

5350 B

==4x4==

VOLVO BM



AGILE, HIGH- CAPACITY HAULER



The Volvo BM 5350 B 4×4 is a truly flexible transport machine that is particularly well suited where the layout of the job site imposes high demands on agility and good manoeuvrability.

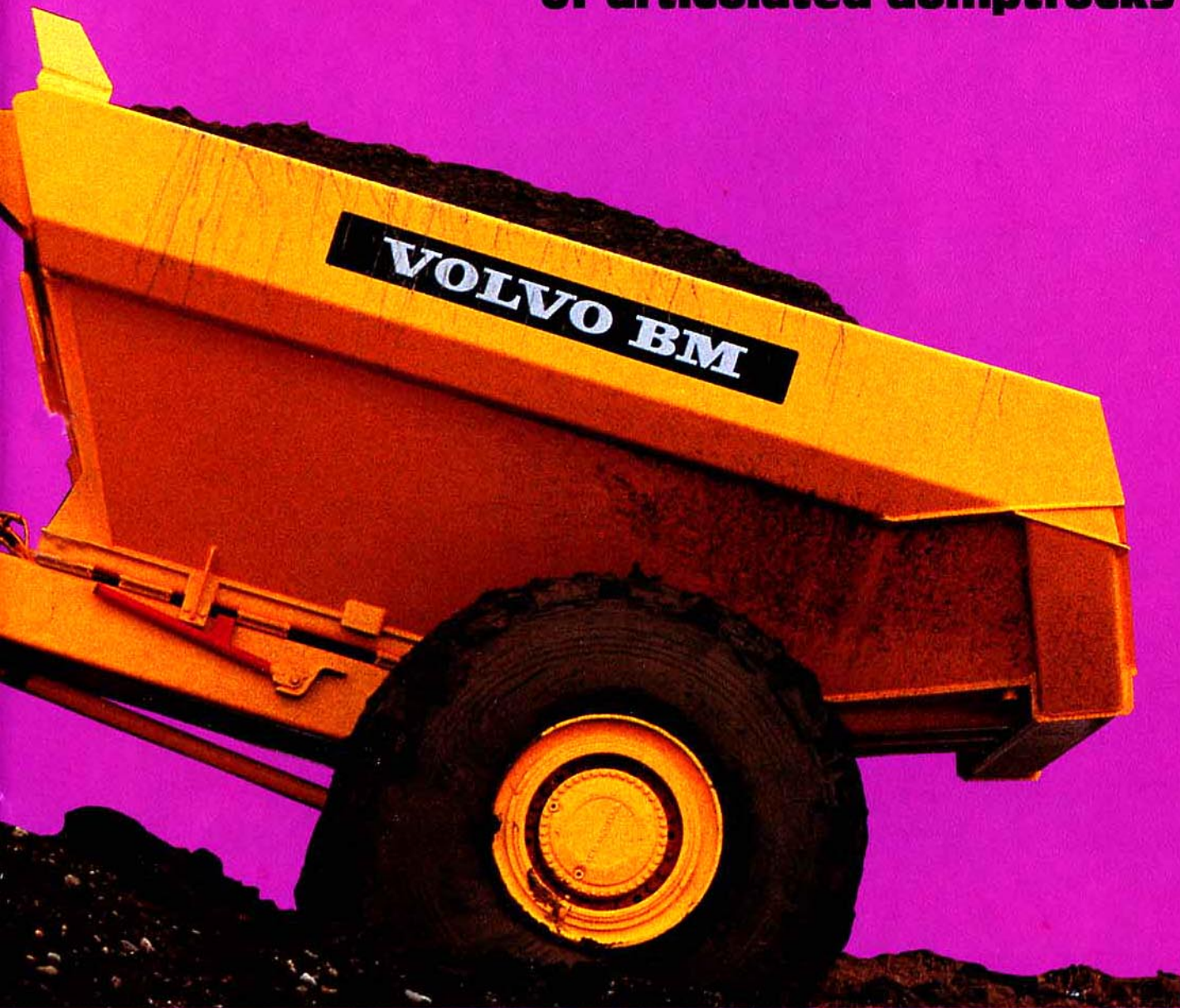
Articulated steering, together with compact dimensions, make the 5350 B 4×4 easy to drive at high average speeds, even on confined work sites.

