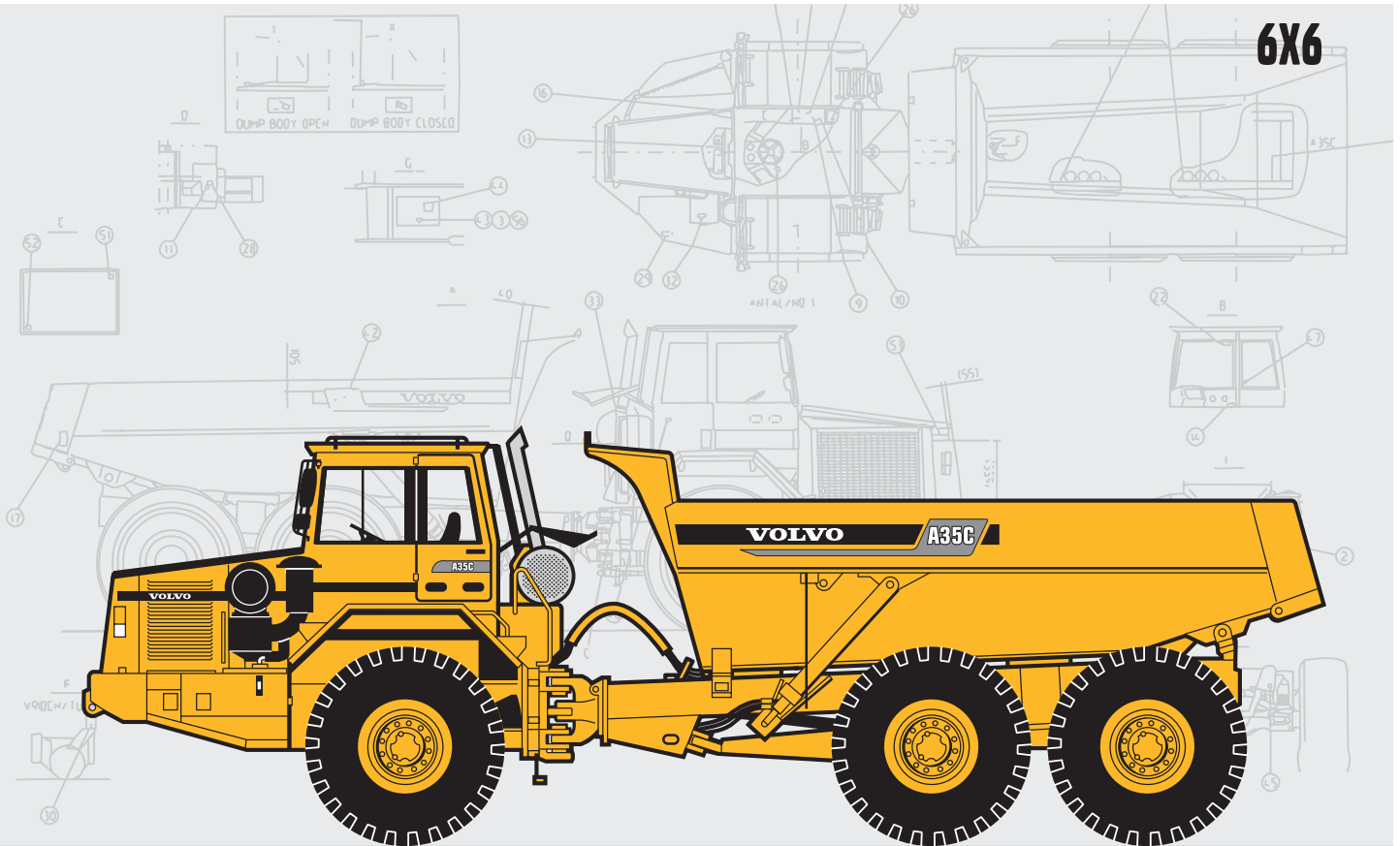


VOLVO ARTICULATED HAULER

A35C



- **Engine output SAE J1349:**
Net 262 kW 351 hp
Gross 267 kW 358 hp
- **Body volume:**
19 m³ 25 yd³
- **Load capacity:**
32 t 35 sh ton
- **Volvo High-performance, low-emission** direct-injected, turbocharged, intercooled diesel engine as standard.
- **Electronically controlled, fully automatic** powershift transmission.
- **Variable, hydraulic retarder** as standard.
- **Dropbox with longitudinal diff. lock** and high and low gear ranges.
- **100% lock-up diff. locks.** One longitudinal and three transverse diff. locks.
- **Volvo rough terrain suspension**, high ground clearance and individually oscillating bogie and front axles.
- **Load and dump brake.**
- **Low interior noise level.**
- **Adjustable steering wheel.**

VOLVO



ENGINE

Volvo 6-cylinder, in-line, direct-injected, intercooled turbo-charged, 4-cycle low-emission diesel engine with overhead valves and wet replaceable cylinder linings.

