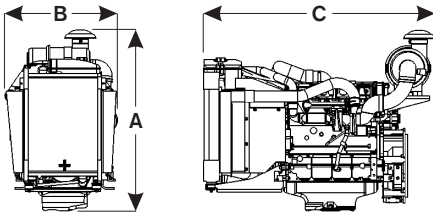


TAD520GE

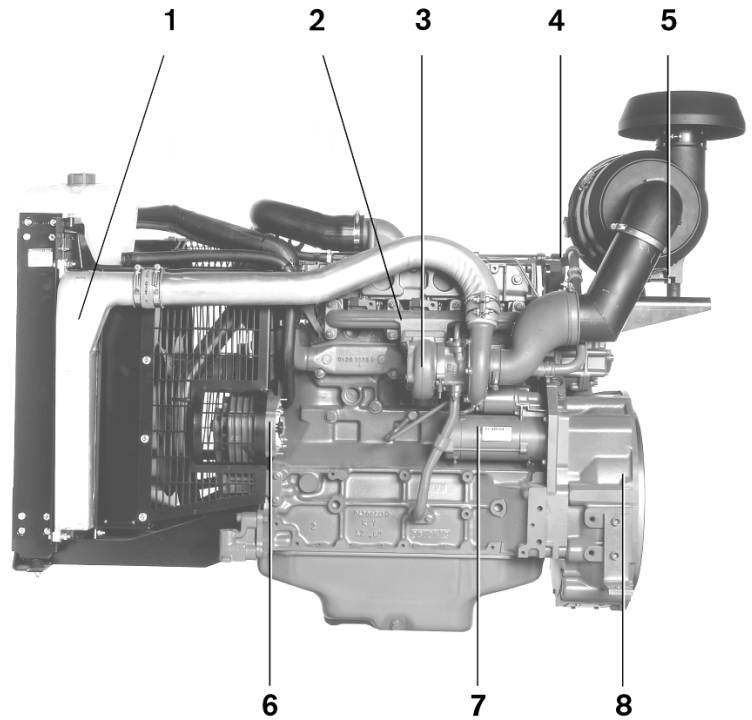
Gen Set Engine

TAD520GE

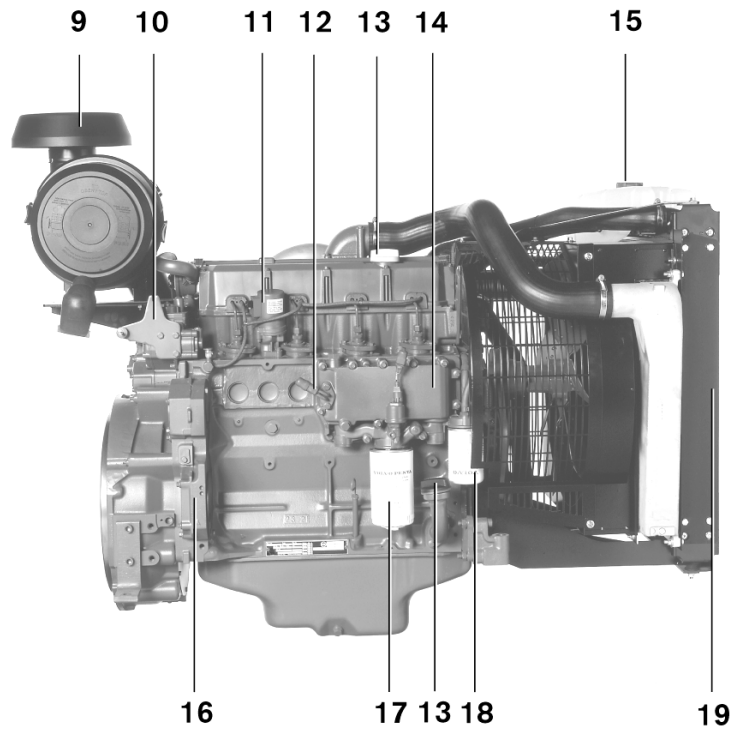
- Turbocharged
- Air to air intercooled
- Diesel fuel
- Displacement indication (l)
- Generation
- Version
- Generator drive
- Emission controlled



