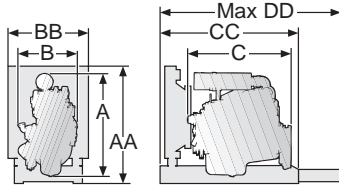


# TAD 1231 GE

## Genset Engine – Gen Pac

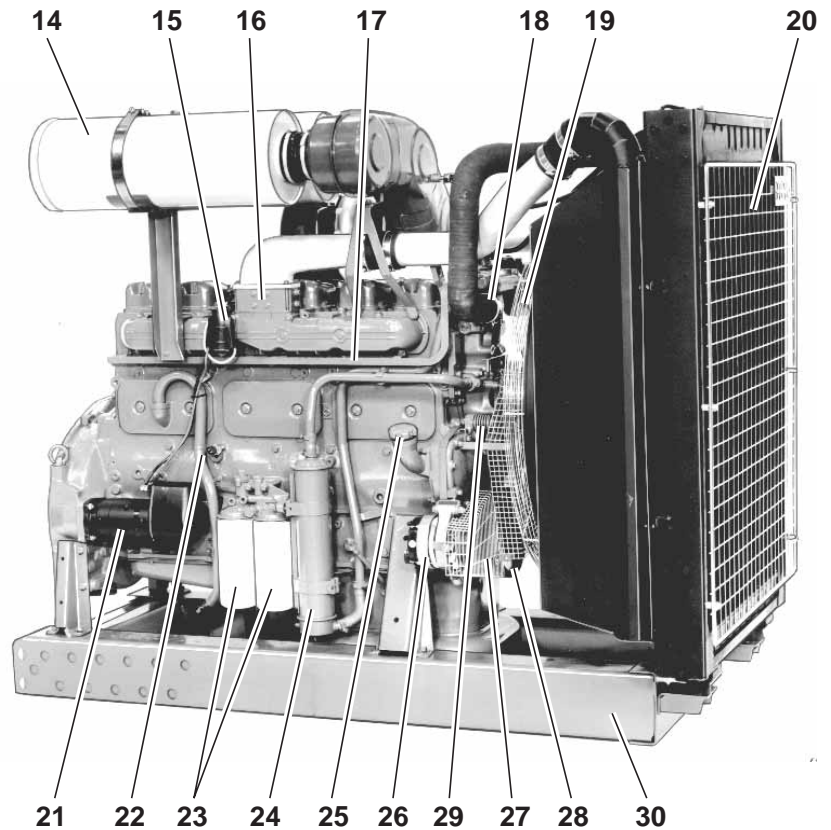
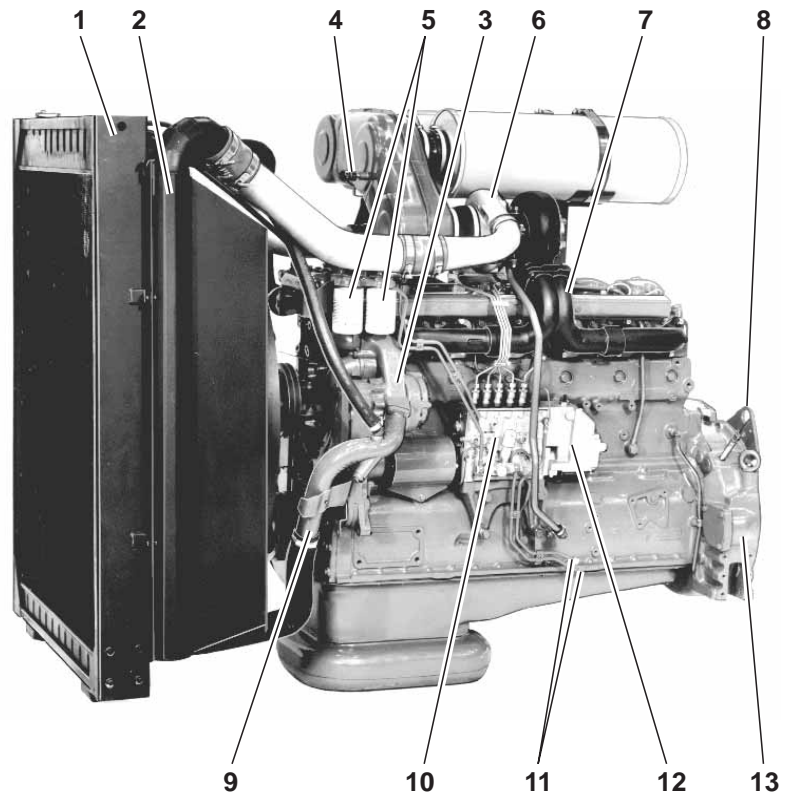
### TAD 1231 GE

Turbocharged  
 Air to air intercooled  
 Diesel fuel  
 Displacement indication (l)  
 Generation  
 Version  
 Generator Drive  
 Emission Controlled



mm/in. AA = 1668/65.7  
 A\* = 1582/62.3 BB = 1089/42.9  
 B\* = 1089/42.9 CC = 2059/81.1  
 C\* = 1961/77.2 DD = 3009/118.5  
 \* Incl. radiator and intercooler

**Gen Pac** – Genset Engine mounted on an expandable base frame. Complete unit with engine, radiator, radiator core guard, fan, fan and belt guard providing reduced delivery time and installation cost and simplified transportation.



