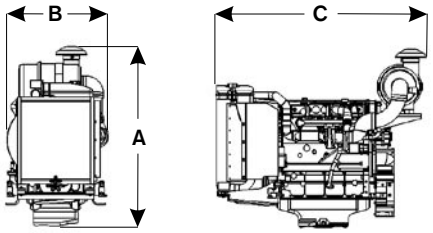
VOLVO PENTA GENSET ENGINE

TD520GE

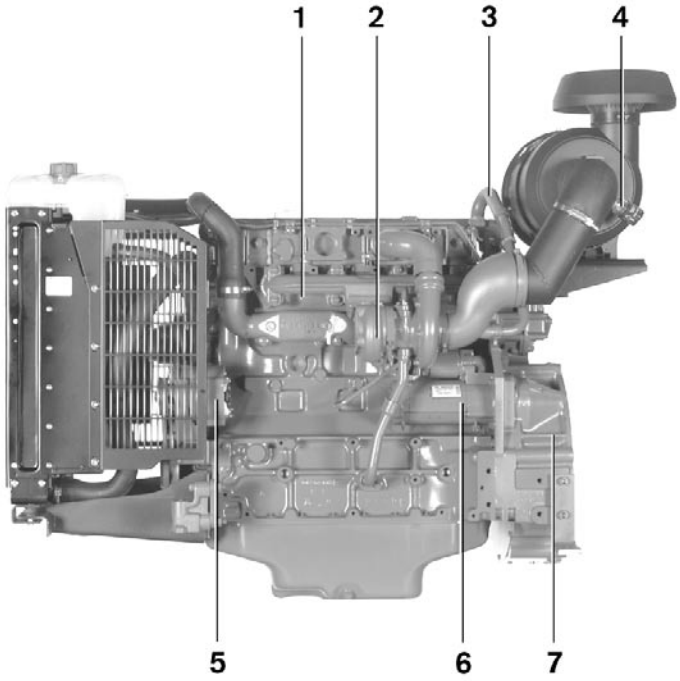
1500 rpm, 85 kW (116 hp) – 1800 rpm 89 kW (121 hp)

TD520GE

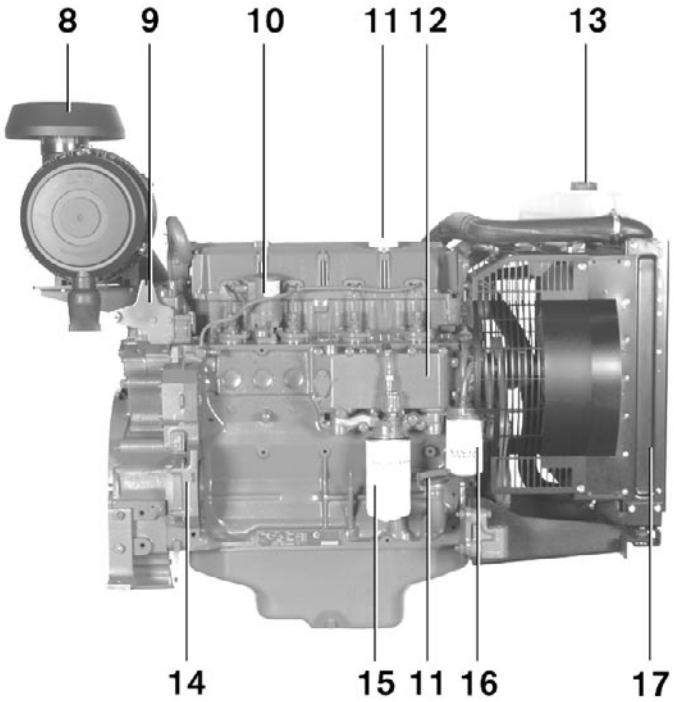
- Turbocharged
- Diesel fuel
- Displacement indication (l)
- Generation
- Version
- Generator drive
- Emission controlled



A = 1171 / 46.1
B = 664 / 26.1
C = 1392 / 54.8



1. Exhaust manifold
2. Turbocharger
3. Closed loop crank case breather system
4. Air restriction indicator
5. Alternator
6. Starter motor
7. Flywheel housing SAE 3
8. Air filter
9. Speed governor
10. Stop solenoid
11. Oil filling
12. Oil cooler
13. Exp. tank with filler cap
14. Engine transmission with PTO
15. Oil filter
16. Fuel filter
17. Radiator



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Volvo Penta reserves the right to make changes at any time, without notice, as to technical data, prices, materials, standard equipment,specifications and models, and to discontinue models. The engine illustrated may not be entirely identical to production standard engines.

