

B50E Articulated Dump Truck

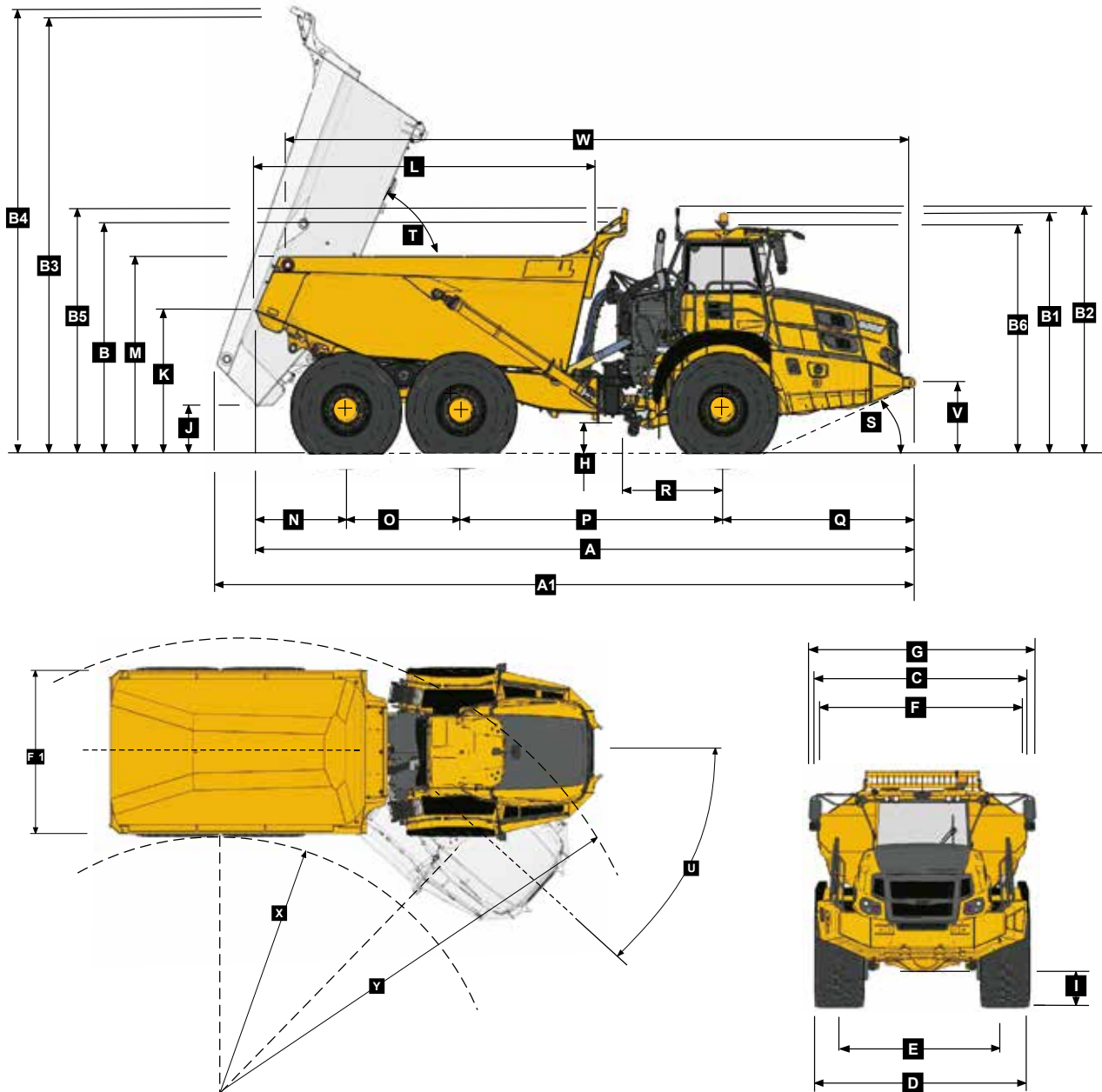
ENGINE	TRANSFER CASE	WHEELS	DUMPING SYSTEM
Manufacturer Mercedes Benz (MTU)	Manufacturer Kessler	Type Radial Earthmover	Two double-acting, single stage, dump cylinders
Model OM473LA (MTU 6R 1500)	Series W2400	Tyre 875/65 R 29 (29.5 R 25 optional)	Raise Time 12,5 seconds
Configuration Inline 6, turbocharged and intercooled	Layout Remote mounted	FRONT SUSPENSION Semi-independent, leading A-frame supported by hydro-pneumatic suspension struts. Active dual springrate Comfort Ride suspension, including height control.	Lowering Time 11,5 seconds
Maximum Net Power 430 kW (577 hp) @ 1 600 rpm in accordance with UN ECE R120	Gear Layout Three in-line helical gears	REAR SUSPENSION Pivoting walking beams with laminated rubber suspension blocks. Optional passive dual-springrate Comfort Ride walkingbeam available.	Tipping Angle 70 deg standard, or any lower angle programmable
Gross Torque 2 850 Nm (2 102 lbf) @ 1 300 rpm	Output Differential Interaxle 29/71 proportional differential. Automatic inter-axle differential lock.	HYDRAULIC SYSTEM Full load sensing system serving the prioritised steering, body tipping, suspension and brake functions. A ground-driven, load sensing emergency steering pump is integrated into the main system.	PNEUMATIC SYSTEM Air drier with heater and integral unloader valve, serving park brake and auxiliary functions
Displacement 15,6 litres (952 cu.in)	AXLES Manufacturer Bell		System Pressure 8,1 Bar (117 psi)
Auxiliary Brake Jacobs Engine Brake®	Model 30T		ELECTRICAL SYSTEM Voltage 24 V
Fuel Tank Capacity 630 litres (166 US gal)	Differential High input controlled traction differential with spiral bevel gears		Battery Type Two AGM (Absorption Glass Mat) type
Certification OM473LA (MTU 6R 1500) is EU Stage IIIA / EPA Tier 3 emission level equivalent	Final Drive Outboard heavy duty planetary on all axles		Battery Capacity 2 X 75 Ah
TRANSMISSION Manufacturer Allison	BRAKING SYSTEM Service Brake Dual circuit, full hydraulic actuation wet disc brakes on front, middle and rear axles. Wet brake oil is circulated through a filtration and cooling system.	Pump Type Variable displacement load sensing piston	Alternator Rating 28 V 100 A
