

B40E Articulated Dump Truck

ENGINE Manufacturer Mercedes Benz (MTU) Model OM471LA (MTU 6R 1300) Configuration Inline 6, turbocharged and intercooled Gross Power 380 kW (510 hp) @ 1 700 rpm Net Power 359 kW (481 hp) @ 1 700 rpm Gross Torque 2 380 Nm (1 755 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 / EPA Tier 3 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.	WHEELS Type Radial Earthmover Tyre 29.5 R 25 (875/65 R 29 optional)	DUMPING SYSTEM Two double-acting, single stage, dump cylinders Raise Time 11 seconds Lowering Time 6 seconds Tipping Angle 70 deg standard, or any lower angle programmable																								
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 30T Differential High input controlled traction differential with spiral bevel gears Final Drive Outboard heavy duty planetary on all axles	FRONT SUSPENSION Semi-independent, leading A-frame supported by hydro-pneumatic suspension struts Option: Electronically controlled adaptive suspension with ride height adjustment	PNEUMATIC SYSTEM Air drier with heater and integral unloader valve, serving park brake and auxiliary functions System Pressure 810 kPa (117 psi)																								
	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: 305 kN (68 567 lbf) Park & Emergency Spring applied, air released driveline mounted disc Maximum brake force: 218 kN (49 008 lbf) Auxiliary Brake Automatic engine valve brake. Automatic retardation through electronic activation of wet brake system. Total Retardation Power Continuous: 442 kW (593 hp) Maximum: 854 kW (1 145 hp)	REAR SUSPENSION Pivoting walking beams with laminated rubber suspension blocks Option: Comfort Ride suspension walking beams, with two-stage sandwich block	ELECTRICAL SYSTEM Voltage 24 V Battery Type Two AGM (Absorption Glass Mat) type Battery Capacity 2 X 75 Ah Alternator Rating 28V 80A																								
		HYDRAULIC SYSTEM Full load sensing system serving the prioritised 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 330 L/min (87 gal/min) Pressure 315 bar (4 569 psi) Filter 5 microns	MAX. VEHICLE SPEED <table border="1"> <tr><td>1st</td><td>4 km/h</td><td>2,5 mph</td></tr> <tr><td>2nd</td><td>9 km/h</td><td>6 mph</td></tr> <tr><td>3rd</td><td>17 km/h</td><td>11 mph</td></tr> <tr><td>4th</td><td>23 km/h</td><td>14 mph</td></tr> <tr><td>5th</td><td>33 km/h</td><td>21 mph</td></tr> <tr><td>6th</td><td>44 km/h</td><td>27,3 mph</td></tr> <tr><td>7th</td><td>51 km/h</td><td>32 mph</td></tr> <tr><td>R</td><td>7 km/h</td><td>4 mph</td></tr> </table>	1st	4 km/h	2,5 mph	2nd	9 km/h	6 mph	3rd	17 km/h	11 mph	4th	23 km/h	14 mph	5th	33 km/h	21 mph	6th	44 km/h	27,3 mph	7th	51 km/h	32 mph	R	7 km/h	4 mph
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		STEERING SYSTEM Double acting cylinders, with ground-driven emergency steering pump Lock to lock turns 5 Steering Angle 42°	CAB ROPS/FOPS certified 76 dBA internal sound level measured according to ISO 6396																								