Where extremely good turnaround characteristics are required, in tunnels for example, the 5350 B 4×4 can be equipped with a special turnaround system. This represents an entirely new technique for effective manoeuvring of bulk haulage vehicles where space is limited.

The Volvo BM 5350 4×4 also has superb off-road characteristics thanks to the large driving wheels. It easily negotiates difficult terrain and the good weight-distribution allows it to be reserved confidently to the edge of the tipping area to dump the load with precision. Particular attention has been devoted to the driver's station.

An outstanding suspension system, low noise levels and attention to ergonomic principles in the design and location of controls and levers ensure the best possible conditions for effective driver performance.

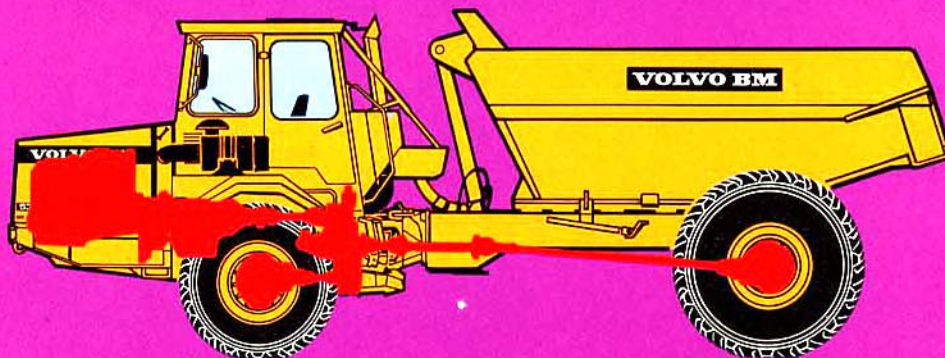
Volvo BM—the world's leading manufacturer of articulated dumptrucks



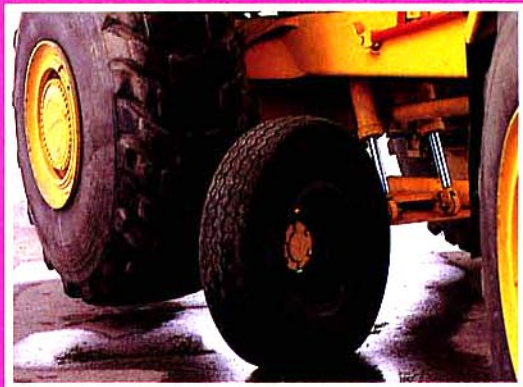
DRIVE TRAIN

The power source in the 5350 B 4×4 is a 6-cylinder Volvo turbodiesel that develops 157 kW (213 hp) SAE. This is a modern, lightweight engine combining high power with low fuel consumption. The drive train is composed of well-matched components for long-term

reliability. Power is transmitted to the four driving wheels via an automatic gearbox. Off-road mobility is guaranteed by the longitudinal differential lock and the transverse differential locks on both axles. The oversized rear wheels provide very high ground clearance.

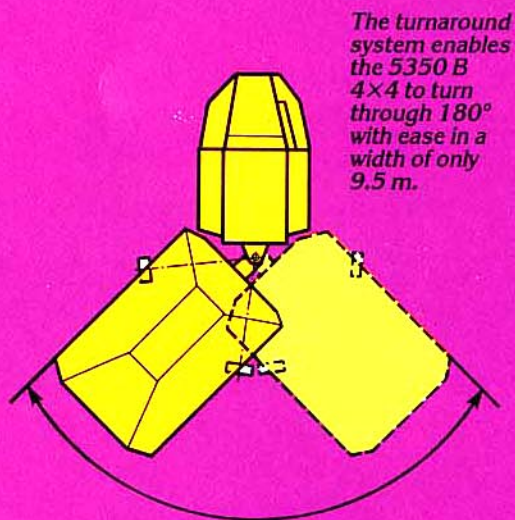


Turnaround system (optional)



Volvo BM has developed a completely new turnaround system specially for the 5350 B 4×4. This consists of a wheeled bridge that is operated hydraulically from the cab. The operator can simply rotate the trailer unit a full 90° in less than 30 seconds.