Model 4800 ORS	Maximum brake force: 488 kN (109 707 lbf)	Flow 300 L/min (79 gal/min)	MAX. VEHICLE SPEED
Configuration Fully automatic planetary transmission	Park & Emergency Spring applied, air released driveline mounted disc	Pressure 310 Bar (4 500 psi)	1st 4 km/h 2,5 mph
Layout Engine mounted	Maximum brake force: 215,5 kN (48 446 lbf)	Filter 5 microns	2nd 9 km/h 6 mph
Gear Layout Constant meshing planetary gears, clutch operated	Auxiliary Brake Jacobs Engine Brake®. Automatic retardation through electronic activation of wet brake system.	STEERING SYSTEM Double acting cylinders, with ground-driven emergency steering pump	3rd 17 km/h 11 mph
Gears 7 Forward, 1 reverse	Total Retardation Power Continuous: 546 kW (732 hp) Maximum: 963 kW (1 291 hp)	Lock to lock turns 5,5	4th 23 km/h 14 mph
Clutch Type Hydraulically operated multi-disc		Steering Angle 42°	5th 33 km/h 21 mph
Control Type Electronic			6th 44 km/h 27,3 mph
Torque Control Hydrodynamic with lock-up in all gears			7th 51 km/h 32 mph
			R 7 km/h 4 mph
			CAB ROPS/FOPS certified 77 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	18 554 (40 905)	(No sinkage or Total Contact Area)		Struck Capacity	21,5 (28)	Bin liner	1 495 (3 296)
Middle	8 718 (19 220)	875/65 R29	kPa (Psi)	SAE 2:1 Capacity	27,5 (36)	Tailgate	1 136 (2 505)
Rear	8 613 (18 988)	Front	297 (43,1)	SAE 1:1 Capacity	33 (43)	29.5 R 25	
Total	35 885 (79 113)	Mid & Rear	366 (53,1)	SAE 2:1 Capacity with Tailgate	29 (38)	(per vehicle) Minus	1 334 (2 941)
LADEN						EXTRA WHEELSET	
Front	24 274 (53 515)	29.5 R 25	kPa (Psi)			29.5 R 25	
Middle	28 558 (62 960)	Front	339 (49,2)	Rated Payload	45 400 kg	(per vehicle) Add	516 (1 138)
Rear	28 453 (62 728)	Mid & Rear	381 (55,3)		(100 090 lb)	875/65 R29	
Total	81 285 (179 203)					(per vehicle) Add	1 338 (2 950)

* Includes additional equipment. * 29.5R25 Groundpressures calculated with Michelin XADN+ Tyre. 875/65 R29 Groundpressures calculated with Michelin XAD65-1 Tyre.