Meets USA (EPA) and California off-road regulation 1996.

Fan: Hydrostatic-driven, thermostatically controlled radiator fan, consuming power only when needed.

Make	Volvo	
Model	TD122 KME	
Max power at	35 r/s	2100 rpm
SAE J1349 Gross	267 kW	358 hp
Flywheel power at	35 r/s	2100 rpm
SAE J1349 Net	262 kW	351 hp
DIN 6271*	262 kW	351 hp
Max. torque at	18,3 r/s	1100 rpm
SAE J1349 Gross	1595 Nm	1176 lbf ft
SAE J1349 Net	1585 Nm	1169 lbf ft
DIN 6271 **	1585 lbf ft	1169 Nm
Displacement total	12 l	732 in³
Bore	130 mm	5.1 in
Stroke	150 mm	5.9 in
Compression ratio	16:1	

* with fan at normal speed. With fan operating at full speed, the flywheel power is 249 kW **334 hp**, which corresponds to DIN 70020.

** with fan at normal speed. With fan operating at full speed, the maximum torque is 1450 Nm **1069 lbf ft**, which corresponds to DIN 70020.



ELECTRICAL SYSTEM

Voltage	24 V	
Battery capacity	2x170 Ah	
Alternator	1,65 kW	60 A
Starter motor	6,6 kW	8.8 hp



SERVICE CAPACITIES

Crankcase	31 l	8.2 US gal
Cooling system, exchange	63 l	16.6 US gal
Cooling system, totally	90 l	23.8 US gal
Transmission total	40 l	10.6 US gal
Dropbox	8 l	2.1 US gal
Front axle	39 l	10.3 US gal
First bogie axle	41 l	10.8 US gal
Second bogie axle	40 l	10.6 US gal
Brake hydraulics	31 l	8.2 US gal
Brake oil tank	11 l	2.9 US gal
Hydraulic tank	150 l	39.6 US gal
Hydraulic system	194 l	51.3 US gal
Fuel tank	360 l	95.1 US gal



DRIVETRAIN

Torque converter: Single stage with free-wheeling stator and automatic lock-up in all ranges.

Transmission: Electronically controlled, fully automatic planetary transmission with six gears forward and two in reverse.

Drop box: Volvo with 2-stage design, power takeoff and differential locking.

Axles: Volvo 6-wheel drive. All axles have transverse diff. locks with 100% locking capability and fully floating axle shafts with planetary-type hub reductions.

Differential locks: One longitudinal and three transverse. All with 100% locking capability.

Torque converter	2.37:1
Transmission	Volvo PT 1761
Dropbox	Volvo FL 762
Axles	Volvo AH 63

Speeds with tires 26.5 R 25

Low gear forward

1	5,3 km/h	3.3 mph
2	7,6 km/h	4.7 mph
3	13,8 km/h	8.6 mph
4	19,9 km/h	12.4 mph
5	25,3 km/h	15.7 mph
6	33,6 km/h	20.9 mph

High gear forward

1	8,6 km/h	5.3 mph
2	12,4 km/h	7.7 mph
3	22,3 km/h	13.9 mph
4	32,3 km/h	20.1 mph
5	41,0 km/h	25.5 mph
6	54,5 km/h	33.8 mph

Low gear reverse

1	8,5 km/h	5.3 mph
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High gear reverse

1	8,0 km/h	5.0 mph
2	13,8 km/h	8.6 mph



SUSPENSION

Volvo suspension system. Totally maintenance-free.

Front axle: One rubber spring with bottoming absorption on each side. Stabilizer. Two shock absorbers on each side. The front axle is suspended at three points, allowing oscillation in rough terrain.

Bogie: Volvo's unique rough terrain bogie, which permits individual oscillation between the axles.



