The TAD1242GE is a powerful, reliable and economical Generating Set Diesel Engine built on the dependable in-line six design.

**Durability & low noise**
Designed for easiest, fastest and most economical installation. Well-balanced to produce smooth and vibration-free operation with low noise level.
To maintain a controlled working temperature in cylinders and combustion chambers, the engine is equipped with piston cooling. The engine is also fitted with replaceable cylinder liners and valve seats/guides to ensure maximum durability and service life of the engine.

**Low exhaust emission**
The state of the art, high-tech injection and charging system with low internal losses contributes to excellent combustion and low fuel consumption.
The TAD1242GE complies with EU Stage 2 and TA-Luft -50% exhaust emission regulations.

**Easy service & maintenance**
Easily accessible service and maintenance points contribute to the ease of service of the engine.

**Technical description:**

**Engine and block**
- Optimized cast iron cylinder block with optimum distribution of forces without the block being unnecessarily heavy.
- Wet, replaceable cylinder liners
- Piston cooling for low piston temperature and reduced ring temperature
- Tapered connecting rods for reduce risk of piston cracking
- Crankshaft induction hardened bearing surfaces and fillets with seven bearings for moderate load on main and high-end bearings
- Case hardened and Nitrocarburized transmission gears for heavy duty operation
- Keystone top compression rings for long service life
- Viscous type crankshaft vibration dampers to withstand single bearing alternator torsional vibrations
- Replaceable valve guides and valve seats
- Over head camshaft and four valves per cylinder

**Lubrication system**
- Full flow oil cooler
- Full flow disposable spin-on oil filter, for extra high filtration
- The lubricating oil level can be measured during operation
- Gear type lubricating oil pump, gear driven by the transmission

**Fuel system**
- Non-return fuel valve
- Electronic Unit Injectors
- Fuel prefilter with water separator and water-in-fuel indicator / alarm
- Gear driven low-pressure fuel pump
- Fine fuel filter with manual feed pump and fuel pressure switch
- Fuel shut-off valve, electrically operated

**Cooling system**
- Efficient cooling with accurate coolant control through a water distribution duct in the cylinder block. Reliable sleeve thermostat with minimum pressure drop
- Gear driven, maintenance-free coolant pump with high degree of efficiency
- Coolant filter as standard

**Turbo charger**
- Efficient and reliable turbo charger
- Extra oil filter for the turbo charger

**Electrical system**
- Electronical Diesel Control III (EDCIII), an electronically controlled processing system which optimizes engine performance. It also includes advanced facilities for diagnostics and fault tracing
- Three different ways for the customer to connect his controls and instrument to the engine. CAN SAE J1939 interface, CIU (Control interface unit) and Stand alone connections.
- Sensors for oil pressure, oil temp, boost pressure, boost temp, coolant temp, fuel temp, water in fuel, fuel pressure and two speed sensors.

**Features**
- Maintained performance, air temp 40°C
- Tropical cooling system (55°C)
- Fully electronic with Volvo Penta EDC III
- Dual frequency switch (between 1500 rpm and 1800 rpm)
- High power density
- Emission compliant
- Low noise levels
- Gen Pac configuration
Technical Data

General

Engine designation ....................................................... TAD1242GE
No. of cylinders and configuration ...................................... in-line 6
Method of operation ...................................................... 4-stroke
Bore, mm (in.) ................................................................. 131 (5.16)
Stroke, mm (in.) .............................................................. 150 (5.91)
Displacement, l (in³) ........................................................... 12.13 (740.2)
Compression ratio .......................................................... 17.5:1
Dry weight, kg (lb) .......................................................... 1380 (3036)
With Gen Pac, kg (lb) .......................................................... 1645 (3627)
Wet weight, kg (lb) ............................................................ 1455 (3201)
With Gen Pac, kg (lb) .......................................................... 1720 (3792)

Performance

<table>
<thead>
<tr>
<th>kW (hp)</th>
<th>1500 rpm</th>
<th>1800 rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Power</td>
<td>352 (479)</td>
<td>391 (532)</td>
</tr>
<tr>
<td>Max Standby Power</td>
<td>387 (526)</td>
<td>430 (585)</td>
</tr>
</tbody>
</table>

Lubrication system

<table>
<thead>
<tr>
<th>Oil consumption, liter/h (US gal/h)</th>
<th>1500 rpm</th>
<th>1800 rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Power</td>
<td>0.12 (0.032)</td>
<td>0.14 (0.037)</td>
</tr>
<tr>
<td>Max Standby Power</td>
<td>0.14 (0.037)</td>
<td>0.15 (0.040)</td>
</tr>
</tbody>
</table>


Fuel system

<table>
<thead>
<tr>
<th>Specific fuel consumption at Prime Power, g/kWh (lb/hph)</th>
<th>1500 rpm</th>
<th>1800 rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 %</td>
<td>216 (0.350)</td>
<td>231 (0.374)</td>
</tr>
<tr>
<td>50 %</td>
<td>195 (0.316)</td>
<td>200 (0.324)</td>
</tr>
<tr>
<td>75 %</td>
<td>195 (0.316)</td>
<td>202 (0.327)</td>
</tr>
<tr>
<td>Max Standby Power, g/kWh (lb/hph)</td>
<td>250 (0.347)</td>
<td>255 (0.365)</td>
</tr>
<tr>
<td>25 %</td>
<td>211 (0.347)</td>
<td>225 (0.365)</td>
</tr>
<tr>
<td>50 %</td>
<td>197 (0.339)</td>
<td>203 (0.329)</td>
</tr>
<tr>
<td>75 %</td>
<td>195 (0.336)</td>
<td>200 (0.324)</td>
</tr>
<tr>
<td>100 %</td>
<td>199 (0.323)</td>
<td>203 (0.329)</td>
</tr>
</tbody>
</table>

