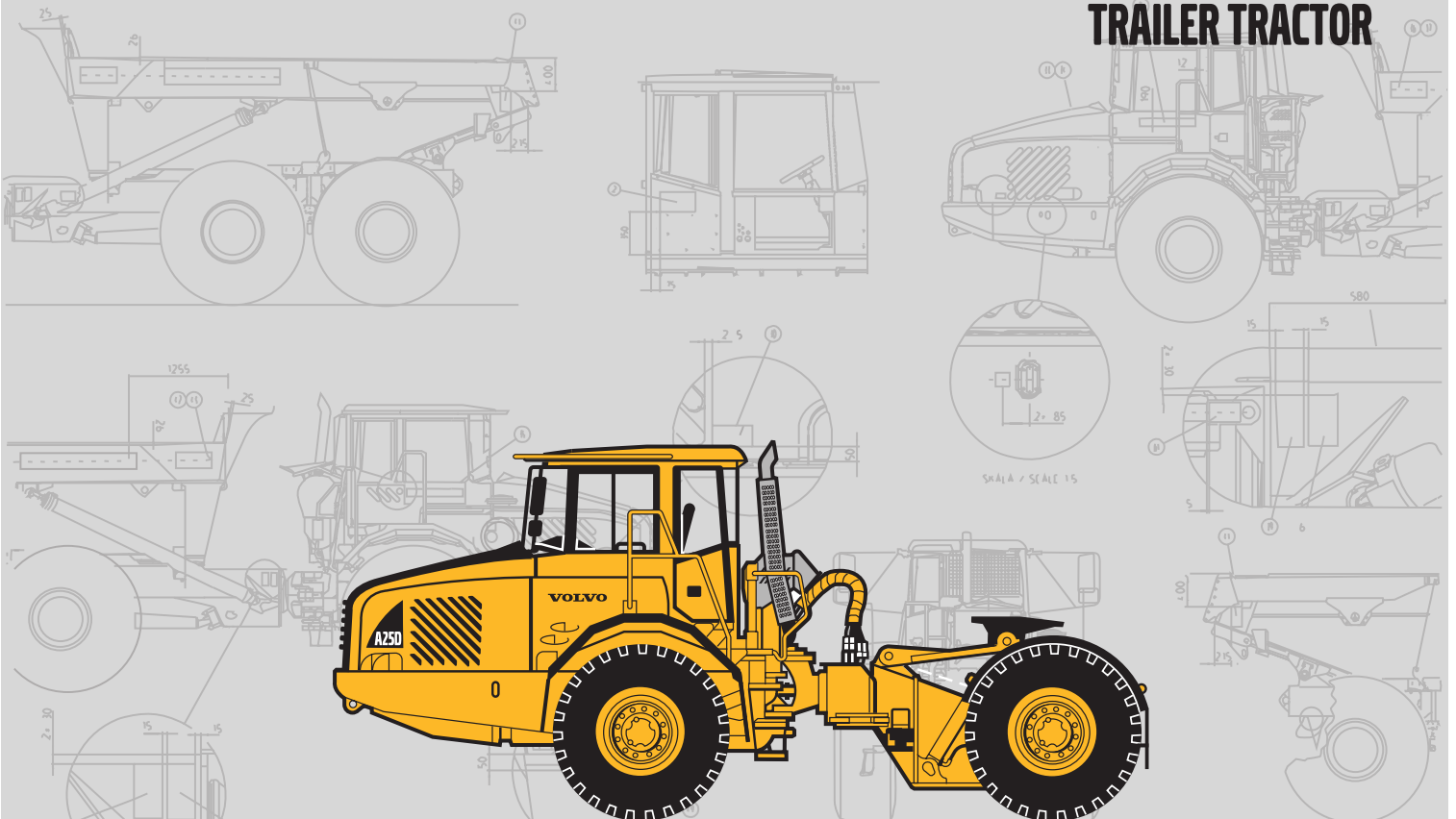


VOLVO ARTICULATED HAULER

A250

TRAILER TRACTOR



- **Engine output:**
SAE J1995, Gross 228 kW (310 hp)
SAE J1349, Net 227 kW (309 hp)
- **Load capacity:**
32 t
- **Volvo cab**, designed for high operator visibility, ergonomics and comfort.
- **Reduced maintenance time** with no daily or weekly grease points.
- **Electronic Operator's Communication System**
- **Volvo high performance – low emission**, electronically controlled, direct injected, turbocharged, intercooled diesel engine.
- **Fully automatic planetary transmission**, electronically controlled.
- **Hydraulic retarder** integral in transmission.
- **Dropbox with longitudinal differential lock**
- **100% lock-up differentials.** One longitudinal and two transverse differential locks.
- **Front axle with three-point suspension.**

Limited Sales area:
Europe only

VOLVO

The A25D Trailer Tractor in detail

Service

The computerized information system monitors all fluid levels, minimizing daily and weekly service times.