BRAKE SYSTEM

Fully hydraulic disc brakes on all axles. Two circuits. Designed to comply with ISO 3450 and SAE J1473 at total machine weight.

Circuit division: One for front axle and one for bogie axles.

Parking brake: Spring-applied, air-released disc brake on the propeller shaft, designed to hold a loaded machine on a grade up to 18%. When the parking brake is applied, the longitudinal differential is locked.

Load and dump brake: With the engine running, the service brake on the bogie axles is applied together with the parking brake.

Compressor: Gear-driven by engine transmission.

Transmission retarder: Hydraulic, integrated in transmission as standard. Infinitely variable with the retarder pedal or full effect applied via the service brake pedal.

Exhaust retarder: Standard.

For retarding capability, including hydraulic transmission retarder, engine and exhaust retarder.

See graph on page 4.



HYDRAULIC SYSTEM

Pumps: Four engine-dependent, variable piston pumps mounted on flywheel power takeoffs. One ground-dependent piston pump for supplementary steering mounted on the dropbox.

Filtration: Through two paper filters with magnetic cores.

Pump capacity per pump . . .	100 l/min	26.5 US gpm
at shaft speed	34 r/s	2040 rpm
Working pressure	21 MPa	3048 psi



CAB

Volvo cab, tested and approved according to ROPS standard ISO 3471 and SAE J1040/APR 88, FOPS standard ISO 3449 and SAE J231. Mounted on rubber pads which effectively reduce vibrations. Adjustable steering wheel. Radio/Contronic console in ceiling.

Heater and defroster: Filtered air and pressurized cab. Three-speed fan.

Operator's seat: Ergonomically designed adjustable seat with air suspension, electric heating, flameproof upholstery and retractable seat belt.

Trainer seat: Standard, with seat belt and back rest.

Number of exits	2
Internal sound level acc. to ISO 6394 at max. speed . . .	76 dB (A)



STEERING SYSTEM

Hydromechanical articulated steering with mechanical feedback. 3,4 turns lock-to-lock.

Cylinders: Two double-acting steering cylinders.

Supplementary steering: Complies with ISO 5010 at total machine weight.

Steering angle: ± 45°



BODY

Body: Hardened and tempered steel body with high-impact strength.

Cylinders: Two 3-stage, of which one stage is double-acting.

Tipping angle	73°
Tipping time with load	15 s
Lowering time	18 s
Body plate thickness	
Front	8 mm 5/16 in
Sides	12 mm 1/2 in
Bottom/chute	16 mm 5/8 in
Yield strength	1000 N/mm ² 145,000 psi
Tensile strength	1250 N/mm ² 181,000 psi
Hardness min.	360 – 440 HB



WEIGHTS

Operating weight includes all fluids and operator. Standard machine.

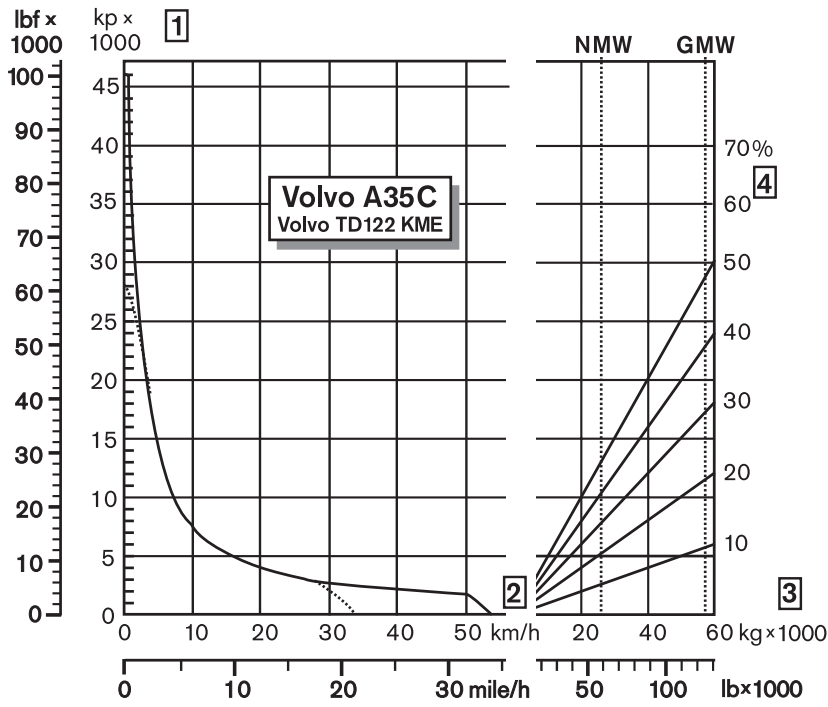
Operating weight		
Front	13250 kg	29,210 lb
Rear	12450 kg	27,450 lb
Total	25700 kg	56,660 lb
Payload	32000 kg	70,550 lb
Total weight		
Front	16450 kg	36,270 lb
Rear	41250 kg	90,940 lb
Total	57700 kg	127,210 lb