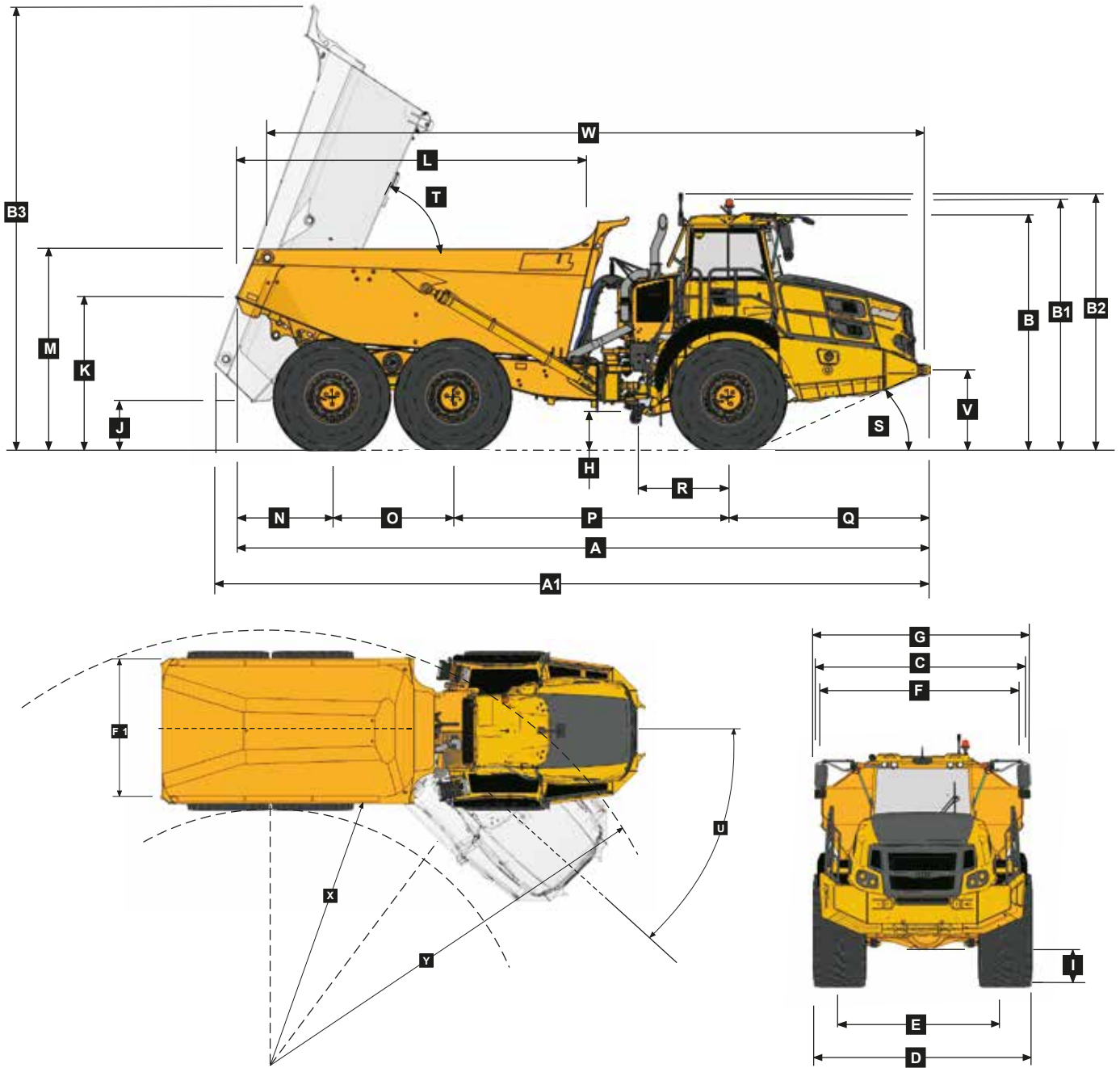
Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE*		LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	kg (lb)	LADEN		BODY	m ³ (yd ³)		kg (lb)
Front	16 816 (37 079)	(No sinkage/Total Contact Area Method)		Struck Capacity	19 (25)	Bin liner	1 369 (3 018)
Middle	8 997 (19 837)	29.5 R 25	kPa (Psi)	SAE 2:1 Capacity	24 (31)	Tailgate	984 (2 169)
Rear	8 784 (19 368)	Front	310 (45)	SAE 1:1 Capacity	28,5 (37)	875/65 R29	
Total	34 596 (76 284)	Mid & Rear	341 (50)	SAE 2:1 Capacity with Tailgate	24,5 (32)	(per vehicle) Add	1 182 (2 606)
LADEN						EXTRA WHEELSET	
Front	21 691 (47 828)	875/65 R29	kPa (Psi)	Rated Payload	39 000 kg	29.5 R 25	800 (1 764)
Middle	26 059 (57 460)	Front	293 (43)		(85 980 lb)	875/65 R29	1 024 (2 258)
Rear	25 846 (56 990)	Mid & Rear	329 (48)				
Total	73 596 (162 279)						