Time to next service and the status of vital vehicle systems is shown to the operator on a display in the instrument panel.

Service accessibility: Fold-down front grill with access ladder to remote filter bank, located in front of engine.

Large, 90° opening hood for total engine access.

Remote drain hoses and swing-out radiator for easy cleaning.

Fill capacities

Crankcase.....	38 l
Fuel tank	400 l
Cooling system	71 l
Transmission total	41 l
Dropbox.....	8,5 l
Front axle	33 l
Rear axle.....	34 l
Hydraulic tank	180 l

Engine

Volvo inline 6-cylinder, direct injected electronically controlled, turbocharged, intercooled 4-stroke low-emission diesel engine with wet replaceable cylinder liners.

Fan: Hydrostatically driven, thermostatically controlled variable speed radiator fan consuming power only when needed.

Engine brake: Exhaust retarder.

Make, model	Volvo D10BACE2*
Make, model	Volvo D10BADE2**
Max power at	33,3 r/s (2 000 r/min)
SAE J1995 Gross	228 kW (310 hp)
Flywheel power at	33,3 r/s (2 000 r/min)
SAE J1349 Net, DIN 6271***	227 kW (309 hp)
Max torque at	22,5 r/s (1 350 r/min)
SAE J1995 Gross	1 375 Nm
SAE J1349 Net, DIN 6271***	1 365 Nm
Displacement total	9,6 l

*) Meets US (EPA) step 2, California (CARB) step 2 and Europe (EU) step 2.

**) Meets Europe (EU) step 2.

***) with fan at normal speed.

With fan operating at full speed, the flywheel power is 214 kW (291 hp) and maximum torque is 1 276 Nm which corresponds to DIN 70020.

Electrical system

All cables, sockets and pins are identified. Cables are enclosed in plastic conduits and secured to main frame.

Halogen lights. Prewired for options.

Connectors meet IP67 standard for waterproofing as necessary.

Voltage	24 V
Battery capacity	2x170 Ah
Alternator.....	1,54 kW (55 A)
Starter motor.....	6,6 kW (9 hp)

Drivetrain

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

Transmission: Fully automatic planetary transmission with six forward gears and two reverse gears, with a built-in variable hydraulic retarder.

Dropbox: Volvo design, single-stage.

Axles: Volvo design with fully floating axle shafts and planetary type hub reductions.

Differential locks: One longitudinal and two transverse with 100% lock-up function, operator selectable on the move.

Configuration: 4-wheel drive.

Torque converter.....	2,37:1
Transmission, Volvo	PT 1560
Dropbox.....	IL 1
Front axle, Volvo	AH 56
Rear axle, Volvo	AH64

Speed:

Forward	
1	8 km/h
2	12 km/h
3	22 km/h
4	30 km/h
5	30 km/h
6	30 km/h
Reverse	
1	8 km/h
2	13 km/h

Brake system

Dual circuit system with air-hydraulic disc brakes. Meets ISO 3450 and SAE J1473 at total machine weight.

Service brakes: Dry discs on all wheels.

Circuit division: One circuit for front axle and one for rear axle.

Parking brake: Spring-applied disc brake on the propeller shaft. When the parking brake is applied, the longitudinal differential is locked.

Compressor: Gear-driven by engine transmission.

Retarder: Hydraulic, infinitely variable, integrated in transmission.

Total retarding capability including transmission retarder and exhaust retarder, see graph.

Steering system

Hydromechanical self-compensating articulated steering for safe and accurate high-speed hauling. Fast acting, low effort steering with 3,4 turns lock-to-lock for slow speed maneuverability.

Cylinders: Two double-acting steering cylinders.

Secondary steering: Meets ISO 5010 at total machine weight.

Steering angle: ±45°

Suspension

Volvo's unique maintenance-free 3-point suspension system.

Front axle: One hollow rubber spring on each side. A cross stay provides the stability. Two shock absorbers on each side.

Rear axle: No suspension

Cab

Volvo cab, ergonomically designed for high operator comfort and excellent visibility.