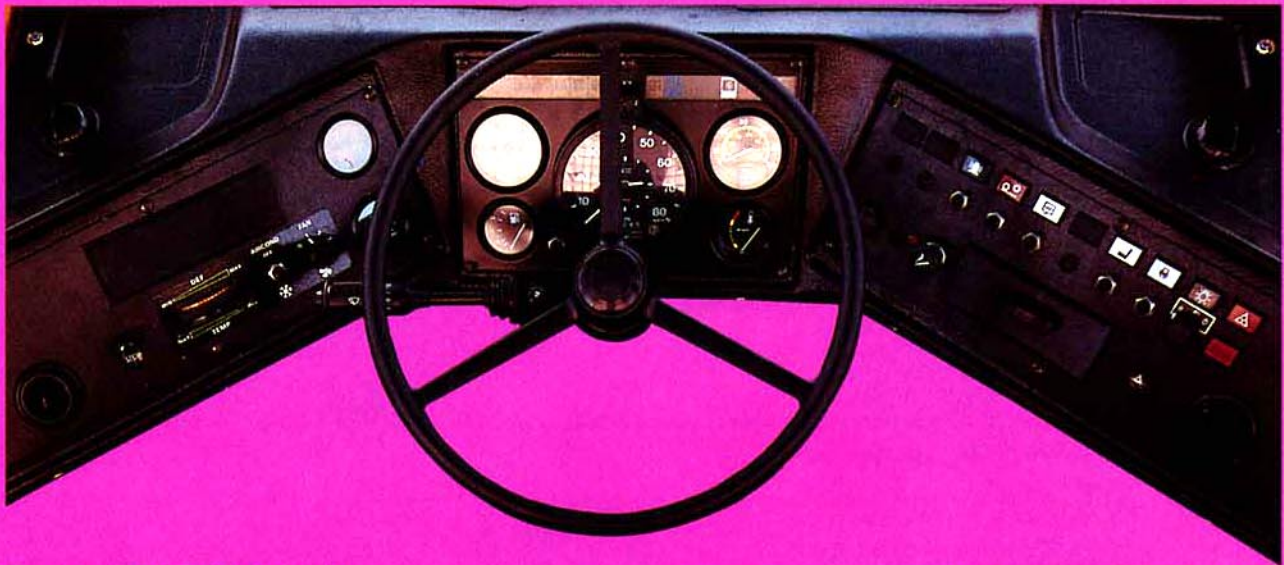
This turning system makes the 5350 B 4×4 a highly effective vehicle for bulk haulage in confined spaces.



The turnaround system enables the 5350 B 4×4 to turn through 180° with ease in a width of only 9.5 m.



COMFORT



The Volvo BM 5350 B 4x4 is designed for high productivity applications where the resources of the machine must be exploited to the full. The cab is therefore designed so that the driver has good visibility and is comfortably seated even when driving at speed over bumpy surfaces. The cab is spacious with low noise levels and is very well appointed for safe, effortless driving.



Suspension

Tyres, rubber suspension with shock absorbers, rubber cab mounting and the sprung/damped driver's seat all contribute to excellent driving characteristics of the 5350 B 4x4 both on and off the road. In addition, the suspension system is completely maintenance-free.

SIMPLE SERVICE

Routine maintenance and daily checks are quick and easy to perform. There are only a few, easily accessible lube points needing daily attention and the bonnet can be tilted forward, exposing the engine compartment for easy access. Simple service gives your machine more operating hours. This means good economy and greater driver satisfaction.





ENGINE

Volvo TD 70 G: 6-cylinder in-line direct-injected turbocharged 4-stroke diesel engine with overhead valves and wet, replaceable cylinder liners.

Gross rating: 157 kW at 40 rps SAE J 270 (213 hp at 2,400 rpm SAE)
Flywheel rating: 140 kW at 40 rps DIN 70020 (190 hp at 2,400 rpm DIN)*

* With radiator fan working at 40 rps (2,400 rpm). Normally, the fan operates at 11.7 rps (700 rpm), which gives 155 kW (210 hp).

Max. torque: 705 Nm at 26.7 rps SAE J 270 (520 lbf ft at 1,600 rpm SAE)
633 Nm at 26.7 rps DIN 70020 (467 lbf ft at 1,600 rpm DIN)

No. of cylinders: 6
Bore: 104.77 mm (4.125 in)
Stroke: 130 mm (5.12 in)
Displacement: 6.73 (411 in³)
Compression ratio: 14.5:1

Automatic cold start: Richer fuel mixture and preheater
Air filter: Dry air cleaner
Radiator fan: Mounted on right-hand side
Type: Hydrostatic drive. Variable speed control, dependent on coolant temperature



ELETRICAL SYSTEM

Voltage 24 V
Battery 135 Ah
Alternator 1,260 W
Starter motor 5 kW (6.8 hp)



TRANSMISSION

Torque converter, type: Single-stage with free-wheeling stator and automatic lock-up
Conversion ratio 1.86:1

Transmission

The machine has an automatic/manual transmission with 10 forward gears and 2 reverse gears, divided between a high and a low range with 5 forward and 1 reverse gear in each. The high/low gear and 1st gear are manual gears.