GROUND PRESSURE

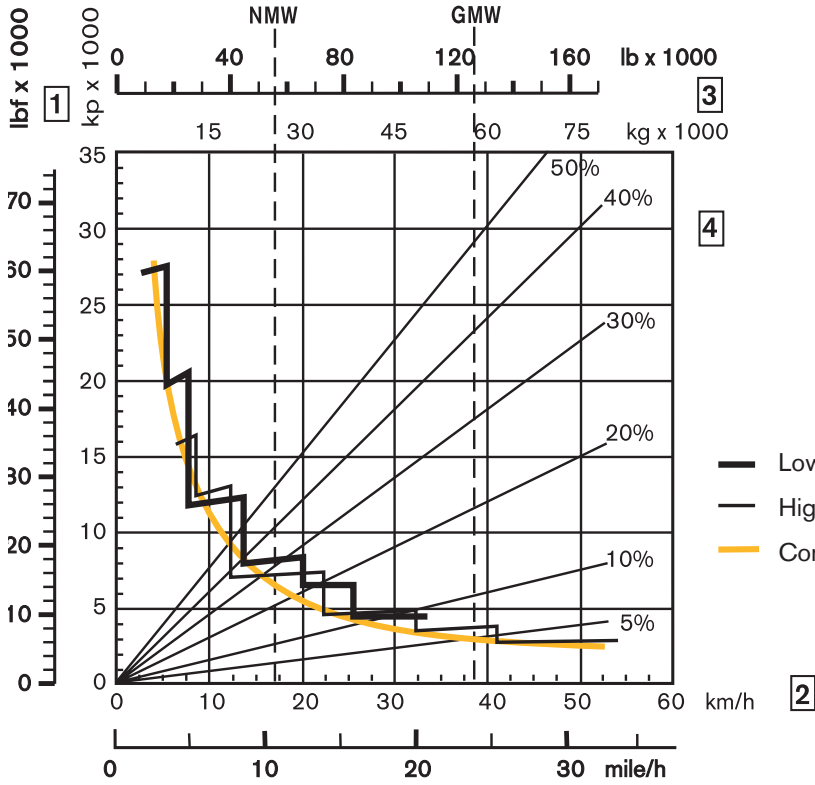
At 15% sinkage of unloaded radius and specified weights.

Unloaded		
Front	111 kPa	16.1 psi
Rear	52 kPa	7.5 psi
Loaded		
Front	138 kPa	20.0 psi
Rear	174 kPa	25.2 psi



RIMPULL

- 1 Rimpull in kp lbf
- 2 Speed in km/h mph
- 3 Machine weight in kg lb
- 4 Grade in % + rolling resistance in %.



RETARDATION PERFORMANCE

(Exhaust retarder + hydraulic transmission retarder)

- 1 Braking effort in kp lbf
- 2 Speed in km/h mph
- 3 Machine weight in kg lb
- 4 Grade in % - rolling resistance in %.