Wide threshold-free door opening and ergonomic cab entrance. Insulating rubber pads to reduce vibrations. Tilt/ telescopic steering wheel.

Stick steering system for reverse travelling (optional). Overhead console for radio and storage. Dash-mounted Operator's Communication System. Storage bins. Extra throttle and service brake pedal for reverse travelling (optional)

Standard: ROPS/FOPS tested and approved. (ISO 3471, SAE J1040) / (ISO 3449, SAE J231) standards.

Heater and defroster: Filtered fresh air, four-speed fan and pressurized cab to maintain a clean operating environment. Multi-level air outlets and separate defroster vents for all windows.

Operator's seat: Adjustable operator's seat with flameproof upholstery. Retractable seat belt. Rotating function (option).

Armrests prepared for joysticks (option). Sound level in cab, ISO 6396 74 dB (A)

Hydraulic system

Load-sensing, variable displacement, piston pumps, consume power only when needed.

Pumps: Four engine-driven variable displacement load-sensing piston pumps driven by the flywheel PTO. One ground-dependent piston pump for secondary steering mounted on the dropbox.

Filter: One fibreglass filter with magnetic core.

Pump capacity per pump:

Engine-dependent.....	140 l/min
Ground-dependent	142 l/min
at shaft speed	52,5 r/s (3 150 r/min)
Working pressure	25 MPa

Trailer Connections (optional):

Pressure and return line quick couplings behind the cab.

Flow at 1000 rpm.....	148 l/min
Pressure (max)	25 MPa

Fifth Wheel

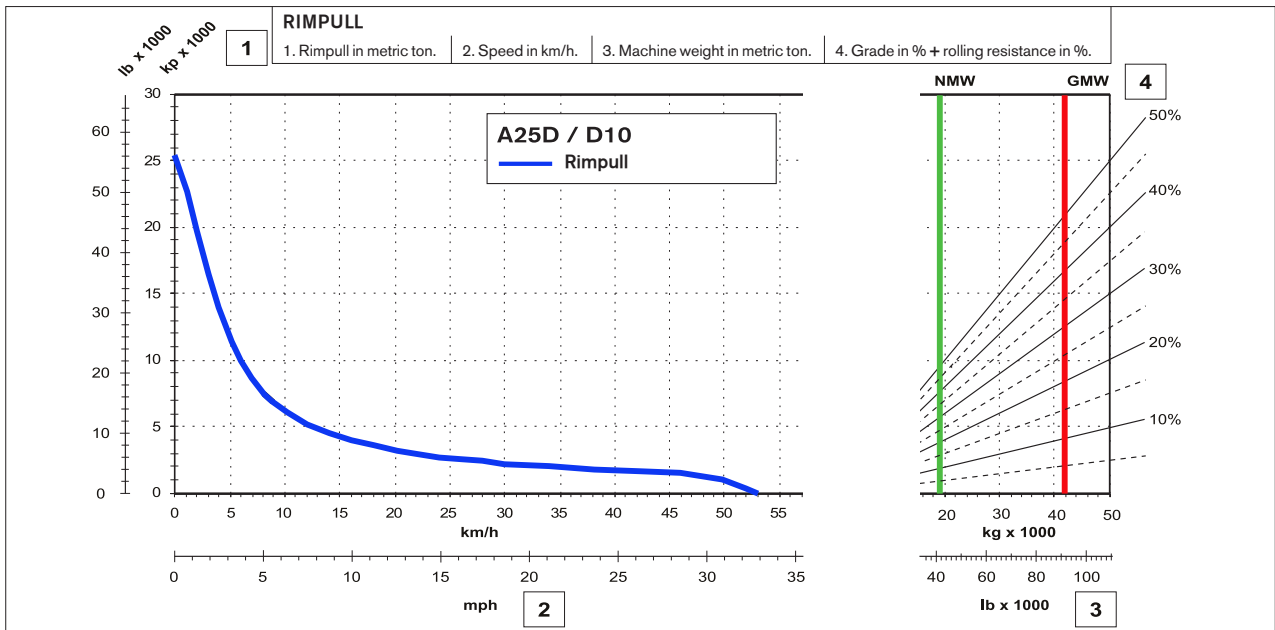
Type: Jost JSK 38G

King-pin size: 3,5" std. - 2" (optional)

