipped	6 258 mm	(20 ft. 6 in.)
C	Width over Mudguards	2 985 mm	(9 ft. 9 in.)
D	Width over Tyres - 23.5R25	2 940 mm	(9 ft. 7 in.)
F	Width over Bin	2 700 mm	(8 ft. 10 in.)
F1	Width over Tailgate	2 998 mm	(9 ft. 10 in.)
G	Width over Mirrors - Operating Position	3 260 mm	(10 ft. 8 in.)
H	Ground Clearance - Artic	537 mm	(21.14 in.)
I	Ground Clearance - Front Axle	488 mm	(19.21 in.)
J	Ground Clearance - Bin Fully Tipped	675 mm	(26.57 in.)

L	Bin Lip Height - Transport Position	2 176 mm	(7 ft. 1 in.)
M	Bin Length	5 272 mm	(17 ft. 3 in.)
N	Load over Height	2 755 mm	(9 ft.)
O	Rear Axle Centre to Bin Rear	1 500 mm	(4 ft. 11 in.)
P	Mid Axle Centre to Rear Axle Centre	1 670 mm	(5 ft. 5 in.)
Q	Mid Axle Centre to Front Axle Centre	4 181 mm	(13 ft. 8 in.)
R	Front Axle Centre to Machine Front	2 602 mm	(8 ft. 6 in.)
S	Front Axle Centre to Artic Centre	1 362 mm	(4 ft. 5 in.)
T	Approach Angle	25 °	
U	Maximum Bin Tip Angle	70 °	
V	Maximum Articulation Angle	45 °	
W	Front Tie Down Height	1 075 mm	(3 ft. 6 in.)
X	Machine Lifting Centres	9 477 mm	(31 ft. 1 in.)
Y	Inner Turning Circle Radius - 23.5R25	4 110 mm	(13 ft. 5 in.)
Z	Outer Turning Circle Radius - 23.5R25	8 000 mm	(26 ft. 2 in.)

Gradeability/Rimpull

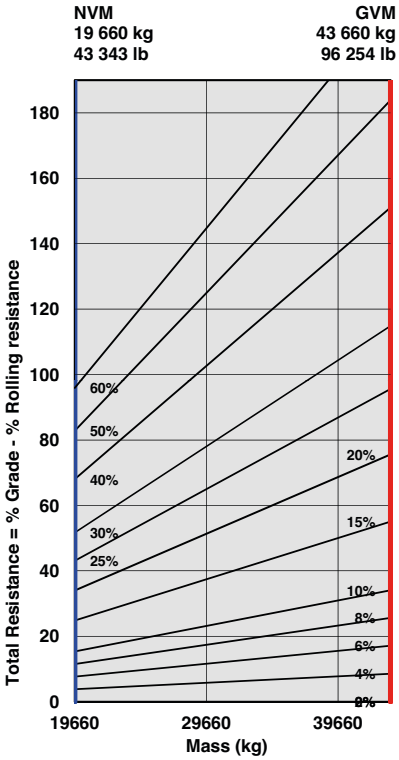
1. Determine tractive resistance by finding intersection of vehicle mass line and grade line. NOTE: 2% typical rolling resistance is already assumed in chart and grade line.
2. From this intersection, move straight right across charts until line intersects rimpull curve.
3. Read down from this point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