Dimensions

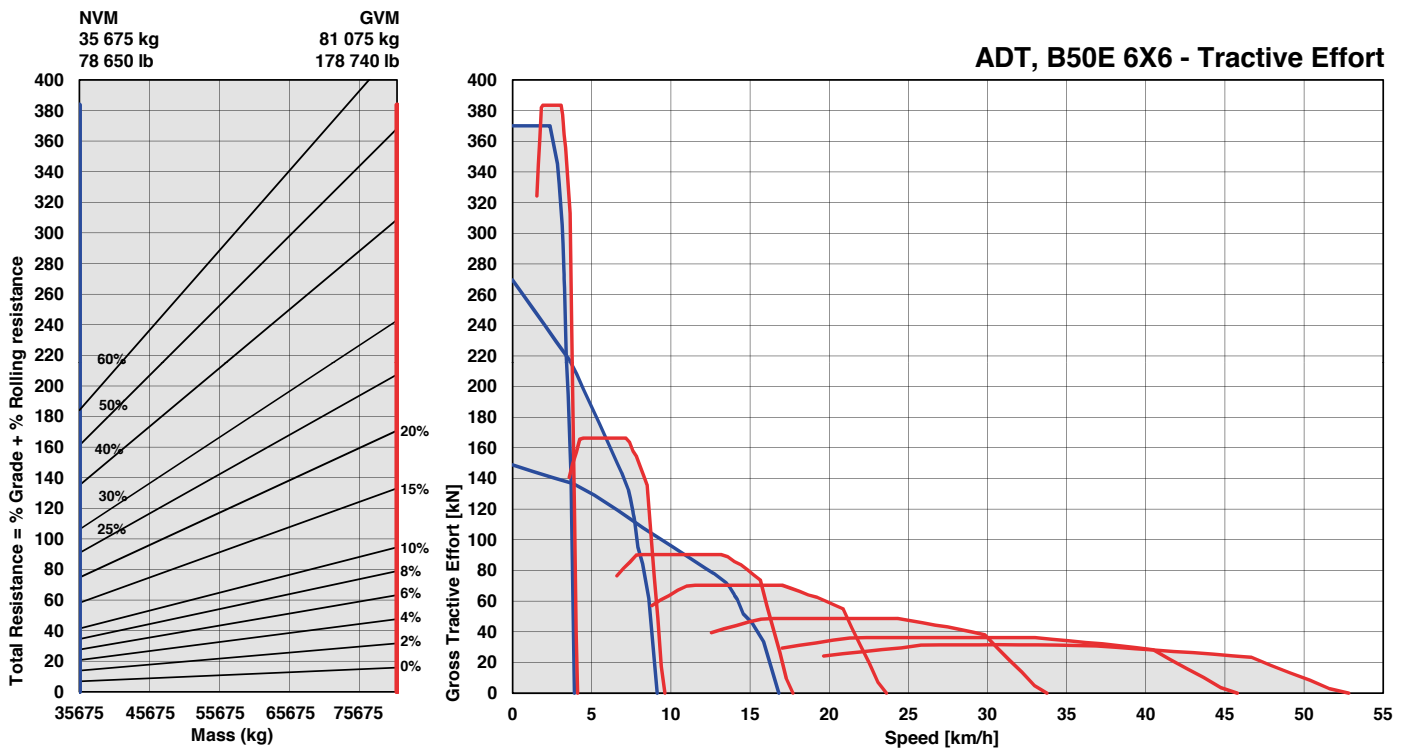


Machine Dimensions

A	Length - Transport Position with Tailgate	11 272 mm	(37 ft.)	I	Ground Clearance - Front Axle	555 mm	(21.85 in.)
A	Length - Transport Position w/o Tailgate	11 272 mm	(37 ft.)	J	Ground Clearance - Bin Fully Tipped	907 mm	(35.71 in.)
A1	Length - Bin Fully Tipped	11 916 mm	(39 ft. 1 in.)	K	Bin Lip Height - Transport Position	2 542 mm	(8 ft. 4 in.)
B	Height - Transport Position w/o Rock Guard	3 822 mm	(12 ft. 6 in.)	L	Bin Length	5 714 mm	(18 ft. 9 in.)
B	Height - Transport Position with Rock Guard	3 870 mm	(12 ft. 8 in.)	M	Load over Height	3 390 mm	(11 ft. 1 in.)
B1	Height - Rotating Beacon	4 050 mm	(13 ft. 3 in.)	N	Rear Axle Centre to Bin Rear	1 533 mm	(5 ft.)
B2	Height - Load Light	4 141 mm	(13 ft. 7 in.)	O	Mid Axle Centre to Rear Axle Centre	1 950 mm	(6 ft. 5 in.)
B3	Bin Height - Fully Tipped w/o Rock Guard	7 325 mm	(24 ft.)	P	Mid Axle Centre to Front Axle Centre	4 438 mm	(14 ft. 7 in.)
B4	Bin Height - Fully Tipped with Rock Guard	7 430 mm	(24 ft. 5 in.)	Q	Front Axle Centre to Machine Front	3 351 mm	(11 ft.)
