



Dimensions & Weights

Overall dimensions

A Transport wheelbase	3250 mm
Wheelbase certified	4800-6900 mm
G Overall length	8959 mm
I Front overhang	2500 mm
J Rear overhang	3209 mm

Steering wheel location:

N-steer	1818 mm
C-steer	1648 mm

Frame height	870 mm
Frame height, rear	1694 mm
Approach angle	8.0 °
Departure angle	7.6 °

Track width with tyres 295/80R22.5" and steel disc rim	8.25"x22.5"
M Front	2069 mm
N Rear	1831 mm

Weights

Permitted front axle load	6500 kg
Permitted rear axle load	11500 kg
Permitted GVW	18000 kg

Engine

6-cylinder, 4-stroke turbo-charged intercooled diesel with overhead valves and electronically controlled direct injection. 4 valves per cylinder. On-board diagnostic, Volvo EMS2 engine control system, Exhaust

Pressure Governor for engine brake and warmholding function, closed crank case ventilation. Fuel filter (1 full flow prefilter, 1 full flow filter), oil filter (2 full flow, 1 bypass). Water cooled turbo charger with electronic waste gate control. Speed limit set to 100 km/h, 80 dB engine encapsulation.

Bore	120 mm
Stroke	138 mm
Displacement	9.36 dm ³ (l)
Idling speed	600 rpm
High idle speed	2000 rpm
Engine oil volume incl. filter	39 l

D9B 340

Output ISO 1585	255 kW (340 hp)
at	1900 r/m
Torque ISO 1585	1632 Nm
at	1200 r/m
Compression ratio	18:1

D9B 380

Output ISO 1585	286 kW (380 hp)
at	1900 r/m
Torque ISO 1585	1740 Nm
at	1200 r/m
Compression ratio	18:1

Engine fulfills Euro 4 emission requirements.

Optional Engine preheating

Fuel tanks

Two 150l tanks, mounted behind front axle. Fuel tanks capacity 300 l

Exhaust and Cooling System

Stainless steel exhaust system with SCR catalytic converter. AdBlue pump and 40 l urea tank (35 l used by the SCR muffler and 5 l is used for injectors cooling). Urea tank mounted on the left hand side. Catalytic converter is integrated with the silencer. Muffler sensor are linked to the On Board Diagnostics that alerts the driver if the level of air pollutants in the exhaust gases is excessive, and when AdBlue refilling is needed. 60 l urea tank as an option.

Fluid cooled, pressurized, sealed cooling system, pump driven by the engine. Of the tube and fin heat exchanger type radiator.

Optional Cyclone air filter

Transmission

Volvo AT2412C I-Shift

Manual gearbox, 12 forward gears, 4 reverse, automatic gear changing available, electronic control system. Integrated compact retarder.

Gear ratios: 14.94:1, 11.73:1, 9.04:1, 7.09:1, 5.54:1, 4.35:1, 3.44:1, 2.70:1, 2.08:1, 1.63:1, 1.27:1, 1.00:1. Rear gears: 17.48:1, 3.73:1, 4.02:1, 3.16:1.

Four transmission packages are available: Basic, Commuter, Line Haul or Tourist & Charter. Packages functions: Launch control, Enhanced shift strategy (C, LH,

T&C); Kick down (LH, T&C); Eco Roll, Smart cruise control (C, LH, T&C); Gear Selection Adjustment (T&C). Gear shifting lever standard (B, C) or professional (LH, T&C). Foot and hand retarder control.

ZF 6S-1600

Manual gearbox, 6 forward gears, 1 reverse, fully synchronized. Voith 120 retarder. Easy Gear Shift selector.

Torque conv	-
1st gear	7.72:1
2nd gear	4.42:1
3rd gear	2.66:1
4th gear	1.79:1
5th gear	1.28:1
6th gear	1.00:1
Reverse	7.09:1

Driveline - Rear axle and tyres

Rear axle

The Volvo RS 1228B single reduction axle with four alternative ratios available. The casing designed for higher ground clearance, lightweight and quiet operation. Four axle ratios available: 2.85:1, 3.08:1, 3.36:1 and 3.70:1.

Max speed km/h at max engine power:

Ratio:	2.85:1 .. 3.08:1
Volvo AT2412C	127 118
ZF 6S-1600	- 118

Ratio:	3.36:1 .. 3.70:1
Volvo AT2412C	109 -
ZF 6S-1600	108 98*

* Only with D9B340

Tyres & Rims

10-stud steel disc wheels, aluminium as an option. Optional zink wheelnut protectors. Dual driving axle wheels. Extra spare wheel, tool kit, warning triangle, 2 wheelchocks.

