

B50E Articulated Dump Truck

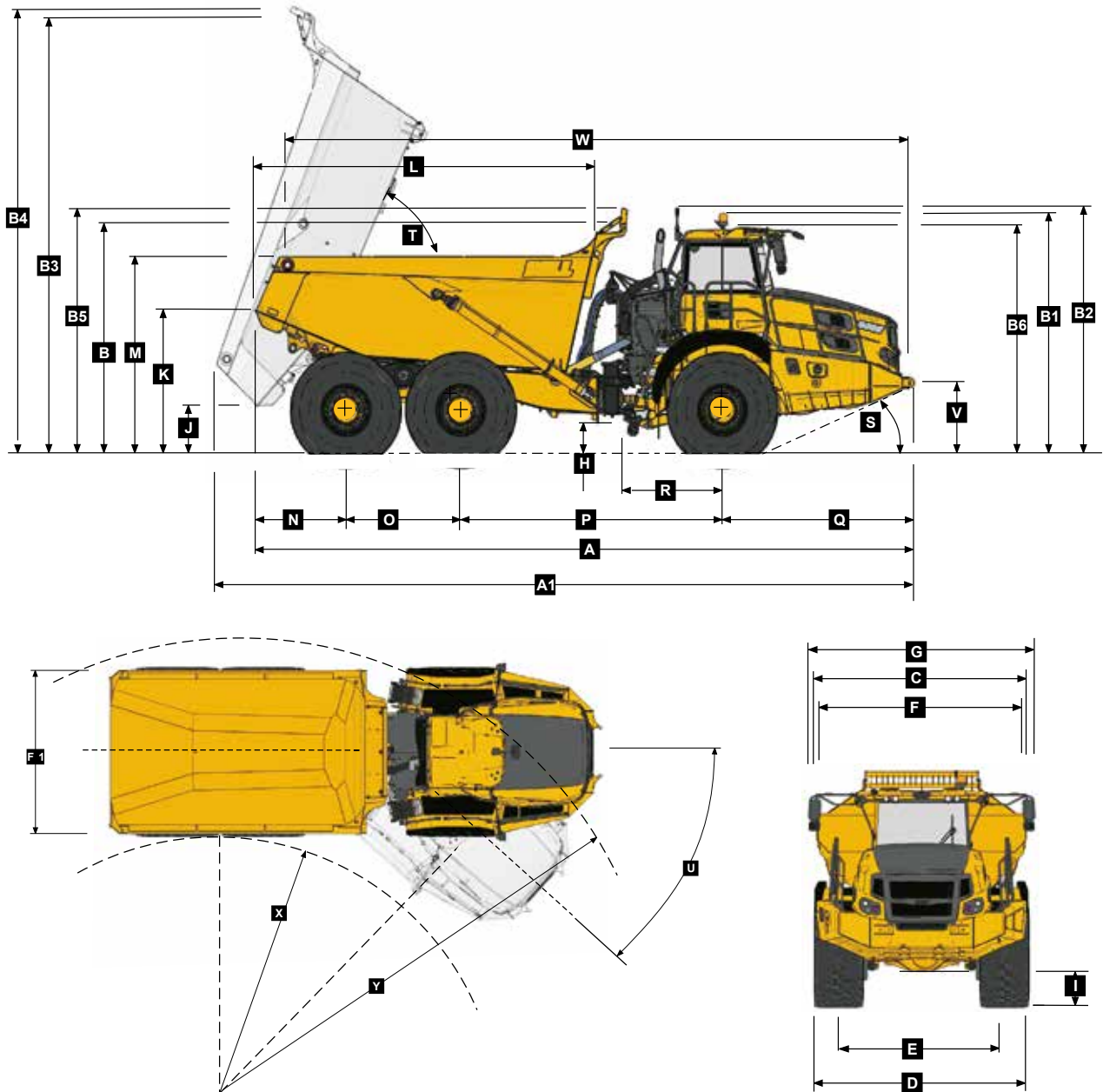
<p>ENGINE</p> <p>Manufacturer Mercedes Benz (MTU)</p> <p>Model OM473LA (MTU 6R 1500)</p> <p>Configuration Inline 6, turbocharged and intercooled</p> <p>Gross Power 430 kW (577 hp) @ 1 700 rpm</p> <p>Net Power 405 kW (543 hp) @ 1 700 rpm</p> <p>Gross Torque 2 750 Nm (2 028 lbf) @ 1 300 rpm</p> <p>Displacement 15,6 litres (952 cu.in)</p> <p>Auxiliary Brake Jacobs Engine Brake®</p> <p>Fuel Tank Capacity 630 litres (166 US gal)</p> <p>Certification OM473LA (MTU 6R 1500) is EU Stage IIIA / EPA Tier 3 emission level equivalent</p>	<p>TRANSFER CASE</p> <p>Manufacturer Kessler</p> <p>Series W2400</p> <p>Layout Remote mounted</p> <p>Gear Layout Three in-line helical gears</p> <p>Output Differential Interaxle 29/71 proportional differential. Automatic inter-axle differential lock.</p>	<p>WHEELS</p> <p>Type Radial Earthmover</p> <p>Tyre 875/65 R 29 (29.5 R 25 optional)</p>	<p>DUMPING SYSTEM</p> <p>Two double-acting, single stage, dump cylinders</p> <p>Raise Time 11,5 seconds</p> <p>Lowering Time 6 seconds</p> <p>Tipping Angle 70 deg standard, or any lower angle programmable</p>																								
<p>TRANSMISSION</p> <p>Manufacturer Allison</p> <p>Model 4800 ORS</p> <p>Configuration Fully automatic planetary transmission</p> <p>Layout Engine mounted</p> <p>Gear Layout Constant meshing planetary gears, clutch operated</p> <p>Gears 7 Forward, 1 reverse</p> <p>Clutch Type Hydraulically operated multi-disc</p> <p>Control Type Electronic</p> <p>Torque Control Hydrodynamic with lock-up in all gears</p>	<p>AXLES</p> <p>Manufacturer Bell</p> <p>Model 30T</p> <p>Differential High input controlled traction differential with spiral bevel gears</p> <p>Final Drive Outboard heavy duty planetary on all axles</p>	<p>FRONT SUSPENSION</p> <p>Semi-independent, leading A-frame supported by hydro-pneumatic suspension struts. Suspension is electronically controlled adaptive suspension with ride height adjustment.