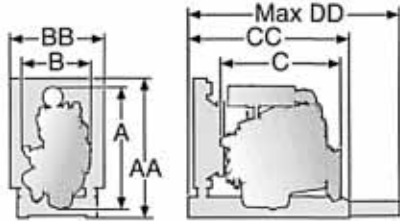


# TWD 710 G

## Gen Set Engine - Gen Pac

### TWD 710 G

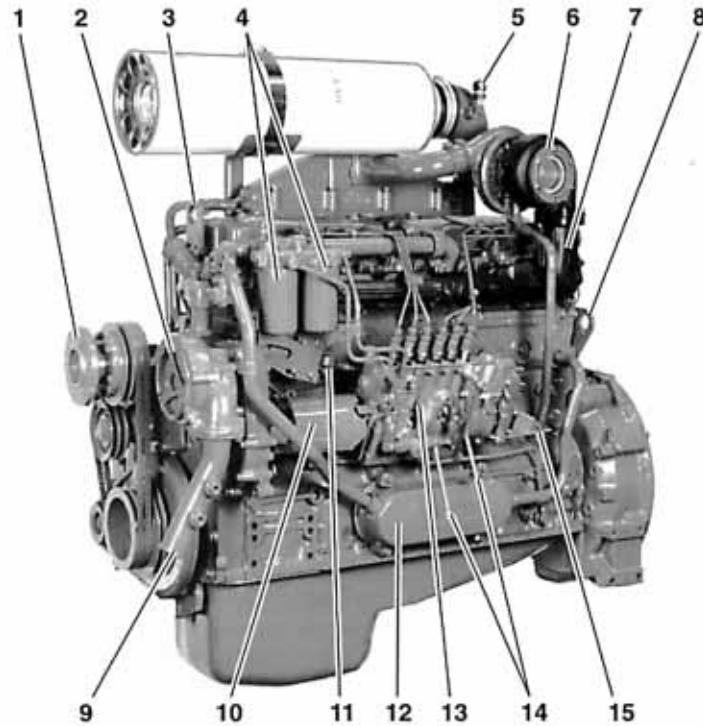
Turbocharged \_\_\_\_\_  
 Water to air intercooled \_\_\_\_\_  
 Diesel fuel \_\_\_\_\_  
 Displacement indication (l) \_\_\_\_\_  
 Generation \_\_\_\_\_  
 Version \_\_\_\_\_  
 Generator Drive \_\_\_\_\_



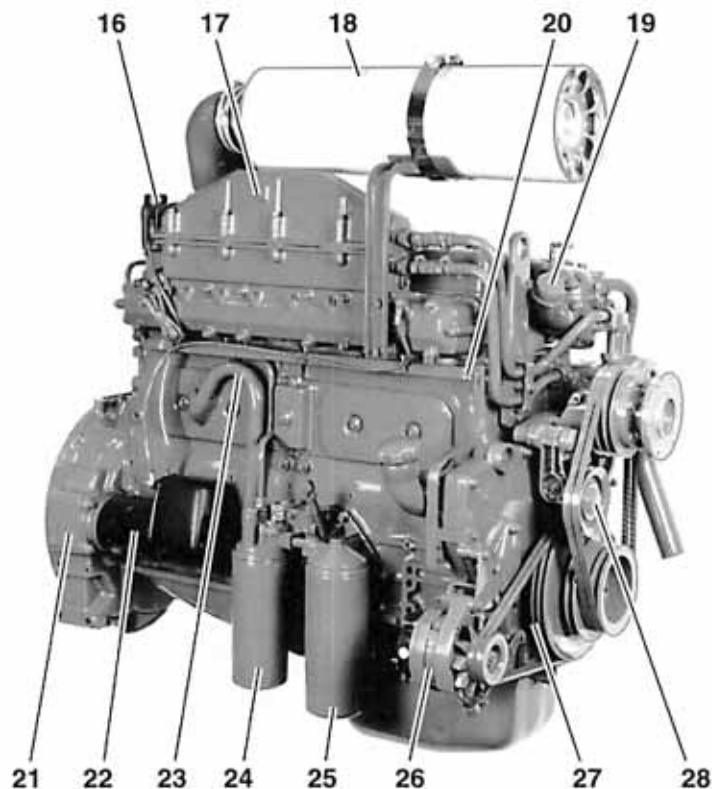
A = 1292 mm      AA = 1410 mm  
 B = 760 mm      BB = 1001 mm  
 C = 1265 mm      CC = 1632 mm  
                          DD = 2582 mm

**Gen Pac** - Generating Set 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. Fan hub
2. Gear driven coolant pump
3. Lift eyelet
4. Twin fuel filters
5. Air restriction indicator
6. Turbo-charger
7. Air cooled exhaust manifold
8. Lift eyelet
9. Coolant pipe, inlet
10. Pump coupling guard
11. Stop solenoid
12. Oil cooler
13. Injection pump
14. Fuel pipes for tank connection
15. Manual speed control
16. Relay for inlet manifold heater
17. Inlet manifold heater
18. Air filters of throw-away type
19. Coolant pipe, outlet
20. Cable iron
21. Flywheel housing SAE 2
22. Starter motor
23. Crankcase ventilation
24. Full flow oil filter
25. Bypass oil filter
26. Alternator
27. Vibration damper
28. Automatic belt tensioner



TT060



TT061

# Technical data TWD 710 G

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.