Speed (max.)	Low	High
1st	5 km/h (3.1 mph)	6 km/h (3.7 mph)
2nd	9 km/h (5.6 mph)	14 km/h (8.7 mph)
3rd	12 km/h (7.4 mph)	20 km/h (12.4 mph)
4th	21 km/h (13 mph)	37 km/h (23.0 mph)
5th	31 km/h (18.6 mph)	51 km/h (31.1 mph)
Reverse	6 km/h (3.7 mph)	9 km/h (5.6 mph)

Dropbox

Designation Volvo BM FL 652
Type Dropbox of 2-stage design with differential and power take-off

Differential lock 100 % lock-yp (dog clutch)
4x4 drive Constant drive on all 4 wheels. Transverse differential locks on both axles and longitudinal differential lock.



WHEELS

Rim 19.5–25
Tyres 23.5 R 25*
Rim 25–25
Tyres 29.5 R 25 **
Ground pressure: see special table.



BRAKE SYSTEM

Driving brakes: Air-hydraulic disc brakes on all axles, dualcircuit system.

Circuit division

One circuit, front axle
One circuit, rear axle

Parking brake

Spring-actuated brake on propeller shaft



AXLES

Fully floating axle shafts with planetary gear type hub reduction.

Front axle:

Designation Volvo BM AH 54 E
Differential lock 100 % lock-up (dog clutch)

Rear axle:

Designation Volvo BM AH 71 B
Differential lock 100 % lock-up (dog clutch)



STEERING SYSTEM

Make Volvo BM
Type Hydromechanical articulated steering with emergency steering function