Assembly system to lift frame: Jost

Other: Cardanic suspension. Allowed for forced motion of trailer

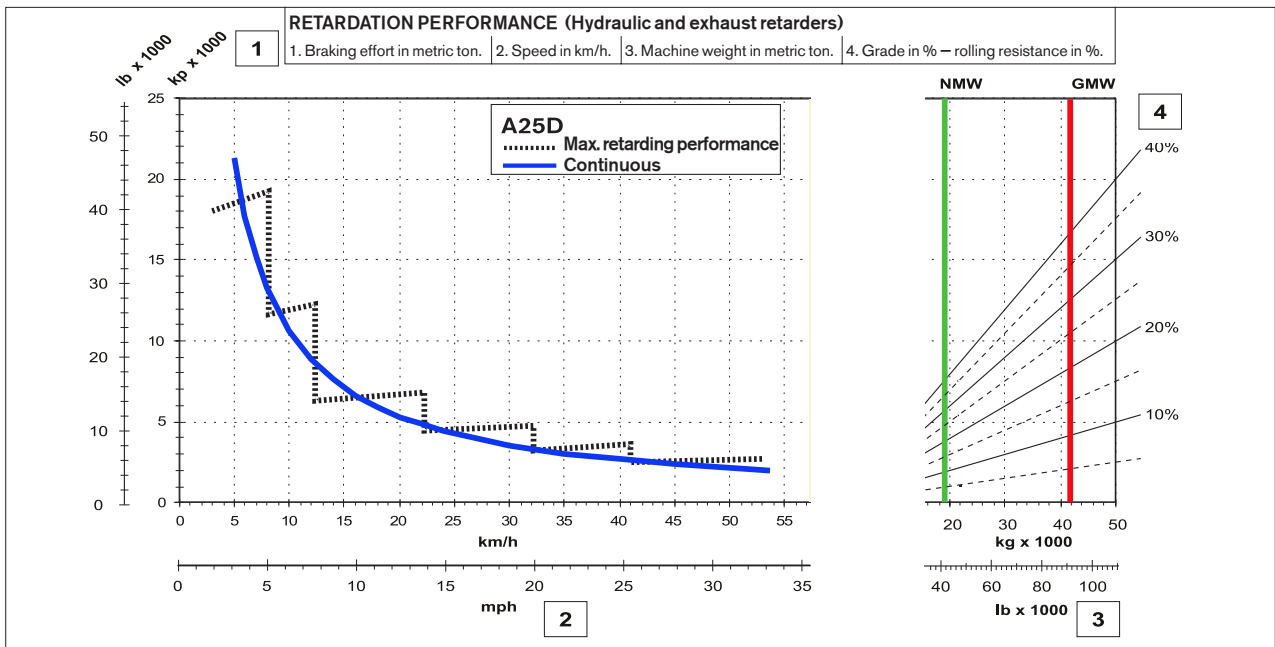
Lift system: Two single stage double acting cylinders with pilot operated locking valves and pressure relief valve.



Instructions

Diagonal lines represent total resistance (grade % ± rolling resistance %). Charts based on 0% rolling resistance, standard tires and gearing, unless otherwise stated.