Rims	Tyres
8.25"x22.5"	295/80R22.5"

Suspension and Steering

Electronically Controlled Suspension, rigid front axle. Stabilizer front and rear. Anti roll bar at rear axle. Double-acting, hydraulic telescopic shock absorbers, two front, four rear. Front side kneeling, whole side kneeling as an option. Kneeling interrupt configuration stop or return.

Numbers	Front	Rear
Air bellows	2	4
Levelling valves	2	2

Steering gear

Power steering of ball-and-nut type with built-in servo unit. Two inter-linked intermediate steering arms and individual link-rods to each side's steering arm. Pitman arm connected to the relay arm via a link-rod. Steering damper and steering wheel lock.

Max wheel angle outer wheel	41.3 °
Max wheel angle inner wheel	49 °
Steering wheel diameter	450, 500 mm

Air and Brake system

Separate circuits for front and rear wheels. Air is fed from the compressor through the ping-tank to the air dryer, then to the primary air tank. A governor, incorporated in the air drier, controls the air pressure. The pressure setting influence the pressure in the brake system. The air passes a safety valve to the four-circuit protection valve. The pressure limiting valve protects the brake system from the high pressure. Four-circuit protection valve secures the feeding of each individual circuit. If any of the circuits fails, the feeding will continue to the other circuits.

Disc brakes combined with electronic braking system EBS5. EBS standard package: ABS, lining wear sensing, lining wear control, brake blending, differential lock synchro, brake temperature warning, EBD (External Brake Demand), diagnosis via SAEJ1587, traction control. Additionally in medium package: lining wear analysis/warning, drag torque control, automatic differential lock, hill start aid, door brake, poor brake performance warning, brake assistant, wheel brake monitoring, EBS status recorder.

Air tanks standard

- Primary	30 dm ³ (l)
- Front circuit	30 dm ³ (l)
- Rear circuit	30 dm ³ (l)
- Park circuit	15 dm ³ (l)

Compressed air system can easily be filled from external circuit.

Handbrake

Air operated spring brake acting directly on the rear wheels. Application is infinitely variable by means of a control on the fascia.

Vehicle Structure

The steel frame combines good stability with low weight. Precise dimensions make bodybuilding simpler. The frame structure is a combination of open channel sections and boxed sections, with welded together wheel arches; frame members are made of highstrength steel (18G2A). Long service life, increased loading capabilities. Rigidity provides good stability and driving characteristics.

Driver's seat and Station

Optional Volvo dashboard fully compatible with BEA2. Two satellites: on the right and the left side. Adjustable steering wheel, both height and tilt. Self canceling turn indicators. Outdoor/indoor temperature

meter, fuel economy meter.

Dashboard, center: speedometer, rev counter, fuel gauge, coolant temperature, brakes, turbo and oil pressure, indicators, warning lamps.

Dashboard, left: emergency switch, tachograph, switches, audio control panel (option).

Dashboard, right: radio, climate control unit.

Steering wheel, left satellite: control buttons, Light Control Panel.

Steering wheel, right satellite: gearbox selector, doorbrake knob, switches and warning lamps.

Instruments, behind engine: selector switch for front or rear operation, starting, charging lamp, mechanical stop, oil gauge. These controls enable the engine to be run and controlled from the tail of the vehicle during service work.

Optional Radio switches
..... in steering wheel

Electrical system

The electrical system is a 24-volt system, where the chassis and engine frame are used as a ground. The battery's minus terminal is connected to the chassis via the battery disconnect. Battery box which is placed under the driver's seat, contains two serial connected 12-volt batteries.

2nd generation Bus Electrical Architecture (BEA2) with electronic databus system Multiplex 2 for data transmission, bus systems control, monitoring and coordination of all devices installed on the bus. Multiplex 2 also provides diagnostic information for driver and workshop. BEA2 features electronic control of the Engine Management System, transmission and suspension. For testing, callibrating and programming of the control units can be used a PC based software package VCADSPRO. External lighting functions integrated in chassis Multiplex. They are activated by new Light Control Panel and controlled by Light Control Module.

The system is equipped with three main switches: engine shut off, fuel shut off and electrical switch. Tachograph system is available, analog or digital, and Dynafleet logger tool.

Battery capacity 170, 225 Ah
Alternators output 2x110 A