Steering gear Rack and pinion

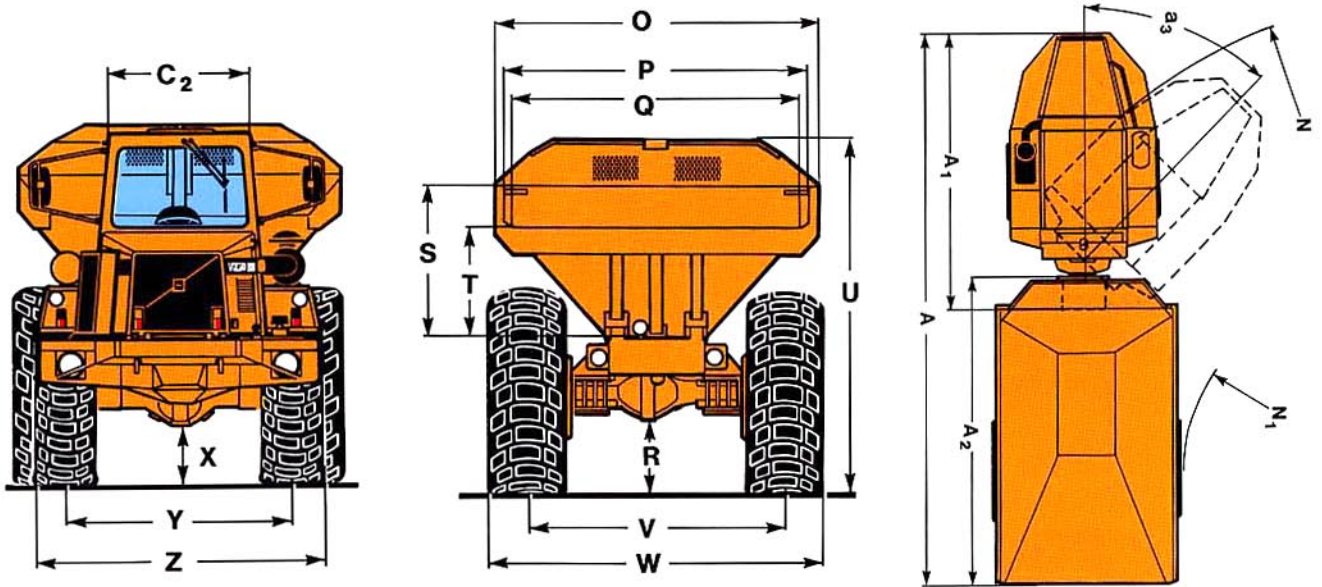
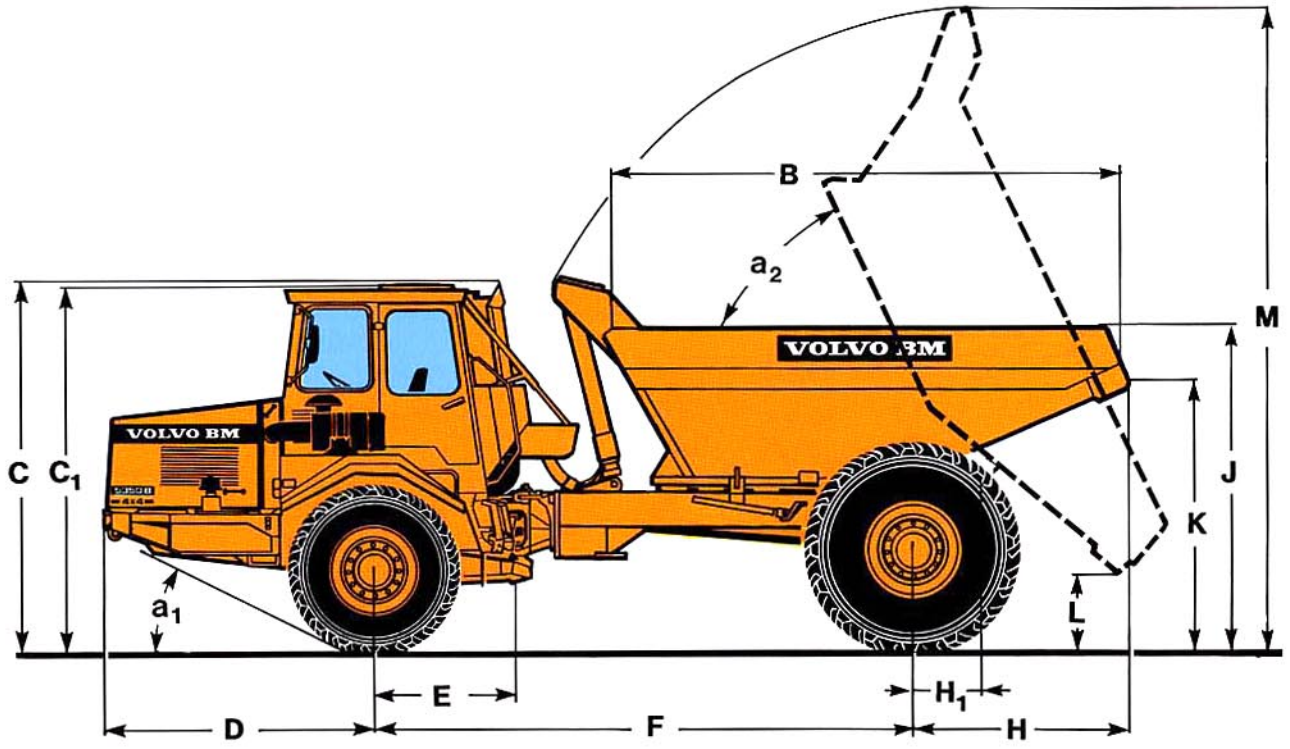
Lock-to-lock turns 3.4

Steering angle from centre line 45°

Steering cylinders 2 double-acting

Hydraulic pumps See Hydraulic system

DIMENSIONS 5350 B 4x4



mm (ft in)		mm (ft in)		mm (ft in)		mm (ft in)	
A	= 8,955 (29'5")	F	= 4,650 (15'3")	N	= 7,500 (24'7")	V	= 2,370 (7'9")
A ₁	= 4,495 (14'9")	H	= 1,890 (6'2")	N ₁	= 3,550 (11'8")	W	= 3,180 (10'5")
A ₂	= 4,985 (16'4")	H ₁	= 590 (2'1")	O	= 2,980 (9'9")	X	= 450 (1'6")
B	= 4,500 (14'9")	J	= 2,730 (8'11")	P	= 2,800 (9'2")	X*	= 465 (1'6")
C	= 3,200 (10'6")	J*	= 2,810 (9'3")	Q	= 2,680 (8'10")	Y	= 2,150 (7'1")
C*	= 3,240 (10'8")	K	= 2,355 (7'11")	R	= 555 (1'10")	Z	= 2,795 (9'2")
C ₁	= 3,150 (10'4")	K*	= 2,435 (8')	R*	= 635 (2'1")	a ₁	= 26°
C ₁ *	= 3,190 (10'6")	L*	= 705 (2'4")	S	= 1,405 (4'7")	a ₂	= 65°
C ₂	= 1,320 (4'4")	M*	= 5,610 (18'5")	T	= 1,030 (3'5")	a ₃	= 45°
D	= 2,415 (7'11")			U	= 3,165 (10'5")		
E	= 1,200 (3'11")			U*	= 3,245 (10'8")		