mm / in
 A = 1171 / 46.1
 B = 732 / 28.8
 C = 1514 / 59.6



1. Charged air to cooler
2. Exhaust manifold
3. Turbocharger
4. Closed loop crank case breather system
5. Air restriction indicator
6. Alternator
7. Starter motor
8. Flywheel housing SAE 3 at 1500 rpm (SAE 2 at 1800 rpm)
9. Air filter
10. Speed governor
11. Stop solenoid
12. Coolant heater (option)
13. Oil filling
14. Oil cooler
15. Exp. tank with filler cap
16. Engine transmission with PTO
17. Oil filter
18. Fuel filter
19. Radiator



**VOLVO
PENTA**

TAD520GE

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	575 / 1268 SAE 3 (1500 rpm)
Wet weight, kg / lb	Engine incl. cooling system	606 / 1336 SAE 3 (1500 rpm)
Extra weight, kg / lb	With SAE 2 (1800 rpm)	36 / 80
	Stroke	130 mm / 5.12 in
	Compression ratio	17.5:1

TAD520GE	Speed, rpm	1500	1800
Performance			
Prime Power without fan	kW / hp	94.0 / 127.8	101.0 / 137.3
Standby Power without fan	kW / hp	102.0 / 139.0	110.0 / 150.0
Fan power consumption			
Standard cooling system	kW / hp	4.2 / 5.7	7.3 / 9.9
Tropical cooling system	kW / hp	6.4 / 8.7	8.8 / 12.0
Mean piston speed	m/s / ft/sec	6.5 / 21.3	7.8 / 25.6
Effective mean pressure at Standby Power	MPa / psi	1.7 / 246	1.5 / 218
Max combustion pressure at Prime Power	MPa / psi	12.9 / 1871	12.8 / 1856
Total mass moment of inertia, J (mR ²)	kgm / lbft ²	1.43 / 33.8	

Lubrication system

Lubricating oil consumption at Standby Power	liter/h / US gal/h	0.08 / 0.02	0.08 / 0.02
Approx 0.3% of fuel consumption			
Oil system capacity including filters	liter / US gal	13 / 3.4	
Oil change interval	h	500	
Minimum quality API-CF			

Fuel system

Specific fuel consumption at			
50% of Prime Power	g/kWh / lb/hph	212 / 0.343	215 / 0.348
75% of Prime Power	g/kWh / lb/hph	206 / 0.334	205 / 0.332
100% of Prime Power	g/kWh / lb/hph	206 / 0.334	205 / 0.332

Intake and exhaust system

Air consumption at Standby Power (at 25 °C)	m ³ /h / cu.ft./h	346 / 12219	436 / 15397
Max allowable air intake restriction	kPa / In wc	3 / 12	
Heat rejection to exhaust at Standby Power	kW / BTU/min	72.7 / 4134	81.7 / 4646
Exhaust gas temperature after turbine at Standby Power	°C / °F	520 / 968	448 / 838
Max allowable back-pressure in exhaust line	kPa / In wc	5 / 20	7 / 28
Exhaust gas flow at Standby Power	m ³ /min / CFm	16.2 / 572	19.8 / 699

Cooling system

Heat rejection radiation from engine			
at Standby Power	kW / BTU/min	12.2 / 694	13.2 / 751
Heat rejection to coolant			
at Standby Power	kW / BTU/min	51.4 / 2923	56.8 / 3230
Fan power consumption			
standard cooling system	kW / hp	4.2 / 5.7	7.3 / 9.9
tropical cooling system	kW / hp	6.4 / 8.7	8.8 / 12.0

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% at 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)

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.

VOLVO PENTA

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SE-405 08 Göteborg, Sweden

Exhaust emissions.

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