- Low gear range
- High gear range
- Continuous

INSTRUCTIONS

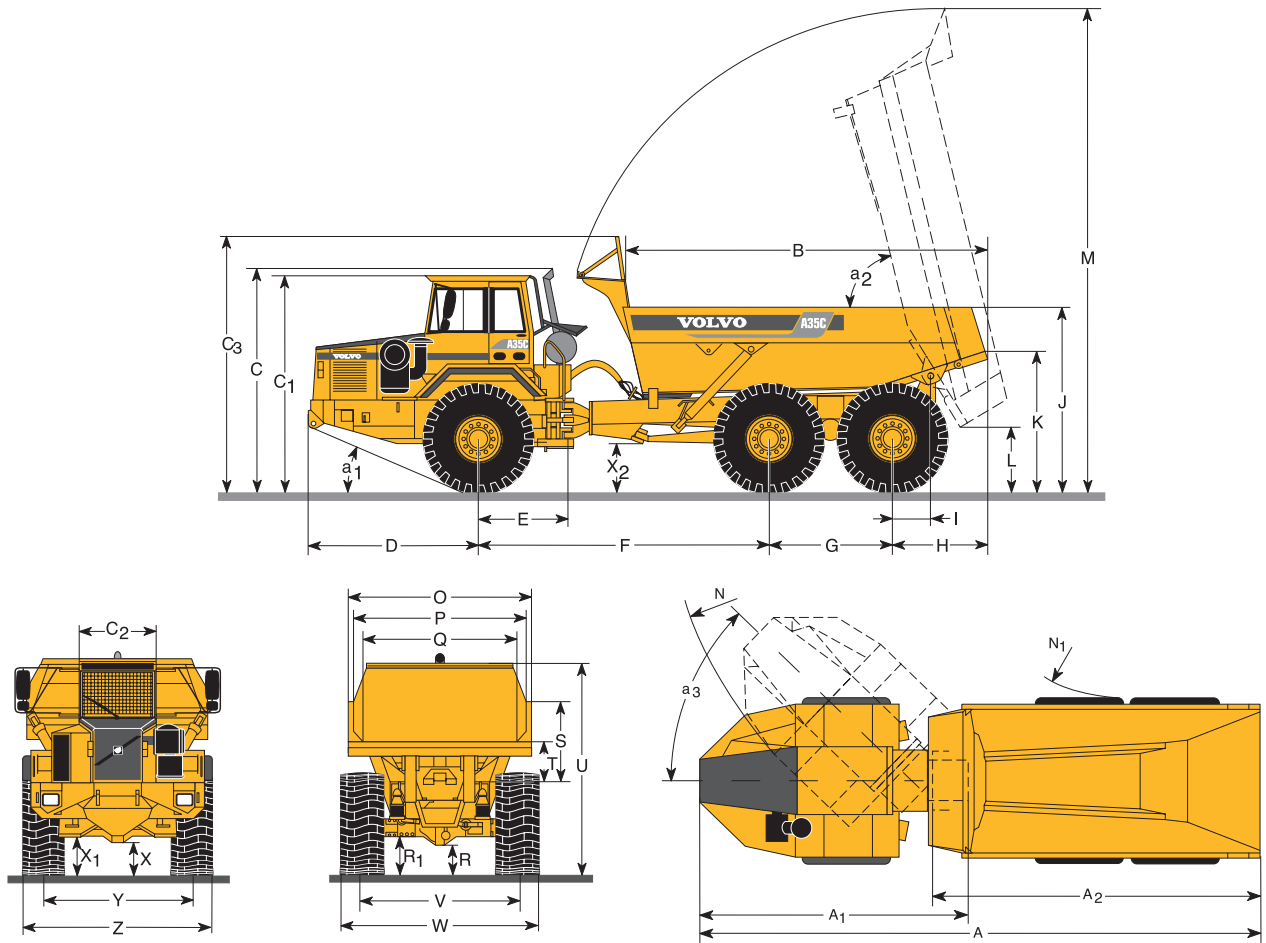
Diagonal lines represent total resistance (grade % plus rolling resistance %).

Charts based on 0 % rolling resistance, standard tires and gearing, unless otherwise stated.

In the retardation chart, the diagonal lines represent the “total resistance” as well (here in downhill grades it is the total extra pushing force), which is the grade in % minus the rolling resistance in %.

- A. Find the diagonal line with the appropriate total resistance on the right-hand edge of the chart.
- B. Follow the diagonal line downward until it intersects the actual machine weight line, NMW or GMW.
- C. Draw a new line horizontally to the left from the point of the intersection until the new line intersects the rimpull or retardation curve.
- D. Read down for vehicle speed.