* unladen machine



HYDRAULIC SYSTEM

Hydraulic pumps, engine-dependent

Type Variable piston pump
 Number 3
 Capacity 100 l/min
 (26 US gal/min,
 22 UK gal/min) at 2,400 rpm

Working pressure 18.5 MPa (2,680 psi)

Drive system:

Type Flywheel power take-off
 Make Volvo BM

Number of pump take-offs 4 (3 are utilized)

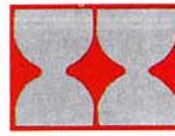
Hydraulic pump, ground-dependent (for emergency steering)

Type Variable piston pump
 Number 1
 Capacity 118 l/min (31 US gal/min,
 26 UK gal/min) at 2,400 rpm

Working pressure 18.5 MPa (2,680 psi)

Location Dropbox

Filters 2 paper and magnet filters



VOLVO BM ON- AND OFF-ROAD SUSPENSION

Front axle

Two rubber springs with bottoming absorption on either side. Stabilizer. Two shock absorbers on either side.



SERVICE REFILL CAPACITIES

	LITRES	US gal	UK gal
Crankcase, incl. filter, total	18.5	4.9	4.1
at change	16	4.2	3.5
Cooling system	30	8.0	6.6
Fuel tank	280	74	62
Gearbox, total	23	6.1	5.1
Dropbox	6	1.6	1.3
Front axle	35	9.2	7.7
Rear axle	47	12.4	10.3
Hydraulic system	160	42	35
Brake fluid reservoir	3×0.5	3×0.13	3×0.10



PNEUMATIC SYSTEM

Compressor:
 Capacity 425 l/min (15 ft³/min)
 at 2,060 rpm

Drive Gear drive

Outlet for tyre inflation

Automatic antifreeze pump

Pressure regulator:
 Relief pressure 730–800 kPa (106–116 psi)

Compressed air reservoir:
 Volume 6+30+30 litres = 66 litres
 (17.4 US gal, 14.5 UK gal)



CAB

Volvo BM safety cab, tested and approved in accordance with ROPS and the impact test method. Meets requirements for trucks, tractors and construction machines. The cab is mounted on rubber pads, which contributes towards low vibration sensations. Filtered air and pressurized cab.

Number of exits: 3
 Driver's seat Flameproof upholstery
 Extra seat For passenger
 Internal noise level 77 dB (A)



TIPPING MECHANISM

Tipping cylinder: 4-stage, of which the 2 top stages are double-acting

Tipping time with load 12 s

Lowering time 22 s

Tipping angle 65°

Tipping stop Built into tipping cylinder



FRAMES

Front and rear frames incorporate closed box sections with "soft" weld toes around joints to minimize stress concentrations.



WEIGHTS

Working weights (body with wear plates)

		Front axle	Rear axle	Total weight
Working weight	kg (lb)	8,850 (19,511)	6,450 (14,220)	15,300 (33,730)
Payload	kg (lb)	3,400 (7,495)	19,100 (42,108)	22,500 (49,604)
Total weight	kg (lb)	12,250 (27,006)	25,500 (56,328)	37,800 (83,335)



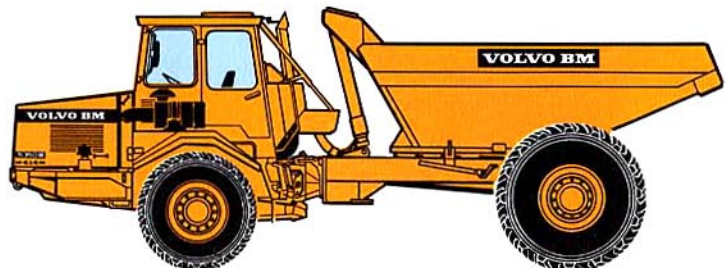
GROUND PRESSURE

At 15% slump of unladen diameter and weights as above.