1. Tropical radiator
2. Intercooler
3. Gear-driven coolant pump
4. Air restriction indicator
5. Twin fuel filters of throw-away type
6. Turbocharger
7. Air cooled exhaust manifold
8. Lift eyelet
9. Coolant pipe, inlet
10. Injection pump
11. Fuel pipes for tank connection
12. Electronic speed governor
13. Flywheel housing SAE 1
14. Air filter
15. Relay for inlet manifold heater
16. Inlet manifold heater
17. Cable iron
18. Coolant pipe, outlet
19. Fan guard
20. Radiator guard (option)
21. Starter motor
22. Crankcase ventilation
23. Full-flow oil filters of spin-on type
24. Oil cooler
25. Oil filler
26. Alternator
27. Belt guard (option)
28. Vibration damper
29. Automatic belt tensioner
30. Expandable base frame

# Technical data TAD 1231 GE

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.

## General

In-line four-stroke diesel engine with direct injection					
Turbocharged and air to air intercooled		Bore	130.17 mm / 5.12 in		
Number of cylinders	6	Stroke	150 mm / 5.91 in		
Displacement, total	11.98 liters / 731 in <sup>3</sup>	Compression ratio	14.0:1		
Firing order	1-5-3-6-2-4	Dry weight, kg/lb	Gen Pac	1434/3159	Engine only 1250/2754 *
Rotation direction, anti-clockwise viewed towards flywheel		Wet weight	Gen Pac	1514/3335	Engine only 1330/2930 *

\*) Including radiator and intercooler

TAD 1231 GE	Speed, rpm	1500	1800
<b>Performance</b>	Test no.	21000743/744	21000746/750
Prime Power with fan	kW / hp	282 / 383	300 / 408
Continuous Standby Power with fan	kW / hp	282 / 383	300 / 408
Maximum Standby Power with fan	kW / hp	308 / 419	330 / 449
Mean piston speed	m/s / ft/sec	7.5 / 24.6	9.0 / 29.5
Effective mean pressure at Prime Power	MPa / psi	2.01 / 292	1.73 / 251
Max combustion pressure at Prime Power	MPa / psi	12.9 / 1871	12.6 / 1827
Total mass moment of inertia, J (mR2)	kgm <sup>2</sup> / lbf <sup>2</sup>	2.80 / 66.4	

## Lubrication system

Lubricating oil consumption at			
Prime Power	liter/h / US gal/h	0.18 / 0.048	0.21 / 0.055
Maximum Standby Power	liter/h / US gal/h	0.19 / 0.050	0.25 / 0.066
Oil system capacity including filters	liters	38	
Oil change interval			
CD oil quality	h	200	
VDS oil quality	h	400	

## Fuel system

Specific fuel consumption at			
25% of Prime Power	g/kWh / lb/hph	225 / 0.365	239 / 0.388
50% of Prime Power	g/kWh / lb/hph	207 / 0.336	212 / 0.344
75% of Prime Power	g/kWh / lb/hph	203 / 0.329	204 / 0.331
100% of Prime Power	g/kWh / lb/hph	202 / 0.328	203 / 0.329
Specific fuel consumption at			
25% of Maximum Standby Power	g/kWh / lb/hph	222 / 0.360	238 / 0.386
50% of Maximum Standby Power	g/kWh / lb/hph	205 / 0.332	210 / 0.341
75% of Maximum Standby Power	g/kWh / lb/hph	202 / 0.328	204 / 0.331
100% of Maximum Standby Power	g/kWh / lb/hph	204 / 0.331	201 / 0.326

## Intake and exhaust system

Air consumption at			
Prime Power (at 27 °C)	m <sup>3</sup> /min / cfm	20.0 / 707	24.0 / 850
Maximum Standby Power (at 27 °C)	m <sup>3</sup> /min / cfm	21.2 / 749	25.5 / 899
Max allowable air intake restriction	kPa / In wc	5 / 20.1	5 / 20.1
Heat rejection to exhaust at			
Prime Power	kW / BTU/min	242 / 13755	263 / 14900
Maximum Standby Power	kW / BTU/min	264 / 15000	282 / 16000
Exhaust gas temperature after turbine at			
Prime Power	°C / °F	535 / 995	510 / 950
Maximum Standby Power	°C / °F	570 / 1056	510 / 950
Max allowable back-pressure in exhaust line	kPa / In wc	5.0 / 20.1	7 / 28.1
Exhaust gas flow at			
Prime Power	m <sup>3</sup> /min / cfm	55.4 / 1956	60.3 / 2130
Maximum Standby Power	m <sup>3</sup> /min / cfm	60.7 / 2143	65.0 / 2296

## Cooling system

Heat rejection radiation from engine at			
Prime Power	kW / BTU/min	17 / 966	19 / 1080
Maximum Standby Power	kW / BTU/min	18 / 1020	20 / 1130
Heat rejection to coolant at			
Prime Power	kW / BTU/min	97 / 5510	105 / 5970
Maximum Standby Power	kW / BTU/min	106 / 6030	114 / 6480
Fan power consumption	kW / hp	6 / 8	11 / 15

## 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/litre (7.01 lb/US gal, 8.42 lb/Imp 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 G2 (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.

CONTINUOUS STANDBY POWER rating corresponds to ISO Power. It is applicable for supplying standby electrical power at variable load for an unlimited number of hours in the event of normal utility power failure. A 10 % overload capability is available for this rating.

MAXIMUM 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.