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

Dimensions

B40E

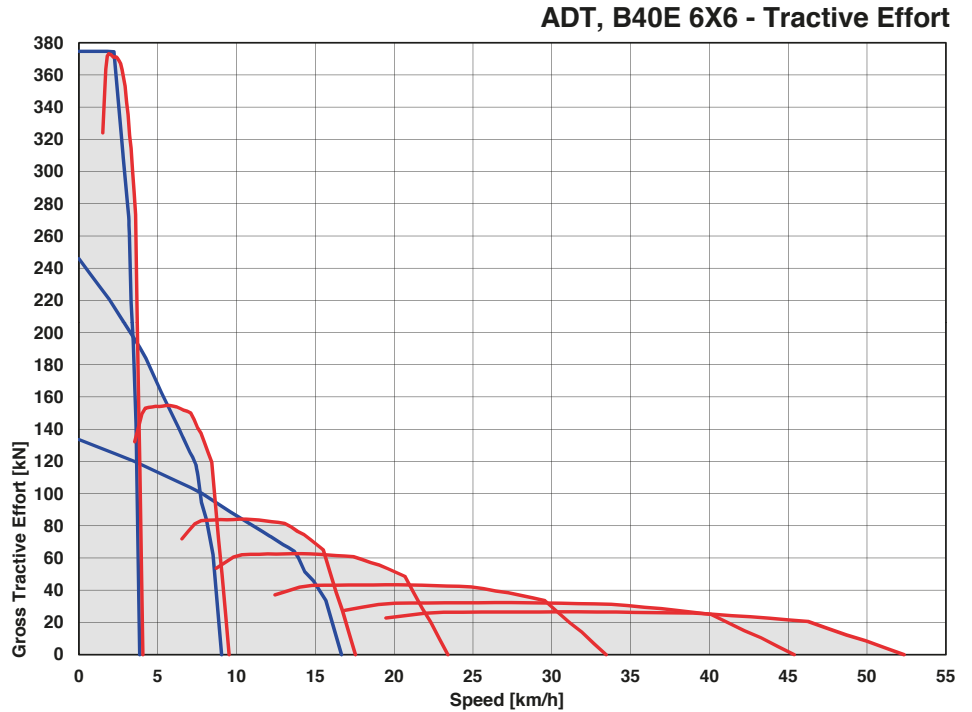
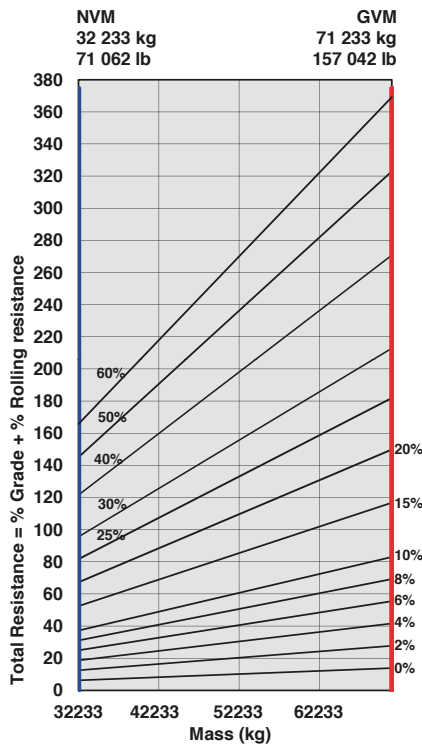


Machine Dimensions

A	Length - Transport Position with Tailgate	11 197 mm (36 ft. 9 in.)	K	Bin Lip Height - Transport Position	2 519 mm (8 ft. 3 in.)
A	Length - Transport Position w/o Tailgate	11 186 mm (36 ft. 8 in.)	L	Bin Length	5 742 mm (18 ft. 10 in.)
A1	Length - Bin Fully Tipped	11 742 mm (38 ft. 6 in.)	M	Load over Height	3 271 mm (10 ft. 9 in.)
B	Height - Transport Position	3 804 mm (12 ft. 6 in.)	N	Rear Axle Centre to Bin Rear	1 543 mm (5 ft.)
B1	Height - Rotating Beacon	4 040 mm (13 ft. 3 in.)	O	Mid Axle Centre to Rear Axle Centre	1 950 mm (6 ft. 5 in.)
B2	Height - Load Light	4 129 mm (13 ft. 7 in.)	P	Mid Axle Centre to Front Axle Centre	4 438 mm (14 ft. 7 in.)
B3	Bin Height - Fully Tipped	7 316 mm (24 ft.)	Q	Front Axle Centre to Machine Front	3 255 mm (10 ft. 8 in.)
C	Width over Mudguards	3 495 mm (11 ft. 6 in.)	R	Front Axle Centre to Artic Centre	1 558 mm (5 ft. 1 in.)
D	Width over Tyres - 875/65 R29	3 656 mm (12 ft.)	S	Approach Angle	24°
D	Width over Tyres - 29.5R25	3 487 mm (11 ft. 5 in.)	T	Maximum Bin Tip Angle	70°
E	Tyre Track Width - 875/65 R29	2 773 mm (9 ft. 1 in.)	U	Maximum Articulation Angle	42°
E	Tyre Track Width - 29.5R25	2 725 mm (8 ft. 11 in.)	V	Front Tie Down Height	1 265 mm (4 ft. 2 in.)
F	Width over Bin	3 372 mm (11 ft.)	W	Machine Lifting Centres	10 594 mm (34 ft. 9 in.)
F1	Width over Tailgate	3 662 mm (12 ft.)	X	Inner Turning Circle Radius - 875/65 R29	4 782 mm (15 ft. 8 in.)
G	Width over Mirrors - Operating Position	3 614 mm (11 ft. 10 in.)	X	Inner Turning Circle Radius - 29.5R25	4 866 mm (16 ft.)
H	Ground Clearance - Artic	545 mm (21.46 in.)	Y	Outer Turning Circle Radius - 875/65 R29	9 320 mm (30 ft. 7 in.)
I	Ground Clearance - Front Axle	545 mm (21.46 in.)	Y	Outer Turning Circle Radius - 29.5R25	9 235 mm (30 ft. 4 in.)
J	Ground Clearance - Bin Fully Tipped	876 mm (34.5 in.)			

