

GREEN POWER VOLVO DIESEL ENGINE

1500 RPM	Type GP590VO
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The Engine with integrated water cooling

Engine: TAD1642GE

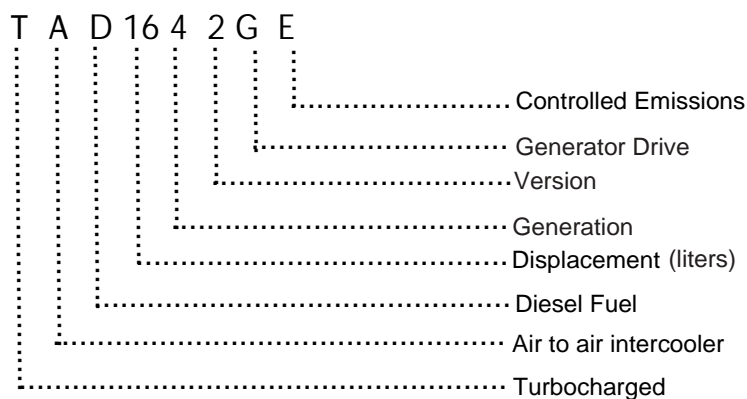
Technical description

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

Benefits

- Low noise emission, cost savings as no noise attenuation measures are required
- Long service intervals: 1000 hour oil change intervals and low fuel consumption bring savings in Operating costs
- Low installation costs
- Excellent load takeover characteristics ensure prompt power supply
- Combined oil cooling and lubrication prevents corrosion and cavitation
- High reliability and durability together with reduced maintenance requirement and wear parts

Model Designation



Control Panel

Manual or Automatic start control panel

- Manual or automatic remote boot controller, selector switch for Off, Man and Auto with the key.
- Complete motor protection functions with alarms visualized via LEDs in the front.
- The control unit 6 is set via DIP switches in the rear part of the case.
- Standard circuit breaker and differential relay.

Rating Table : The Genset TAD1642GE Engine

Engine type	TAD1642GE		
Speed	min ⁻¹ rpm	1500	
Frequency	Hz	50	
Engine Power			
Prime power (PRP)	kVA kW	590	472
Limited time running power (LTP)	kVA kW	650	520
Spec. fuel consumption PRP (LTP)			
100 % load	g/KWh lb/hph	200	0.324
75 % load	g/KWh lb/hph	296	0.318
50% load	g/KWh lb/hph	196	0.318
25 % load	g/KWh lb/hph	210	0.340

PRP* kVA/KW :

Available electrical power (at variable load) in a medium of 80% of the indicated maximum power.
A 10% overload capacity is available.

LTP** kVA/KW :

Available electrical power load (at variable load) for a maximum of 500 hours per year.
No overload capability available

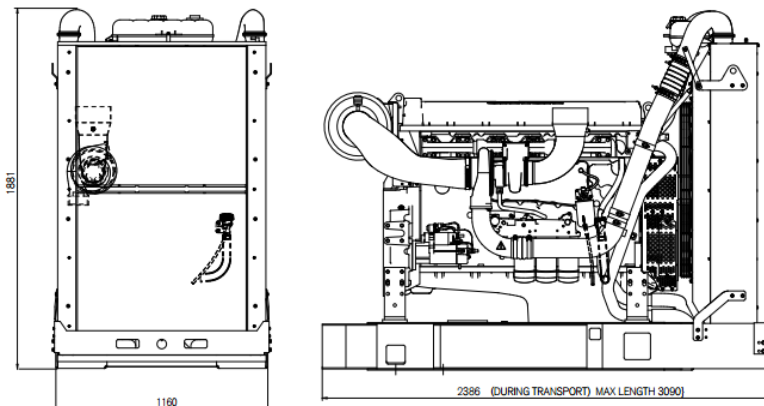
Scope of supply :

The engine and alternator are mounted together forming a rigid monoblock, the shoulders are connected by inflexible disc connection. The mono-block is mounted on a steel base frame through silent blocks. The base frame is including a fuel tank. Starting is electric and it contains a battery. The generator monitoring system consists of a control module.

Technical Data

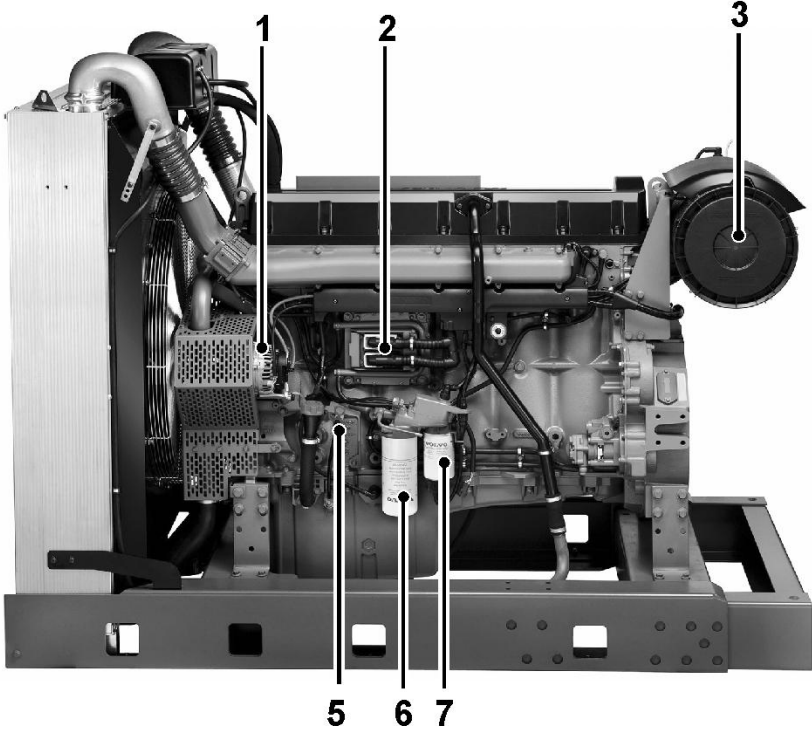
Engine type	TAD1642GE	
Numer of cylinder	6	
Bore x Stroke	mm	144 x 165
Displacement	l	16.12
Compression ratio	16.5:1	
Engine Power PRP	KW	472
Engine Power LTP	KW	520
Cooling Type	water	
Injection Type	Electronic unit	
Max allowable Back pressure	Kpa	10
Max Permitted air Intake restriction	Kpa	5
Standard Governor	Electronic	
Oil system capacity	Litres	48
Battery	Ah	80
Starting engine	KW	7.0
Exhaust gas flow	m ³ /min	102.5
Exhaust gas Temperature	°C	482