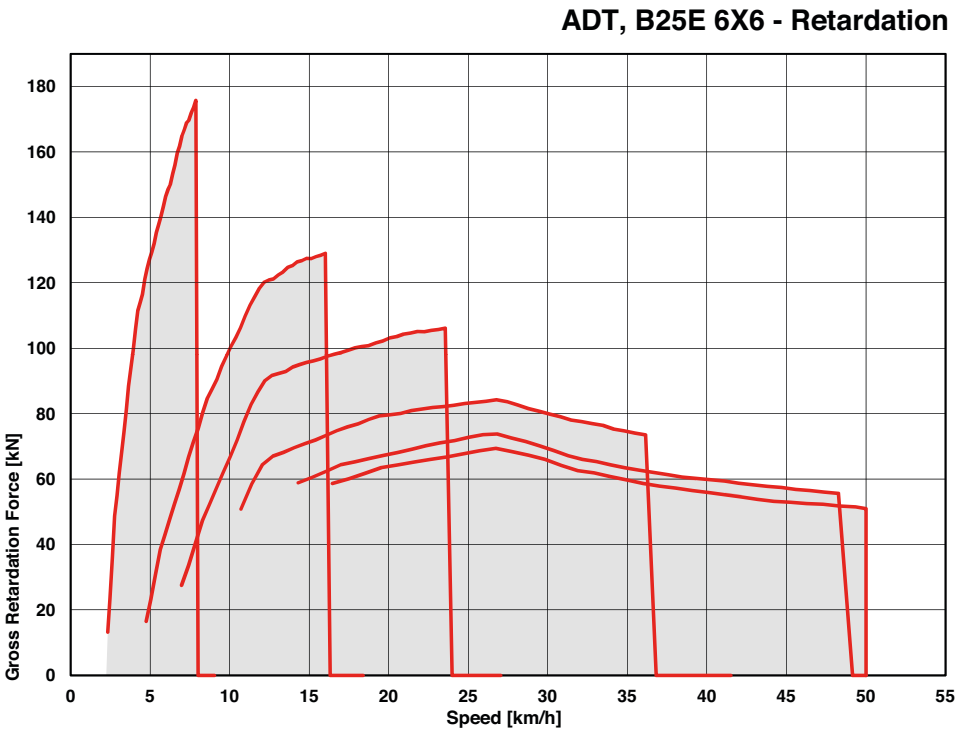




Retardation

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.





Features and Options

● STANDARD ▲ OPTION

B18E	B25E (6x4)	B25E	B30E	
				ENGINE
●	●	●	●	Engine valve brake and exhaust brake
●	●	●	●	Dual element air cleaner with dust ejector valve
●	●	●	●	Precleaner with automatic dust scavenging
●	●	●	●	Water separator
●	●	●	●	Serpentine drive belt with automatic tensioner
				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
●	●	●	●	Drive lights
●	●	●	●	Air horn
●	●	●	●	Reverse alarm
▲	▲	▲	▲	White noise reverse alarm
●	●	●	●	Rotating beacon
●	●	●	●	Pitch Roll sensor
▲	▲	▲	▲	LED Artic reverse light
▲	▲	▲	▲	Halogen Artic reverse light
●	●	●	●	LED reverse light
				STEERING SYSTEM
▲	▲	▲	▲	Bi-directional ground driven secondary steering pump
●	●	●	●	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
▲	▲	▲	▲	Extra wide wiper system
●	●	●	●	Tilt and telescoping steering wheel
●	●	●	●	Centre-mount air-suspension seat
●	●	●	●	Retractable 3-point seat belt
●	●	●	●	Foldaway trainer seat with retractable seat belt
▲	▲	▲	▲	Rotating beacon: seat belt installation
●	●	●	●	Halogen work lights
▲	▲	▲	▲	LED work lights
▲	▲	▲	▲	Remote engine and machine isolation
●	●	●	●	Remote battery jump start

B18E	B25E (6x4)	B25E	B30E	
				CAB (continued)
	▲	▲	▲	High visibility mirrors
●	●	●	●	12-volt power outlet
●	●	●	●	Cup holder
▲	▲	▲	▲	Electric adjustable and heated mirrors
●	●	●	●	Cooled/heated lunch box
●	●	●	●	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 / Airconditioner/Heater controls / Preselected Speed Control
●	●	●	●	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 / Tip counter / Trip timer / Trip distance / Metric/English units / Service codes/diagnostics
				DUMP BODY
●	●	●	●	Partial up dump-body mechanical
▲	▲	●	●	Fully up dump-body mechanical lock
▲	▲	▲	▲	Body liner
▲		▲	▲	Tailgate
		▲	▲	Body heater
			▲	Less dump body and cylinders
		▲	▲	Greedy boards (200 mm)
▲	▲	▲	▲	Triangular bin caps
				OTHER
●	●	●	●	Automatic Traction Control (ATC)
●	●			20.5R25 Radial earthmover tyres
		●	●	23.5R25 Radial earthmover tyres
		▲	▲	750/65R25 Radial earthmover tyres
●	●	●	●	Remote grease banks
▲	▲	▲	▲	Automatic greasing
●	●	●	●	Onboard weighing
▲	▲	▲	▲	Load lights: stack
	▲	▲	▲	Comfort ride suspension (Front)
	▲	▲	▲	Comfort ride suspension (Rear)
▲	▲	▲	▲	Reverse camera
	▲	▲	▲	HSE hand rails
●	●	●	●	Cab peak
▲	▲	▲	▲	High pressure hydraulic filter
▲	▲	▲	▲	Fuel heater
●	●	●	●	Belly cover
	▲	▲	▲	Cross member cover
▲	▲	▲	▲	Remote transmission filters
▲	▲	▲	▲	Window smash button
●	●	●	●	Electronic bonnet opening
▲	▲	▲	▲	Engine oil quick drain connector

**PDS Hardware option*