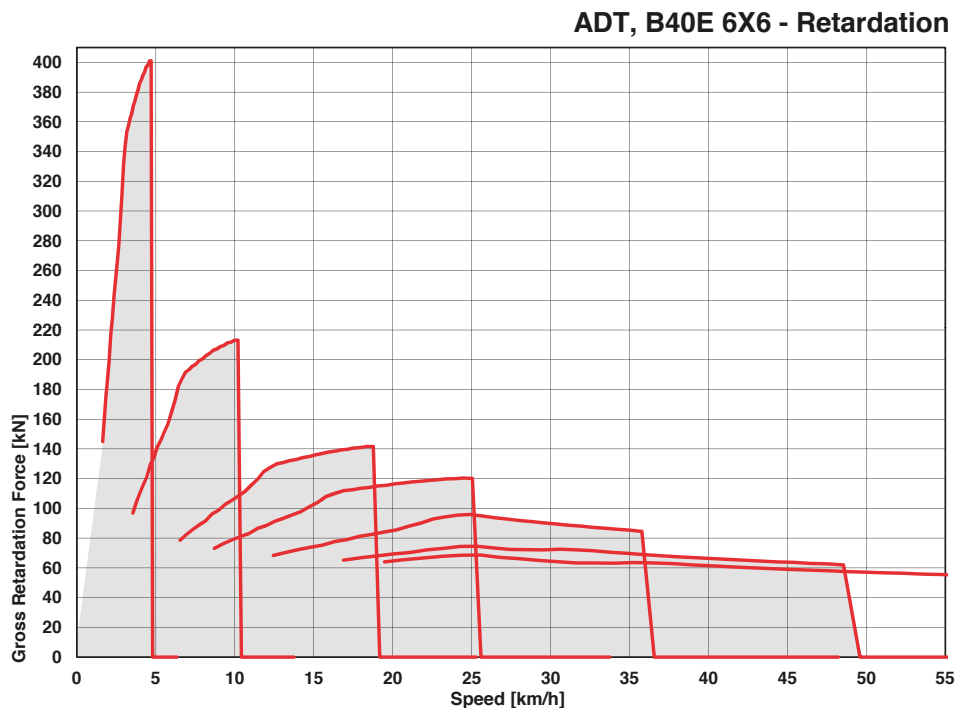
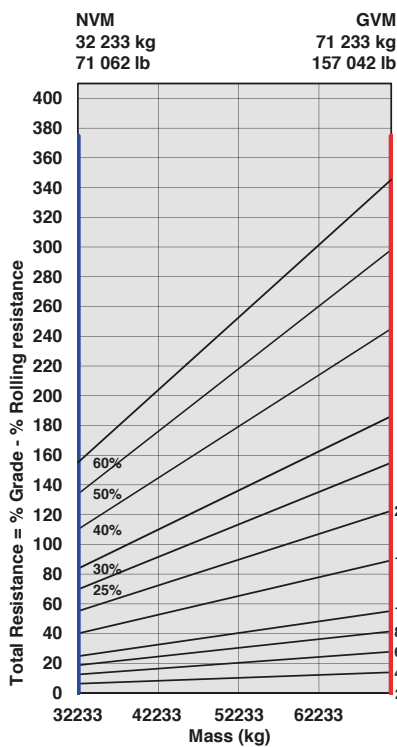
Gradeability/Rimpull

