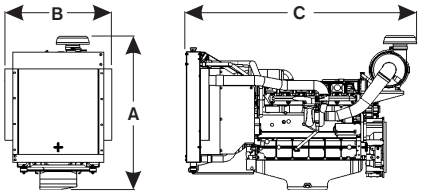
TAD720GE

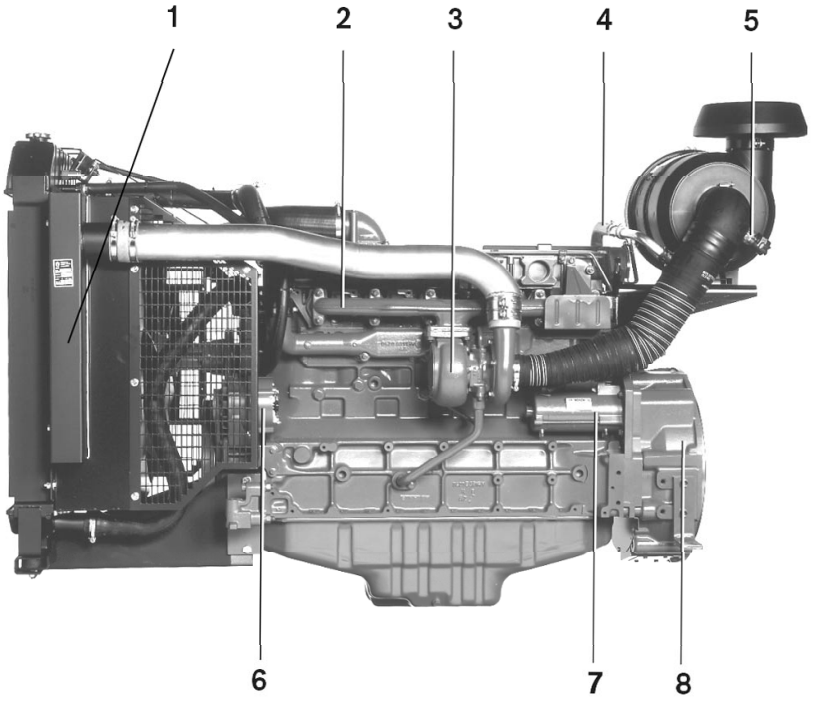
Gen Set Engine

TAD720GE

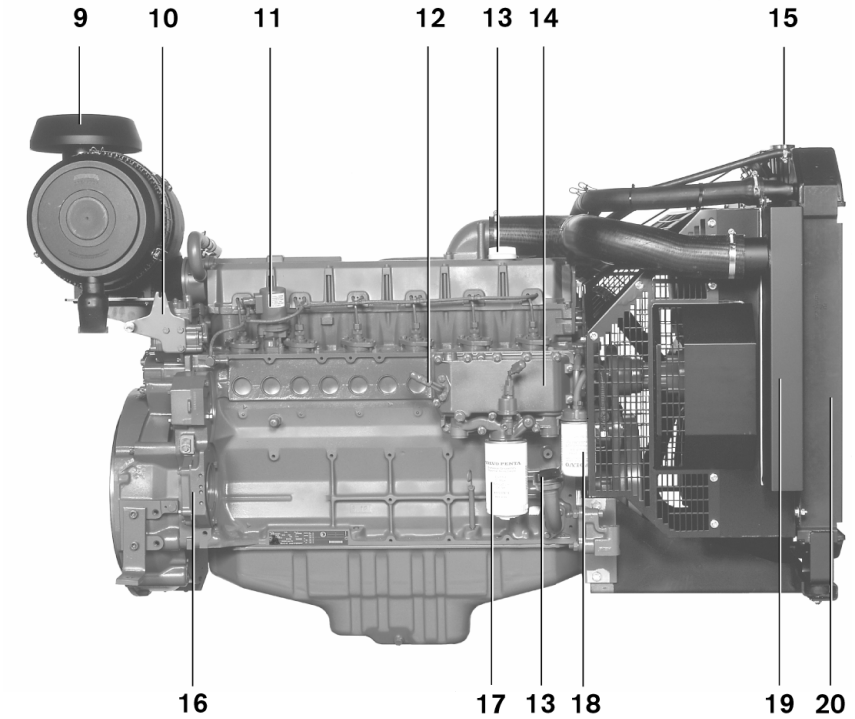
- Turbocharged
- Air to air intercooled
- Diesel fuel
- Displacement indication (l)
- Generation
- Version
- Generator drive
- Emission controlled