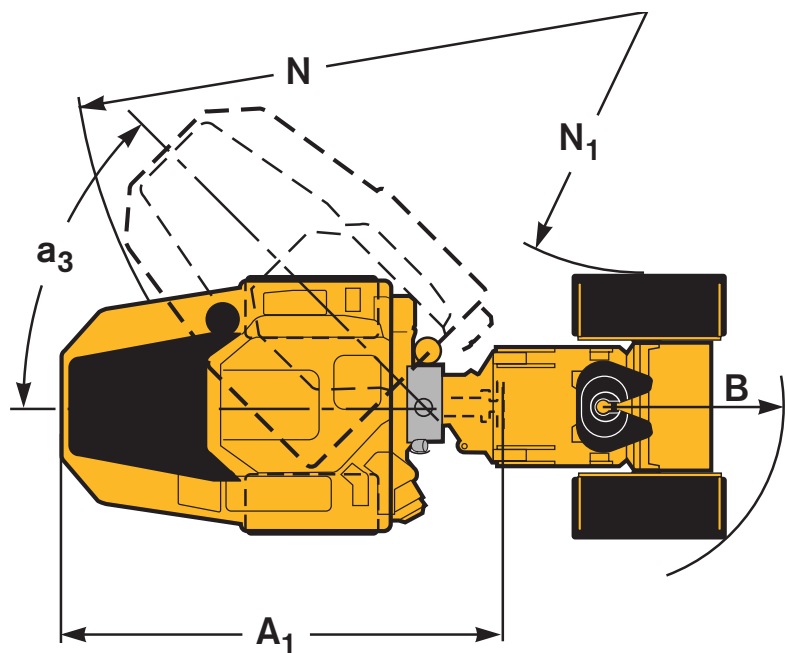
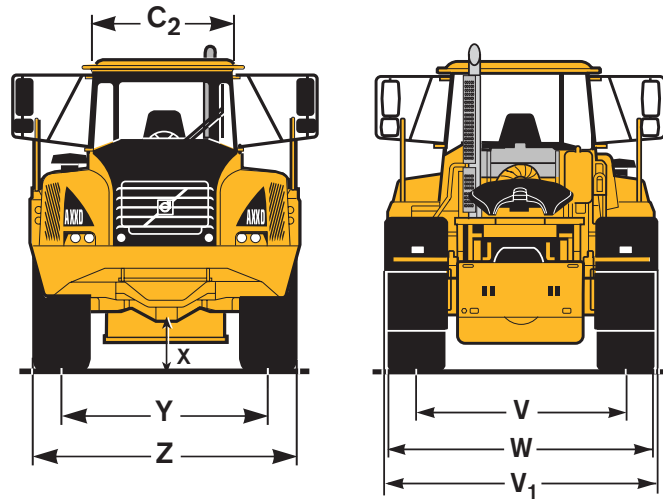
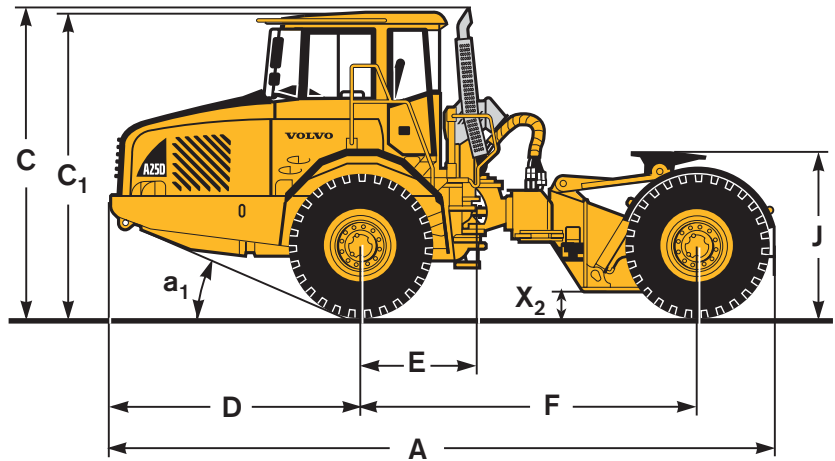
- Find the diagonal line with the appropriate total resistance on the right-hand edge of the chart.
- Follow the diagonal line downward until it intersects the actual machine weight line, NMW or GMW.
- Draw a new line horizontally to the left from the point of intersection until the new line intersects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



Specifications

Pos	Metric	Imp.
A	7 355 mm	24'2"
A ₁	4 954 mm	16'3"
B	1 956 mm	6'5"
C	3 470 mm	11'5"
C ₁	3 332 mm	10'11"
C ₂	1 768 mm	5'10"
D	2 764 mm	9'1"
E	1 210 mm	4'0"
F	3 710 mm	12'2"
J*	1 380 mm	4'6"
J**	1 920 mm	6'4"
J***	1 860 mm	6'1"
N	6 239 mm	20'6"
N ₁	2 758 mm	9'1"
V	2 258 mm	7'5"
V ₁	2 908 mm	9'6"
W	2 859 mm	9'5"
X ₂	350 mm	1'2"
Y	2 258 mm	7'5"
Z	2 859 mm	9'5"
a ₁	23,5°	23.5°
a ₃	45°	45°

Unloaded machine with 23,5R25
 J* Minimum height
 J** Maximum height
 J*** Maximum height loaded





Weights		Ground Pressure		Load Capacity	
Operating weight includes all fluids and operator and tires		At 15% sinkage of unloaded radius and specified weights.			
Tires	23,5R25		23,5R25		
Operating weight unloaded		Unloaded		Load capacity, fifth wheel 32 000 kg	
Front	11 000 kg	Front	111 kPa		
Rear	3 500 kg	Rear	37 kPa		
Total	14 500 kg	Loaded			
Payload, Fifth wheel	32 000 kg	Front	152 kPa		
Total weight		Rear	324 kPa		
Front	14 900 kg				
Rear	31 600 kg				
Total	46 500 kg				