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		B40E	B45E	B50E	
			ENGINE				CAB (continued)
●	●	●	Engine valve brake	●	●	●	Cooled/heated lunch box
●	●	●	Dual element air cleaner with dust ejector valve	●	●	●	Manually adjusted mirrors
●	●	●	Precleaner with automatic dust scavenging	▲	▲	▲	Electrically adjusted and heated mirrors
●	●	●	Water separator	●	●	●	Deluxe 10" colour LCD:
●	●	●	Serpentine drive belt with automatic tensioner				Speedometer / Fuel gauge /
●	●	●	Provision for fast fill				Transmission oil temperature gauge /
●	●	●	Wet-sleeve cylinder liners				Engine coolant temperature gauge /
			COOLING				LED function/warning indicators and
●	●	●	Crankshaft mounted electronically controlled viscous fan drive				audible alarm / Transmission gear selection /
●	●	●	Fan guard				Tachometer / Battery voltage / Hour meter /
			PNEUMATIC SYSTEM				Odometer / Fuel consumption / Tip counter /
●	●	●	Engine-mounted compressor				Trip timer / Trip distance / Metric/English units /
●	●	●	Air drier with heater				Service codes/diagnostics
●	●	●	Integral unloader valve	●	●	●	Backlit sealed switch module functions with:
			ELECTRICAL SYSTEM				Wiper control / Lights / Heated mirrors /
●	●	●	Battery disconnect				Retarding aggressiveness / Transfer case
●	●	●	Drive lights				differential lock / Transmission gear hold /
▲	▲	▲	LED Drive lights				Dump-body tip limit / Automatic dump-body
●	●	●	Air horn				tip settings / Airconditioner/ Heater controls /
●	●	●	Reverse alarm				Preselected Speed Control
▲	▲	▲	White noise reverse alarm				DUMP BODY
●	●	●	LED reverse lights	●	●	●	Dump body mechanical locks (x2). Partially up
●	●	●	Rotating beacon				and fully up
●	●	●	Pitch Roll Sensor	▲	▲	▲	Body liner
●	●	●	Halogen Artic reverse light	▲	▲	▲	Tailgate
▲	▲	▲	LED Artic reverse light	▲	▲	▲	Body heater
			STEERING SYSTEM	▲	▲	▲	Less dump body and cylinders
▲	▲	▲	Bi-directional ground-driven secondary steering pump	▲	▲	▲	Low SG bin extensions
●	●	●	Ground-driven secondary steering pump	▲	▲	▲	Bin pole lockout
			CAB				OTHER
●	●	●	ROPS/FOPS certification	●	●	●	Automatic Traction Control (ATC)
●	●	●	Tilt cab	●	●	●	Wet disc brakes
●	●	●	Gas strut-supported door				26.5 R 25 Radial Earthmover tyres
●	●	●	I-Tip programmable dump-body tip settings	●	●	▲	29.5 R 25 Radial Earthmover tyres
●	●	●	HVAC Climate control system	▲	▲	●	875/65 R 29 Radial Earthmover tyres
▲	▲	▲	AM/FM radio with Aux + USB	●	●	●	Remote grease banks
●	●	●	Rear window guard	●	●	●	Automatic greasing
●	●	●	Wiper/washer with intermittent control	●	●	●	Onboard weighing
●	●	●	Tilt and telescoping steering wheel	▲	▲	▲	Load lights: stack
●	●	●	Centre-mount air-suspension seat	▲	▲	●	Comfort ride suspension (front)
▲	▲	▲	Halogen work lights	▲	▲	▲	Comfort ride suspension (rear)
▲	▲	▲	LED work lights	▲	▲	▲	Reverse camera
▲	▲	▲	Rotating beacon: seat belt installation	▲	▲	▲	Hand rails
▲	▲	▲	Remote engine and machine isolation	●	●	●	Cab peak
●	●	●	Remote battery jump start	▲	▲	▲	High pressure hydraulic filter
●	●	●	Retractable 3-point seat belt	▲	▲	▲	Fuel heater
●	●	●	Foldaway trainer seat with retractable seat belt	●	●	●	Belly cover
●	●	●	12-volt power outlet	▲	▲	▲	Remote transmission filters
●	●	●	Cab utility bin (removable)	●	●	●	Engine and transmission remote drain-gravity
●	●	●	Cup holder	▲	▲	▲	Engine and transmission remote drain-scavenge
				▲	▲	▲	Window smash button
				●	●	●	High visibility mirrors
				●	●	●	Fleetm@tic® Classic package for 2 years
				●	●	●	Electronic bonnet opening