</p> <p>REAR SUSPENSION</p> <p>Pivoting walking beams with laminated rubber suspension blocks.</p> <p>Option: Comfort Ride suspension walking beams, with two-stage sandwich block.</p>	<p>PNEUMATIC SYSTEM</p> <p>Air drier with heater and integral unloader valve, serving park brake and auxiliary functions</p> <p>System Pressure 810 kPa (117 psi)</p>																								
	<p>BRAKING SYSTEM</p> <p>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.</p> <p>Maximum brake force: 458 kN (102 962 lbf)</p> <p>Park & Emergency Spring applied, air released driveline mounted disc</p> <p>Maximum brake force: 215,5 kN (48 446 lbf)</p> <p>Auxiliary Brake Automatic engine valve brake. Automatic retardation through electronic activation of wet brake system.</p> <p>Total Retardation Power Continuous: 546 kW (732 hp) Maximum: 963 kW (1 291 hp)</p>	<p>HYDRAULIC SYSTEM</p> <p>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.</p> <p>Pump Type Variable displacement load sensing piston</p> <p>Flow 330 L/min (87 gal/min)</p> <p>Pressure 315 bar (4 569 psi)</p> <p>Filter 5 microns</p>	<p>ELECTRICAL SYSTEM</p> <p>Voltage 24 V</p> <p>Battery Type Two AGM (Absorption Glass Mat) type</p> <p>Battery Capacity 2 X 75 Ah</p> <p>Alternator Rating 28V 80A</p>																								
		<p>STEERING SYSTEM</p> <p>Double acting cylinders, with ground-driven emergency steering pump</p> <p>Lock to lock turns 4,9</p> <p>Steering Angle 42°</p>	<p>MAX. VEHICLE SPEED</p> <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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			<p>CAB</p> <p>ROPS/FOPS certified 77 dBA internal sound level measured according to ISO 6396</p>																								

Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE*		LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	kg (lb)	LADEN		BODY	m ³ (yd ³)	kg (lb)	
Front	18 484 (40 750)	(No sinkage/Total Contact Area Method)		Struck Capacity	21,5 (28)	Bin liner	1 495 (3 296)
Middle	8 648 (19 066)	875/65 R29	kPa (Psi)	SAE 2:1 Capacity	27,5 (36)	Tailgate	1 117 (2 463)
Rear	8 543 (18 834)	Front	296 (43)	SAE 1:1 Capacity	33 (43)	29.5 R 25	
Total	35 675 (78 650)	Mid & Rear	366 (53)	SAE 2:1 Capacity with Tailgate	29 (38)	(per vehicle) Minus	1 182 (2 606)
LADEN						EXTRA WHEELSET	
Front	24 204 (53 361)	29.5 R 25	kPa (Psi)			29.5 R 25	800 (1 764)
Middle	28 488 (62 805)	Front	326 (47)	Rated Payload	45 400 kg	875/65 R29	1 024 (2 258)
Rear	28 383 (62 574)	Mid & Rear	395 (57)		(100 090 lb)		
Total	81 075 (178 740)						

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

Dimensions

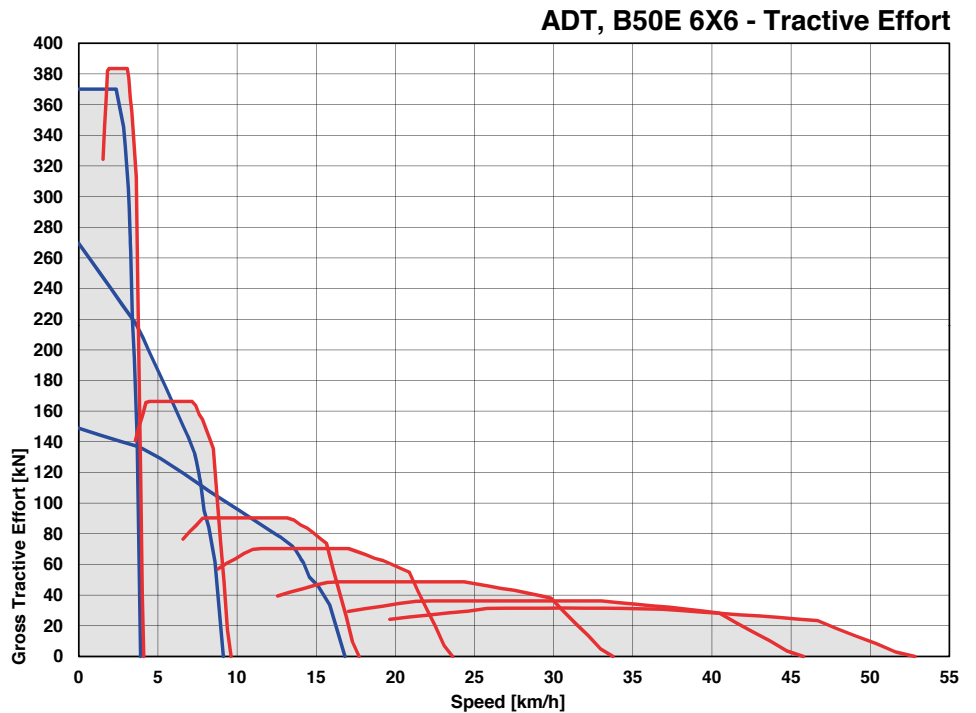
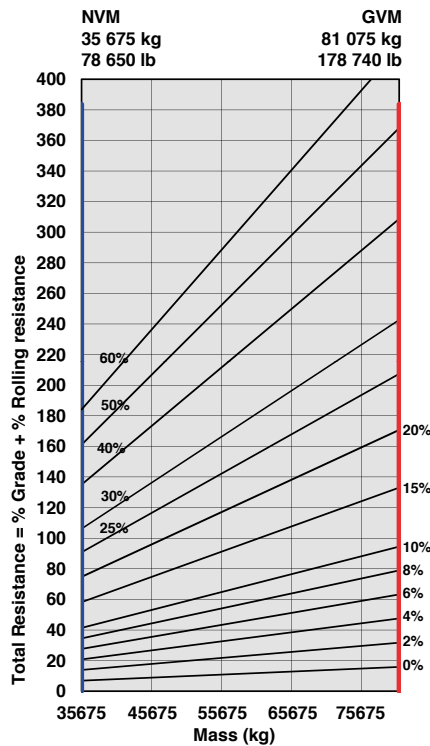