B5	Height - Rock Guard Operating Position	4 148 mm	(13 ft. 7 in.)	R	Front Axle Centre to Artic Centre	1 558 mm	(5 ft. 1 in.)
B6	Height - Cab	3 813 mm	(12 ft. 6 in.)	S	Approach Angle	23°	
C	Width over Mudguards	3 790 mm	(12 ft. 5 in.)	T	Maximum Bin Tip Angle	70°	
D	Width over Tyres - 875/65 R29	3 832 mm	(12 ft. 7 in.)	U	Maximum Articulation Angle	42°	
D	Width over Tyres - 29.5R25	3 714 mm	(12 ft. 2 in.)	V	Front Tie Down Height	1 269 mm	(4 ft. 2 in.)
E	Tyre Track Width - 875/65 R29	2 949 mm	(9 ft. 8 in.)	W	Machine Lifting Centres	10 632 mm	(34 ft. 11 in.)
E	Tyre Track Width - 29.5R25	2 952 mm	(9 ft. 8 in.)	X	Inner Turning Circle Radius - 875/65 R29	4 694 mm	(15 ft. 5 in.)
F	Width over Bin	3 735 mm	(12 ft. 3 in.)	X	Inner Turning Circle Radius - 29.5R25	4 753 mm	(15 ft. 7 in.)
F1	Width over Tailgate	4 057 mm	(13 ft. 4 in.)	Y	Outer Turning Circle Radius - 875/65 R29	9 408 mm	(30 ft. 10 in.)
G	Width over Mirrors - Operating Position	4 027 mm	(13 ft. 3 in.)	Y	Outer Turning Circle Radius - 29.5R25	9 349 mm	(30 ft. 8 in.)
H	Ground Clearance - Artic	558 mm	(21.97 in.)				