DIMENSIONS Volvo A35C 6x6 (unloaded)



A	10898 mm	35'9"	D	2959 mm	9'8"	O	3006 mm	9'10"	W	3200 mm	10'6"
A ₁	5232 mm	17'	E	1270 mm	4'2"	P	2770 mm	9'1"	X	519 mm	1'8"
A ₂	6348 mm	20'10"	F	4495 mm	14'9"	Q	2510 mm	8'3"	X ₁	559 mm	1'10"
B	5554 mm	18'3"	G	1820 mm	6'	R	570 mm	1'10"	X ₂	696 mm	2'3"
C	3604 mm	11'10"	H	1624 mm	5'4"	R ₁	670 mm	2'2"	Y	2522 mm	8'3"
C ₁	3510 mm	11'6"	I	725 mm	2'5"	S	1274 mm	4'2"	Z	3200 mm	10'6"
C ₂	1330 mm	4'4"	J	2922 mm	9'7"	T	595 mm	1'11"	a ₁	25°	
C ₃	3997 mm	13'1"	K	2231 mm	7'4"	U	3486 mm	11'5"	a ₂	73°	
	with optional spill guard in upright position		L	1054 mm	3'5"	V	2522 mm	8'3"	a ₃	45°	
			M	7529 mm	24'8"						
			N	8694 mm	28'6"						
			N ₁	4300 mm	14'1"						

LOAD CAPACITY (Body volumes according to SAE 2:1)

US body load capacity 32000 kg **35 sh tn**
 Body, struck. 14,8 m³ **19 yd³**
 heaped 19 m³ **25 yd³**

With overhung tailgate (optional)
 Body, struck. 15,2 m³ **20 yd³**
 heaped 19,8 m³ **26 yd³**

STANDARD EQUIPMENT

<p>Safety ROPS/FOPS cab Anti-slip material on hood and fenders Hazard flashers Horn Protective grille for rear window Rearview mirrors Reverse alarm Secondary steering Speedometer, electric Steering joint locking assembly Trainer's seat with seat belt and back rest Windshield wipers with interval Windshield washers</p> <p>Comfort Adjustable steering wheel Ashtray Cab heater with filtered fresh air and defroster Cigarette lighter Cup holder Contronic information display Ergonomically designed and adjustable operator's seat with air suspension, electric heating and retractable seat belt Radio/Contronic console in ceiling Sun visor Tinted glass</p> <p>Engine Exhaust retarder Intercooler Low-emission engine Oil drainage hose Preheating coil Turbocharger</p>	<p>Electric system Alternator Battery disconnect switch Electrical outlet (24V)</p> <p><i>Lights:</i></p> <ul style="list-style-type: none"> • Headlights, high/low beam • Parking lights • Turn signals • Rear lights • Brake lights • Reverse lights • Cab lighting • Instrument lighting • Control panel lighting <p><i>Gauges for:</i></p> <ul style="list-style-type: none"> • Air pressure • Engine temperature • Engine rpm • Fuel • Hours • Transmission oil temperature <p><i>Pilot lamps for:</i></p> <ul style="list-style-type: none"> • Turn signals • Bogie axles diff. lock • Front axle diff. lock • Longitudinal diff. lock • Lights • High beam • Preheating coil • High-low gear range 	<p><i>Warning lamps for:</i></p> <ul style="list-style-type: none"> • Air cleaner, engine • Battery charging • Body up • Brake pressure • Brake fluid level • Coolant level • Engine oil pressure • Engine temperature • Engine-dependent steering pump • Ground-dependent steering pump • Parking brake • Transmission/dropbox malfunction <p><i>Central warning for:</i></p> <ul style="list-style-type: none"> • Battery charging • Brake oil level • Brake pressure • Body up • Engine oil pressure • Engine overspeed • Steering function • Transmission/dropbox malfunction 	<p>Drivetrain Torque converter with automatic lock-up Fully automatic transmission Hydraulic, variable transmission retarder Dropbox with high/low range Longitudinal differential lock Differential lock front axle Differential lock first bogie axle Differential lock second bogie axle</p> <p>Brakes Two circuits Fully hydraulic disc brakes Brake shields Load and dump brake Parking brake Retarder activation in brake pedal</p> <p>Body Body with exhaust ducts</p> <p>External Rear mudflaps</p> <p>Tires 26.5 R 25</p>
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OPTIONAL EQUIPMENT

<p>Service and maintenance Toolbox Central lubrication</p> <p>Engine Coolant filter Engine coolant preheater, 120 V Oil-bath air cleaner</p>	<p>Electrical Work lights, roof-mounted</p>	<p>Cab Air-conditioning Electrically heated rearview mirrors Kit for radio installation</p>	<p>Body Body heating Extra front spill guard Overhung tailgate, wire-operated Upper side extensions, 100 mm 4" Rock liner</p>
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Under our policy of continual product improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

VOLVO

**Volvo Construction
 Equipment Group**

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