

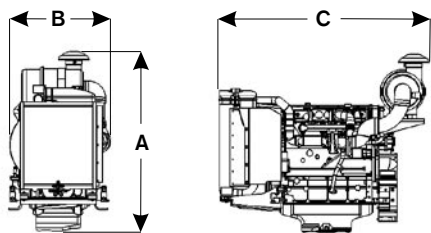
VOLVO PENTA GENSET ENGINE

TD520GE

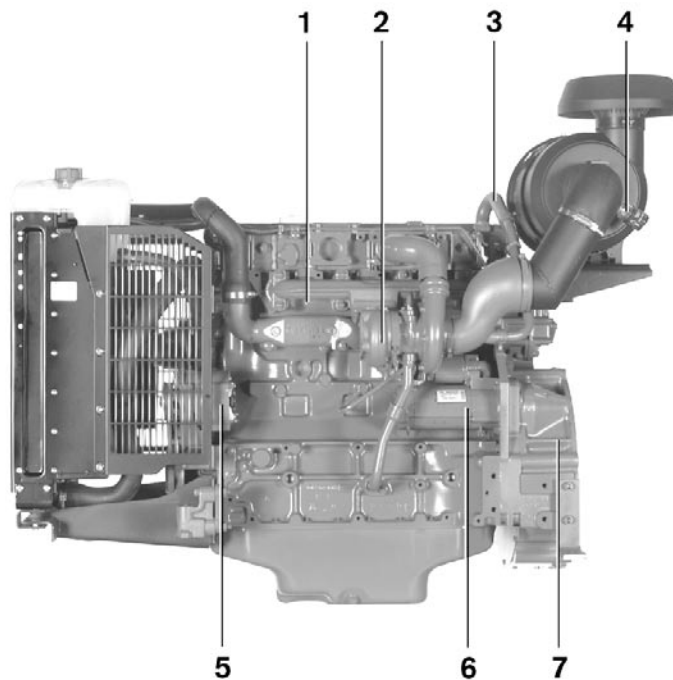
1500 rpm, 85 kW (116 hp) – 1800 rpm 89 kW (121 hp)

TD520GE

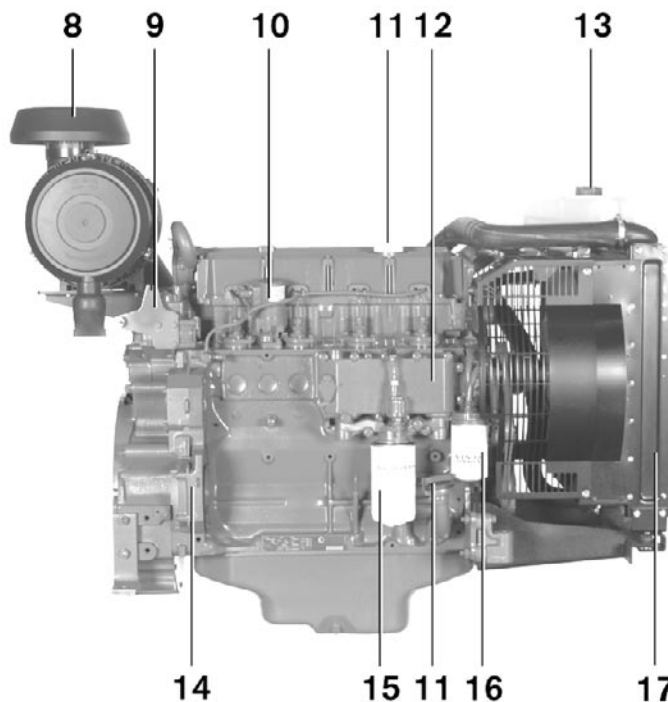
Turbocharged _____
 Diesel fuel _____
 Displacement indication (l) _____
 Generation _____
 Version _____
 Generator drive _____
 Emission controlled _____



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



**VOLVO
PENTA**

TD520GE

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 | Number of cylinders | 4 |
| Turbocharged and air to air intercooled | Displacement, total | 4.76 liter / 290 in ³ |
| Rotation direction, anti-clockwise viewed towards flywheel | Firing order | 1-3-4-2 |
| | Bore | 108 mm / 4.25 in |
| Dry weight, kg / lb | Engine incl. cooling system | 550 / 1213 |
| Wet weight, kg / lb | Engine incl. cooling system | 580 / 1279 |
| | 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 | |
| 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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