mm / in
A = 1240 / 48.8
B = 866 / 39.1
C = 1881 / 74.0



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 2
9. Air filter
10. Speed governor
11. Stop solenoid
12. Coolant heater (option)
13. Oil filling
14. Oil cooler
15. Radiator cap
16. Engine transmission with PTO
17. Oil filter
18. Fuel filter
19. Intercooler
20. Radiator



VOLVO PENTA

TAD720GE

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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. cooling system	760 / 1674
Wet weight, kg / lb	Engine incl. cooling system	804 / 1773

Number of cylinders	6
Displacement, total	7.15 liter / 4.36 in^3
Firing order	1-5-3-6-2-4
Bore	108 mm / 4.25 in
Stroke	130 mm / 5.12in
Compression ratio	17.5:1

TAD720GE	Speed, rpm	1500	1800
Performance			
Prime Power without fan	kW / hp	140.0 / 190.4	149.0 / 202.6
Standby Power without fan	kW / hp	153.0 / 208.0	163.0 / 221.0
Fan power consumption			
Standby cooling system	kW / hp	3.8 / 5.2	6.6 / 9.0
Tropical cooling system	kW / hp	8.2 / 11.1	9.2 / 12.5
Mean piston speed	m/s / ft/sec	6.5 / 21.3	7.8 / 25.6
Effective mean pressure at Prime Power	MPa / psi	1.7 / 247	1.5 / 218
Max combustion pressure at Prime Power	MPa / psi	13.5 / 1958	1 3.0 / 1885
Total mass moment of inertia, J (mR^2)	kgm / $lbft^2$	3.09 / 73.3	
Lubrication system			
Lubricating oil consumption at Standby Power	liter/h / US gal/h	0.1 / 0.02	0.1 / 0.02
Oil system capacity including filters	liter / US gal	20 / 5.3	
Oil change interval	h	500	
Minimum quality API-CF			
Fuel system			
Specific fuel consumption at			
50% of Prime Power	g/kWh / lb/hph	204 / 0.330	215 / 0.348
75% of Prime Power	g/kWh / lb/hph	198 / 0.321	205 / 0.332
100% of Prime Power	g/kWh / lb/hph	197 / 0.319	203 / 0.329
Intake and exhaust system			
Air consumption			
at Standby Power (at 25 °C)	m^3/h / cu.ft/h	608 / 21472	830 / 29311
Max allowable air intake restriction	kPa / In wc	3 / 12	
Heat rejection to exhaust			
at Standby Power	kW / BTU/min	109 / 6199	121 / 6881
Exhaust gas temperature after turbine			
at Standby Power	°C / °F	476 / 914	433 / 837
Max allowable back-pressure in exhaust line	kPa / In wc	5 / 20	7 / 28
Exhaust gas flow			
at Standby Power	m^3/min / cfm	26.7 / 943	31.3 / 1105
Cooling system			
Heat rejection radiation from engine at Standby Power	kW / BTU/min	18.4 / 1046	19.6 / 1115
Heat rejection to coolant at Standby Power	kW / BTU/min	77.8 / 4424	84.9 / 4828
Fan power consumption			
standard cooling system	kW / hp	3.8 / 5.2	6.6 / 9.0
tropical cooling system	kW / hp	8.2 / 11.1	9.2 / 12.5

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.

VOLVO PENTA

AB Volvo Penta
SE-405 08 Göteborg, Sweden