Technical Data

General

In-line four-stroke diesel engine with direct injection
Turbocharged and air to air intercooled
Rotation direction, anti-clockwise viewed towards flywheel

Dry weight, kg / lb	Engine incl. coolingsystem	550 / 1213
Wet weight, kg / lb	Engine incl. coolingsystem	580 / 1279

Number of cylinders	4
Displacement, total	4.76 liter / 290 in^3
Firing order	1-3-4-2
Bore	108 mm / 4.25 in
Stroke	130 mm / 5.12 in
Compression ratio	17.5:1

TD520GE	Speed, rpm	1500	1800
Performance			
Prime Power without fan	kW / hp	77.5 / 105.4	81.5 / 110.8
Standby Power with fan	kW / hp	85.0 / 116.0	89.0 / 121.0
Fan power consumption			
Standard cooling system	kW / hp	2.5 / 3.4	4.3 / 5.8
Tropical cooling system	kW / hp	2.5 / 3.4	4.3 / 5.8
Mean piston speed	m/s / ft/sec	6.5 / 21.3	7.8 / 25.6
Effective mean pressure at Standby Power	MPa / psi	1.4 / 203	1.2 / 174
Max combustion pressure at Prime Power	MPa / psi	11.2 / 1624	11.3 / 1639
Total mass moment of inertia, J (mR^2)	kgm / $lbft^2$	1.43 / 33.8	
Lubrication system			
Lubricating oil consumption			
at Prime Power	liter/h / US gal/h	0.065 /0.017	0.069 / 0.018
Oil system capacity including filters	liter / US gal	13 / 3.4	
Fuel system			
Specific fuel consumption at			
50% of Prime Power	g/kWh / lb/hph	213 / 0.345	223 / 0.361
75% of Prime Power	g/kWh / lb/hph	208 / 0.337	217 / 0.352
100% of Prime Power	g/kWh / lb/hph	213 / 0.345	215 / 0.348
Intake and exhaust system			
Air consumption at Standby Power (at 25 °C)	m^3/h / cu.ft/h	285 / 10065	346 / 12219
Max allowable air intake restriction	kPa / In wc	3 / 12	
Heat rejection to exhaust at Standby Power	kW / BTU/min	71.1 / 4078	77.0 / 4379
Exhaust gas temperature after turbine			
at Standby Power	°C / °F	610 / 1130	530 / 986
Max allowable back-pressure in exhaust line	kPa / In wc	3 / 12	5 / 20
Exhaust gas flow at Standby Power	m^3/min / cfm	15.4 / 544	17.5 / 618
Cooling system			
Heat rejection radiation from engine			
at Standby Power	kW / BTU/min	12.7 / 722	13.7 / 779
Heat rejection to coolant			
at Standby power	kW / BTU/min	53.7 / 3020	55.7 / 3168
Fan power consumption			
standard and tropical cooling system	kW / hp	2.5 / 3.4	4.3 / 5.8

Power Standards
The engine performance corresponds to ISO 3046, BS 5514 and DIN 6271. The technical data applies to an engine without cooling fan and operating on a fuel with calorific value of 42.7 MJ /kg (18360 BTU/lb) and a density of 0.84 kg/liter (7.01 lb/US gal), also where this involves a deviation from the standards. Power output guaranteed within 0 to +2% att rated ambient conditions at delivery. Ratings are based on ISO 8528.
Engine speed governing in accordance with ISO 3046/IV, class A1 and ISO 8528-5 (G3 with electronic speed governor)

Exhaust emissions.
The engine exhaust emissions complies with EPA, CARB and TA-luft regulations.

Rating Guidelines
PRIME POWER rating corresponds to ISO Standard Power for continuous operation. It is applicable for supplying electrical power at variable load for an unlimited number of hours instead of commercially purchased power. A10 % overload capability is available for this rating.
STANDBY POWER rating corresponds to ISO Standard Fuel Stop Power. It is applicable for supplying standby electrical power at variable load in areas with well established electrical networks in the event of normal utility power failure. No overload capability is available for this rating.

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