		Tyres	Unladen	With 22.5 ton load
Front axle,	kPa (lb/in ²)	23.5 R25*	95 (13.8)	131 (19.0)
Rear axle,	kPa (lb/in ²)	29.5 R25**	48 (7.0)	191 (27.8)
Cone penetrometer value at a depth of 250 mm (9.8 in)				73

Standard body equipped with exhaust gas ducts

The standard body is designed for hauling most types of material. The sides and wear plates have a yield strength of 110 kgf/mm², a tensile strength of 130 kgf/mm² and a hardness of 360–440 HB.



* In the case of bodies with struck volumes of less than 10 m³ (13 yd³), heaped volume is given to the nearest half m³. In the case of bodies with struck volumes of 10 m³ (13 yd³) or more, heaped volume is given to the nearest whole m³. Struck volume is given in m³ (yd³) to one decimal place.

Body volumes SAE 2:1*		
Struck, m ³ (yd ³)	10.1 (14.4)	
Heaped, m ³ (yd ³)	13.0 (17.0)	



HYDRAULICALLY OPERATED TAILGATE (Optional)

The tailgate can be used in all types of bulk haulage and enables the dumptruck to climb steep grades without the risk of spillage. Moreover, it increases the heaped volume to 14 m³ (18.3 yd³). The function of the tailgate has priority, which means that the body cannot be raised until the tailgate is open all the way. The tailgate is operated by means of the tipping control.

STANDARD EQUIPMENT



SAFETY & COMFORT

- ROPS-cab
- Cab heater with defroster and filtered fresh air intake
- Air conditioning
- Ergonomically designed and adjustable driver's seat
- Heated seat
- Windshield wipers
- Windshield washers
- Rear-view mirrors
- Sun visor
- Attachment points for safety belt
- Cigarette lighter and ashtray
- Tinted glass
- Horn
- Lights: headlights, main/dipped/asym. parking lights, reverse lights, direction indicators, brake lights
- tail lights
- cab lighting
- instrument lighting
- Steering joint lock
- Headlight washers
- Indicator for air cleaner
- Complete tyre inflation kit
- Protective grille for rear window
- Roof hatch
- Tool box
- Tool kit
- Speedometer
- Tachometer
- Anti-theft lock
- Rider seat
- Hazard flashers
- Mudguards
- Fold-up boarding steps

Body equipment

- Exhaust gas heating
- Standard body



ENGINE & ELECTRICAL SYSTEM

- Electrical outlet
- Battery disconnect switch
- Electrical system
- Alternator
- Central warning lamp: hydraulic oil level, fault in steering system, brake fluid level, brake pressure, coolant level, engine oil pressure, engine overspeed, air filter, battery charging, gearbox temperature
- Pilot lamps for: battery charging, main beams, direction indicators, preheating
- longitudinal differential lock
- steering function
- ground-dependent pump
- Warning lamp for: low hydraulic oil level, steering function, engine-dependent pump, brake fluid level, low brake pressure, parking brake, engine oil pressure, engine overspeed, gearbox temperature, air filter
- Gauges for: air pressure, engine temperature, fuel, speed recorder or tachograph



DRIVE TRAIN

- Torque converter
- Automatic gearbox
- Automatic lock-up
- Dropbox with high/low gear unit
- Longitudinal differential lock
- Transverse differential lock
- Tyres: front 23.5 R 25*, rear 29.5 R 25**

OPTIONAL EQUIPMENT

(Standard equipment on certain markets)

- Safety belt
- Compressor horn
- Rotating beacon with collapsible mount
- Heated rear-view mirror
- Extra fuel filter
- Radio
- Working lights, front
- Mudguard widener, front mudguard 2.7 m
- Oil-bath air cleaner
- Automatic cutouts
- Electromagnetic retarder
- Lock-up valve
- Towing schackle
- 30 km/h variant
- Tachograph
- Overhead guard FOPS
- Low-emission engine
- Collision guard
- Exhaust gas cleaning
- Turnaround system (optional)
- Tailgate

VOLVO BM

VOLVO BM AB ESKILSTUNA SWEDEN

Under our policy of continual product improvement, we reserve the right to change specifications and design without notice. The illustrations do not necessarily show the standard version of the machine.

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ENGELSKA

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