<b>General</b>			
In line four stroke diesel engine with direct injection			
Turbocharged and water to air intercooled			
Number of cylinders	6	Bore	104.77 mm / 4.12 in
Displacement, total	6.73 litres / 411 in <sup>3</sup>	Stroke	130 mm / 5.12 in
Firing order	1-5-3-6-2-4	Compression ratio	14.5:1
Rotation direction, anti-clockwise viewed towards flywheel		Dry weight Gen Pac	1095 kg
		Engine only	795 kg
		Wet weight Gen Pac	1158 kg
		Engine only	835 kg
<b>TWD 710 G</b>			
		Speed, rpm	
		1500	1800
<b>Performance</b>			
	Test no.	24000239	24000238
Prime Power with fan	kW / hp	152 / 207	165 / 225
Continuous Standby Power with fan	kW / hp	163 / 222	178 / 242
Maximum Standby Power with fan	kW / hp	179 / 243	195 / 266
Mean piston speed	m/s / ft/sec	6.5 / 21.3	7.8 / 25.6
Effective mean pressure at Prime Power	MPa / psi	1.8 / 261	1.7 / 247
Max combustion pressure at Prime Power	MPa / psi	12.6 / 1830	12.5 / 1810
Total mass moment of inertia, J (mR <sup>2</sup> )	kgm <sup>2</sup> / lbf <sup>2</sup>		1.63 / 38.7
<b>Lubrication system</b>			
Lubricating oil consumption at			
Prime Power	litre/h / US gal/h	0.17 / 0.045	0.19 / 0.050
Maximum Standby Power	litre/h / US gal/h	0.20 / 0.053	0.22 / 0.058
Oil system capacity including filters	litres		29
Oil change interval			
CD oil quality	h		200
VDS oil quality	h		400
<b>Fuel system</b>			
Specific fuel consumption at			
25% of Prime Power	g/kWh / lb/hph	240 / 0.389	251 / 0.407
50% of Prime Power	g/kWh / lb/hph	217 / 0.352	218 / 0.353
75% of Prime Power	g/kWh / lb/hph	209 / 0.339	209 / 0.339
100% of Prime Power	g/kWh / lb/hph	206 / 0.333	208 / 0.337
Specific fuel consumption at			
25% of Maximum Standby Power	g/kWh / lb/hph	234 / 0.379	242 / 0.392
50% of Maximum Standby Power	g/kWh / lb/hph	213 / 0.345	214 / 0.347
75% of Maximum Standby Power	g/kWh / lb/hph	207 / 0.336	208 / 0.337
100% of Maximum Standby Power	g/kWh / lb/hph	206 / 0.333	210 / 0.340
<b>Intake and exhaust system</b>			
Air consumption at			
Prime Power (at 27 °C)	m <sup>3</sup> /min / cfm	10 / 353	12.9 / 456
Maximum Standby Power (at 27 °C)	m <sup>3</sup> /min / cfm	11.5 / 406	14.3 / 505
Max allowable air intake restriction	kPa / In wc	5 / 20.1	5 / 20.1
Heat rejection to exhaust at			
Prime Power	kW / BTU/min	115 / 6540	131 / 7450
Maximum Standby Power	kW / BTU/min	134 / 7620	152 / 8640
Exhaust gas temperature after turbine at			
Prime Power	°C / °F	540 / 1004	495 / 963
Maximum Standby Power	°C / °F	560 / 1040	525 / 975
Max allowable back-pressure in exhaust line	kPa / In wc	5 / 20.1	7 / 28.1
Exhaust gas flow at			
Prime Power	m <sup>3</sup> /min / cfm	28.2 / 996	33.2 / 1172
Maximum Standby Power	m <sup>3</sup> /min / cfm	32.6 / 1153	37.6 / 1330
<b>Cooling system</b>			
Heat rejection radiation from engine at			
Prime Power	kW / BTU/min	12 / 682	12 / 682
Maximum Standby Power	kW / BTU/min	14 / 796	13 / 739
Heat rejection to coolant at			
Prime Power	kW / BTU/min	95 / 5402	105 / 5971
Maximum Standby Power	kW / BTU/min	112 / 6370	131 / 7450
Fan power consumption	kW / hp	2 / 3	4 / 6

#### 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)

#### 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. A 10 % 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.