STANDARD EQUIPMENT

Safety

ROPS/ FOPS protected cab
Service platform for ease of service
Anti-slip material on hood and fenders
Hazard lights
Horn
Rear-view mirrors
Secondary steering
Retractable 3-inch safety belt
Steering joint locking assembly
Safety bar for lift platform*
Intermittent wiper control
Windshield washers
Speed limiting device, 30 km/h *

Comfort

Tilt/telescopic steering wheel
Cab heater with filtered fresh air and defroster
Overhead console for radio and storage
Sun visor
Tinted glass
Can holder /storage tray
Cigarette lighter
Ashtray
Space for lunch cooler
Storage box

Engine

Direct injected, electronically controlled
Turbocharged, intercooled
Remote oil drain plug
Remote oil filters, for ease of access
Preheater for easier cold starts

Electrical system

55 A alternator
Battery disconnect switch
Extra 24 V socket for lunch cooler

Lights:

- Headlights
- Parking lights
- Direction indicators
- Rear lights
- Back-up lights
- Brake lights
- Cab lighting
- Instrument lighting

Operator information interface

Gauges:
• Speedometer
• Tachometer
• Brake pressure
• Fuel
• Transmission oil temperature

Pilot lamps for all switches
Pilot lights for all switches
Warning lights grouped and easy to read

Central positioned information display:

- Automatic pre-start checks
- Operation information, easy-to-find menu
- Troubleshooting diagnostics
- Hour meter
- Clock
- Machine settings

Drivetrain

Automatic transmission
Torque converter with automatic lock-up
Drop-box, single-stage
Hydraulic variable retarder
100% longitudinal differential lock
100% differential locks in all axles

Brakes

Air-hydraulic disc brakes
Two circuit brake system
Parking brake on prop shaft

Tires

23,5R25

Fifth Wheel

Lifting platform with two hydraulic cylinders *
3,5" King-pin system *
Manual King-pin locking system *
Cardanic suspension, Jost JSK 38G *

Other

Air drier

(* Special Standard Equipment)

OPTIONAL EQUIPMENT

Safety

Fire-extinguisher and first aid kit
Extra Central warning light, visible during reverse operation **

Service and maintenance

Tool kit with tire inflation unit
Electrical hood opening

Engine

Extra air cleaner, heavy-duty
Extra air cleaner, oil bath type
External emergency engine stop
Delayed engine stop
Electric engine heater (120V or 240V)
Engine and cab heater, diesel **
Fuel filter heater, electrical, 24V **
Fast fuel filling system **

Electrical

Work lights, roof mounted
Work lights, rear-facing, fender-mounted
Work lights (distance lights) on cab roof **
Rotating beacon, collapsible mount
Rotating beacon, extra
Back-up alarm
Rear vision system
Anti-theft system (prevents engine start)
Headlights for left-hand traffic
Alternator, heavy-duty 80 A
Battery charger **
Jump start connection, NATO **
Rear- and backup lights on cab roof **
Electric cab heater **

Cab

Air suspended, electrically heated operator's seat
Rotating drivers seat 180° **
Seat cover **
Armrests prepared for joysticks **
Instructor seat with seat belt
Electrically heated rear-view mirrors
Air conditioning
Radio installation kit
Radio
Cable kit for cab heater (120V or 240V)
Window tint film
Stick steering system for reverse travelling **
Steering wheel for reverse travelling **
Throttle pedal for reverse travelling **
Brake pedal for reverse travelling **
Rear-view mirrors for reverse travelling **
Exhaust pipe moved for reverse travelling **
Washer and wiper for rear window **
Vandalism protection for cab windows **
Rear-view mirror, close up **
Control lever for trailer brake **
Remote control device for Fifth Wheel locking mechanism **
Lowered cab roof
Roof rack **

External

Rubber fenders and mud flaps for rear wheels **

Hydraulic

Hydraulic tank, extra, 300 l **
Trailer hydraulic connections behind the cab, pressure and return line with quick couplers **

Fifth Wheel

2" King-pin system **
Central lubrication for Fifth Wheel **

Other

Synthetic hydraulic oil (biologically degradable)
Toolbox
Quick couplers for trailer brakes and lights located behind the cab **

Tires

650/65R25

(** Special Optional Equipment)



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

Construction Equipment

Ref. No 21 1 669 4164 English
Sweden 2003-04 ART
Volvo Växjö