Machine Dimensions

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.)				

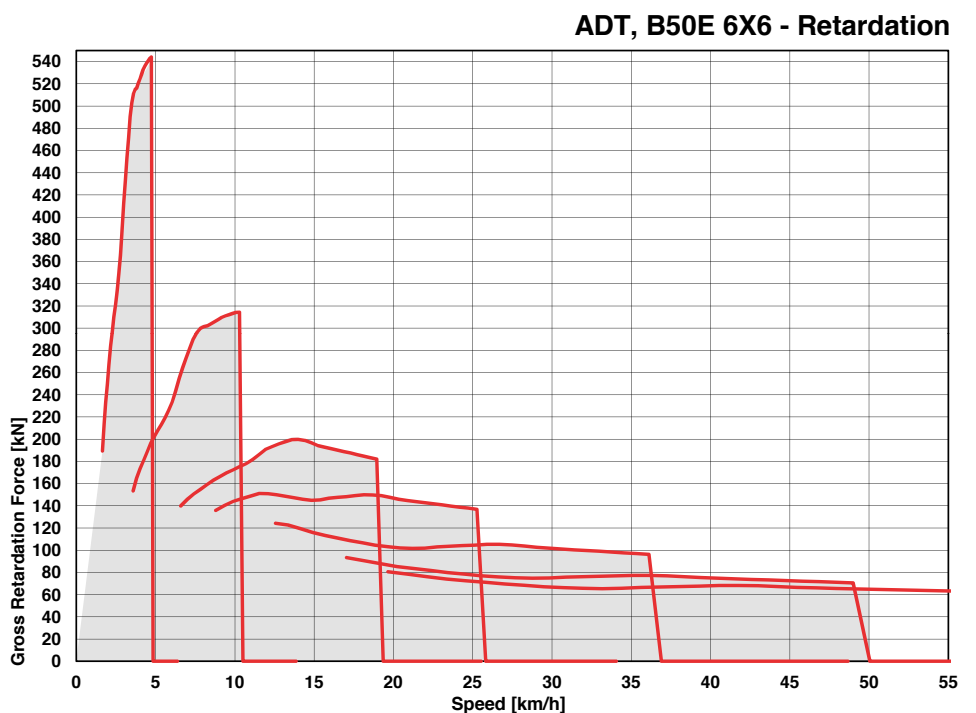
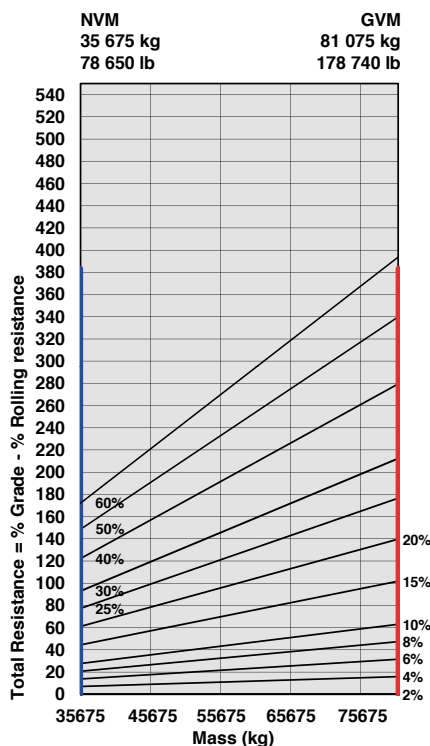
Gradeability/Rimpull

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		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