



Dimensions & Weights

Overall dimensions

A	Transport wheelbase	5000 mm
	Wheelbase certified	5000-7400 mm
B	Bogie	1400 mm
G	Overall chassis length	
	N steering with J1	9137 mm
	N steering with J2	8607 mm
	F steering with J1	9237 mm
	F steering with J2	8707 mm
I	Front overhang	
	N steering	2500 mm
	F steering	2600 mm
J	Rear overhang	
	J1 Rear overhang	3434 mm
	J2 Rear overhang	2904 mm
	Steering wheel location	
C	N steering	1918 mm
F	F steering	2018 mm
	Approach angle	7.9 °
	Departure angle J1	7.1 °
	Departure angle J2	8.3 °
	Frame height in front	356 mm
X	Frame height at rear	1688 mm
	based on tyre 295/80R22.5	
	Track width with tyres	295/80R22.5"
	and steel disc rim	8.25"x22.5"
M	Track, front	2068 mm
N	Track, rear	1817 mm
K	Overall width front wheels housing	2500 mm
	Overall width rear wheels	2436 mm

Front gangway width 910 mm

Weights

	Permitted front axle load	7500 kg
	Permitted rear axle load	11500 kg
	Permitted tag axle load	5750 kg
	Permitted GVW	24750 kg

Engine

6-cylinder, 4-stroke turbo-charged diesel with overhead valves and electronically controlled direct injection. Common Rail fuel system. Volvo EMS2.2 engine control system. Electronic oil level sensor. Fan with electronic thermostat. Crank case ventilation closed or open with pipe. On-off fan clutch. Engine software protection and on-board diagnostic to detect, warn and to take action for malfunctions leading to increased emission. Operation altitude up to 1500m above the sea level. 77dB or 80dB engine encapsulation. Engine fulfils Euro 5 and EEV emission requirements.

D7E 290 hp

Bore	108 mm
Stroke	130 mm
Displacement	7.14 dm ³ (l)
Output ISO 1585	213 kW (290 hp)
at	35r/s (2100 r/m)
Torque ISO 1585	1200 Nm (122kpm)
at	17.5-27.5 r/s (1050-1650 r/m)
Compression ratio	18:1
Weight	645 kg
Idling speed	600+50 rpm
High idle speed	2650 rpm
Oil change volume	28 l

Optional	Fuel water separator
Optional	Engine block heater
Optional	Engine preheating
Optional	Cyclone air filter

Fuel tanks

There is a choice of three fuel tanks with volumes: 310, 360 and 410 l. Mounted above front wheel arch, on the right and left hand side.

Mounted transport tank 50 l

Exhaust and Cooling System

Stainless steel exhaust system with SCR catalytic converter, AdBlue pump and 40 l urea tank. Urea tank is mounted behind the rear axle, on the left or right side of the chassis. 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. Fluid cooled, pressurized cooling system.

Optional Diesel Particulate Filter
 only with ROH3434

Transmission

6AP1400B

AIS, Automatic Idle Shift, neutral when bus stops. 6-speed fully automatic gearbox with integrated retarder and electronic control system.

Voith D864.5

Fully automatic 4 speed gearbox with integrated retarder and electronic control system. The torque converter also functions as a retarder. ANS - auto neutral at stop function.

	ZF 6AP	Voith
	1400B	D864.5
Torque converter	2.16:1	5.05:1
1st gear	3.36:1	1.36:1
2nd gear	1.91:1	1.00:1
3rd gear	1.42:1	0.73:1
4th gear	1.00:1	-
5th gear	0.72:1	-
6th gear	0.62:1	-
Reverse	4.24:1	4.30:1

Driveline - Rear axle and tyres

Rear axle

The Volvo RS 1228C single reduction axle with two alternative ratios available. The casing designed for higher ground clearance, lightweight and quiet operation.

Ratio:..... 5.29:1 5.63:1
Optional Differential lock

Tag axle

The axle is of hydraulic steered type.

Tyres & Rims

10-stud steel or aluminium disc wheels. Dual driving axle wheels.

Rims Tyres
8.25"x22.5" 295/80R22.5"
Optional Spare wheel

Vehicle Structure

B7RLE has a low entry at the front and in the middle, with floor height above the road of just 320 mm, which considerably aids entry and exit. Robust and dependable design. Bolted black steel frame. Thanks to the frame's low height, the body can be built with two steps at the rear axle. The frame consists of two modules. The front module is a combination of open channel sections and boxed sections, with structural wheelarches, bolted to a rear module which is substantially tubular with shear panels.

Suspension and Steering

Rigid low front suspension with stabilizer and four reaction rods. Improved roll stability and small turning circle. Stabilizer rear. Double-acting, hydraulic telescopic shock absorbers, two front, four rear and two for tag axle..

Numbers Front Drive Rear
Air bellows 2 4 2
Levelling valves 1 2 -

Steering gear

Power steering of ball and nut type with built-in servo unit. Approx. 4.5 turns of wheel from lock to lock.

Max outer wheel angle 43 °
Max inner wheel angle 52 °
Steering wheel diameter 450 or 500 mm

Optional Side kneeling
Optional Steering wheel lock

Air and Brake system

Separate circuits for front wheels, drive axle wheels, tag/pusher wheels. Park brake circuit acting on drive axle wheels. Volvo disc brakes combined with electronic braking system EBS 5, which controls ABS/ASR functions.

Available features: brake blending, dual retarder control, drag torque control, hill start aid, brake temperature warning, poor brake performance warning, door brake, brake assistant, automatic diff lock, lining wear sensing and analysis, automatic calibration after brake pad change.

Brake disc diameter:

Front 434 mm
Rear 434 mm
Tag 434 mm

Friction area:

Front axle, disc brake 2x200 cm²
Rear axle, disc brake 2x200 cm²

Cut-out pressure 12,0 bar
Compressor capacity at 10 bar and engine speed 33 r/s (2000 r/min)

..... 920 l/min
Compressor ratio 1.116:1

Air tanks standard

- Primary 30 dm³ (l)
- Front circuit 30 dm³ (l)
- Tag circuit 15 dm³ (l)
- Rear circuit 30 dm³ (l)
- Park circuit 15 dm³ (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.

Driver's seat and Station

Volvo dashboard available or instruments only supplied. Dashboard has two satellites on the right and the left side. Adjustable steering wheel, both height and tilt. Self canceling turn indicators.

Dashboard, center: speedometer, rev counter, AIC display, 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 Tachograph
Optional Datalog Information Center
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 disconnecter. Volvo Multiplex with electronic databus system 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. It features electronic control of the Engine Management System, transmission and suspension. For testing, calibrating and programming of the control units a PC based software package VCADSPRO is used.

External lighting functions are integrated in chassis Multiplex. They are activated by the Light Control Panel and controlled by Light Control Module. The system can be equipped with three main switches: engine shut off, fuel shut off and electrical shut off. Tachograph system is available, analog or digital.

Number of batteries 2
Voltage 24 V
Battery capacity 165, 225 Ah
Alternators max output 2x100 A

VOLVO

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