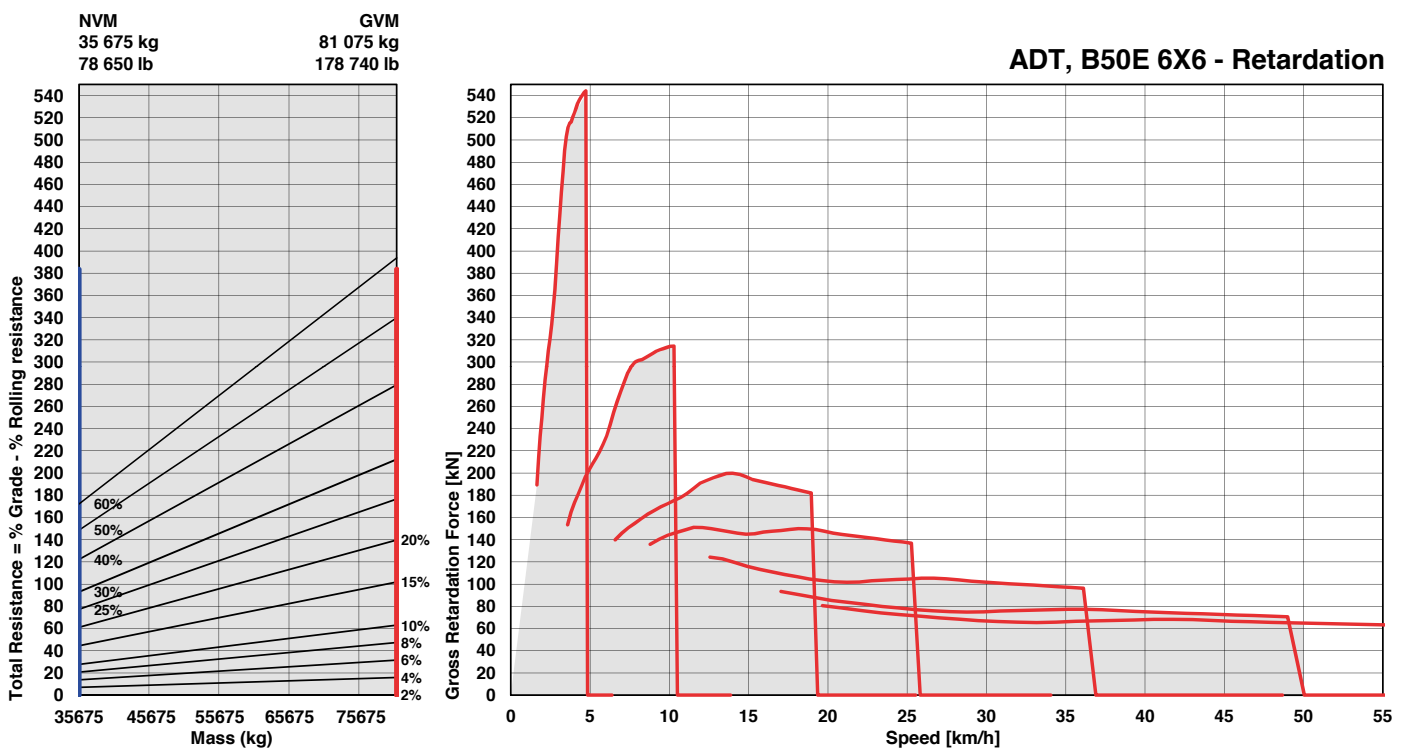
Gradeability/Rimpull

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.



B40E	B45E	B50E	
			ENGINE
●	●	●	Jacobs Brake Engine®
●	●	●	Dual element air cleaner with dust ejector valve
●	●	●	Precleaner 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
▲	▲	▲	PDS Hardware as an option
●	●	●	Battery disconnect
●	●	●	Drive lights
▲	▲	▲	LED Drive lights
●	●	●	Air horn
●	●	●	Reverse alarm
▲	▲	▲	White noise reverse alarm
●	●	●	LED reverse lights
●	●	●	Rotating beacon
●	●	●	Pitch Roll Sensor
●	●	●	Halogen Artic reverse light
▲	▲	▲	LED Artic reverse light
			STEERING SYSTEM
●	●	●	Unidirectional pump
▲	▲	▲	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 semi-climate control system
▲	▲	▲	AM/FM radio with Aux + USB
●	●	●	Rear window guard
●	●	●	Wiper/washer with intermittent control
●	●	●	Tilt and telescoping steering wheel
●	●	●	Centre-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
●	●	●	Foldaway trainer seat with retractable seat belt
●	●	●	12-volt power outlet
●	●	●	Cab utility bin (removable)
●	●	●	Cup holder
●	●	●	Cooled/heated lunch box
●	●	●	Manually adjusted mirrors

B40E	B45E	B50E	
			CAB (continued)
▲	▲	▲	Electrically adjusted and heated mirrors
●	●	●	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
●	●	●	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
			DUMP BODY
●	●	●	Dump body mechanical locks (x2). Partially up and fully up
▲	▲	▲	Body liner
▲	▲	▲	Tailgate
▲	▲	▲	Body heater
▲	▲	▲	Less dump body and cylinders
▲	▲	▲	Low SG bin extensions
▲	▲	▲	Bin pole lockout
▲	▲	▲	High volume dump body
▲	▲	▲	Triangular bin caps
			OTHER
●	●	●	Automatic Traction Control (ATC)
●	●	●	Wet disc brakes
●	●	▲	29.5 R 25 Radial Earthmover tyres
▲	▲	●	875/65 R 29 Radial Earthmover tyres
●	●	●	Remote grease banks
▲	▲	●	Automatic greasing
●	●	●	Onboard weighing
▲	▲	▲	Load lights: stack
▲	▲	●	Comfort ride suspension (front)
▲	▲	▲	Comfort ride suspension (rear)
▲	▲	▲	Reverse camera
●	●	●	Hand rails
▲	▲	▲	HSE Hand rails
●	●	●	Cab peak
▲	▲	▲	High pressure hydraulic filter
▲	▲	▲	Fuel heater
●	●	●	Belly plate
▲	▲	▲	Belly covers
▲	▲	●	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