Intake and exhaust system

<table>
<thead>
<tr>
<th>Air consumption at 27°C, m³/min (cfm)</th>
<th>1500 rpm</th>
<th>1800 rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Power</td>
<td>23.5 (830)</td>
<td>28.0 (989)</td>
</tr>
<tr>
<td>Max Standby Power</td>
<td>25.0 (883)</td>
<td>29.0 (1024)</td>
</tr>
<tr>
<td>Max allowable intake restriction, kPa (In wc)</td>
<td>5 (20.1)</td>
<td></td>
</tr>
<tr>
<td>Heat rejection to exhaust, kW (BTU/min)</td>
<td>1500 rpm</td>
<td>1800 rpm</td>
</tr>
<tr>
<td>Prime Power</td>
<td>250 (14217)</td>
<td>272 (15468)</td>
</tr>
<tr>
<td>Max Standby Power</td>
<td>276 (15696)</td>
<td>306 (17402)</td>
</tr>
<tr>
<td>Exhaust gas temperature after turbine, °C (°F)</td>
<td>1500 rpm</td>
<td>1800 rpm</td>
</tr>
<tr>
<td>Prime Power</td>
<td>490 (914)</td>
<td>465 (869)</td>
</tr>
<tr>
<td>Max Standby Power</td>
<td>505 (941)</td>
<td>490 (894)</td>
</tr>
<tr>
<td>Max allowable back-pressure in exhaust line, kPa (In wc)</td>
<td>10 (40.2)</td>
<td></td>
</tr>
<tr>
<td>Exhaust gas flow, m³/min (cfm)</td>
<td>1500 rpm</td>
<td>1800 rpm</td>
</tr>
<tr>
<td>Prime power</td>
<td>58 (2048)</td>
<td>66 (2331)</td>
</tr>
<tr>
<td>Max Standby Power</td>
<td>63 (2252)</td>
<td>72 (2543)</td>
</tr>
</tbody>
</table>

Cooling system

<table>
<thead>
<tr>
<th>Heat rejection from engine, kW (BTU/min)</th>
<th>1500 rpm</th>
<th>1800 rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Power</td>
<td>17 (867)</td>
<td>18 (1024)</td>
</tr>
<tr>
<td>Max Standby Power</td>
<td>18 (1024)</td>
<td>20 (1137)</td>
</tr>
<tr>
<td>Heat rejection to coolant kW (BTU/min)</td>
<td>Prime Power</td>
<td>Max Standby Power</td>
</tr>
<tr>
<td>Prime Power</td>
<td>123 (6995)</td>
<td>139 (7905)</td>
</tr>
<tr>
<td>Max Standby Power</td>
<td>125 (7109)</td>
<td>143 (8132)</td>
</tr>
<tr>
<td>Fan power consumption, kW (hp)</td>
<td>9 (12)</td>
<td>12 (20)</td>
</tr>
</tbody>
</table>

Standard equipment

<table>
<thead>
<tr>
<th>Engine</th>
<th>Gen Pac</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 without damage to the engine.

MAXIMUM STANDBY POWER rating corresponds to ISO Standard Fuel Stop Power. It is applicable for supplying electrical power at variable load and in areas with well established electrical networks in the event of normal utility power failure. No overload capability is available for this rating.

For more technical data and information, please look in the Generating Set Engines Sales Guide.

Volvo Penta
SE-405 08 Göteborg, Sweden
www.volvopenta.com

* Including radiator and intercooler

Not all models, standard equipment and accessories are available in all countries.

All specifications are subject to change without notice.

Note! Not all models, standard equipment and accessories are available in all countries.

Flywheel

Flywheel housing with conn. acc. to SAE 1
Flywheel for 4" flex. plate and flexible coupling
Vibration dampers
Engine suspension

Fixed front suspension
Lubrication system

Oil dipstick
Full-flow oil filter of spin-on type
By-pass oil filter of spin-on type
Oil cooler, side mounted
Low noise oil sump
Fuel system

Fuel filters of disposable type
Electronic unit injectors
Pre-filter with water separator

Intake and exhaust system

Air filter with replaceable paper insert
Air restriction indicator
Air cooled exhaust manifold
Connecting flange for exhaust pipe
Exhaust flange with v-clamp
Turbo charger, low right side
Crankcase ventilation

Cooling system

Tropical radiator incl intercooler
Gear driven coolant pump
Fan hub
Thrust fan
Fan guard
Belt guard

Control system

Engine Management System (EMS) with CAN-bus interface SAE J1939 and stand alone interface

Alternator

Alternator 60A / 24 V

Starting system

Start motor, 6.0kW, 24 V
Connection facility for extra starter motor

Instruments and senders

Temp. and oil pressure for automatic stop/alarm 105°C

Other equipment

Expandable base frame

Engine Packing

Plastic warpping

Engine Packing

Electrical performance at variable load in areas with well established electrical power at variable load for an unlimited number of hours without damage to the engine.