Dimensions

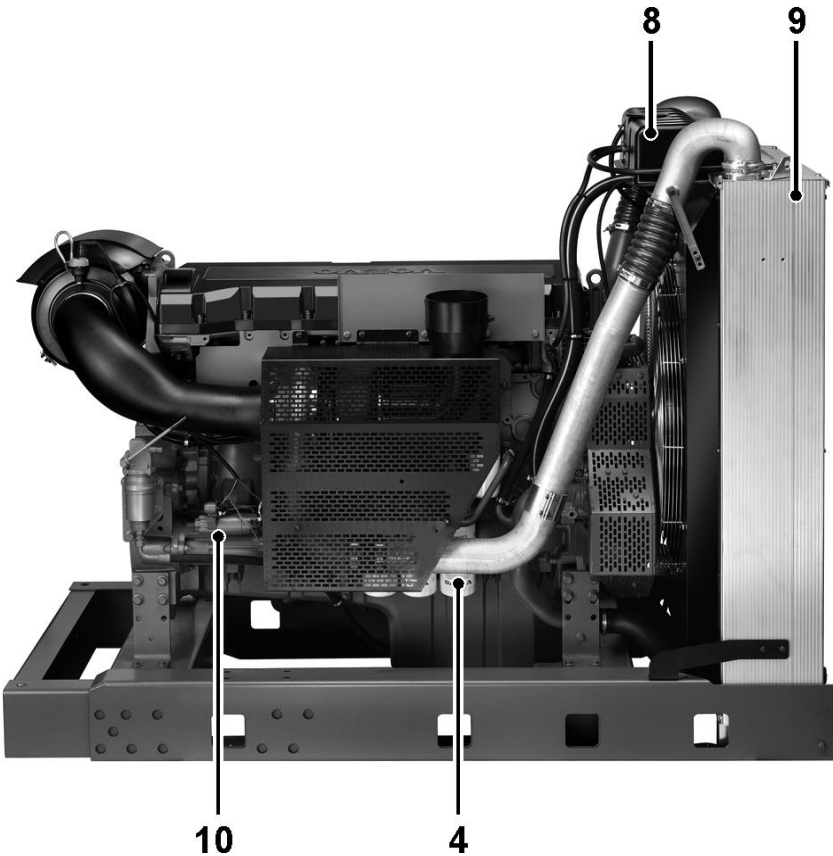


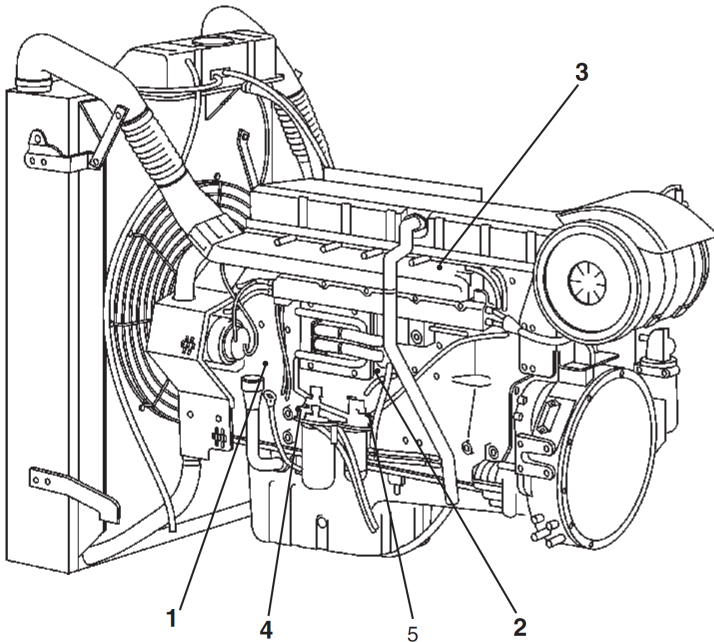
Engine type		Length	Width	Height
TAD1642GE	mm	2386	1160	1881

Engine Illustration



- Engine Description**
TAD1642GE
- 1 Alternator
 - 2 Control, EMS
 - 3 Air filters
 - 4 Oil filler
 - 5 Oil dipstick
 - 6 Fuel filter with fuel pressure
 - 7 Fuel pre-filter with water monitor
 - 8 Expansion tank
 - 9 Charge air coolers
 - 10 Starter

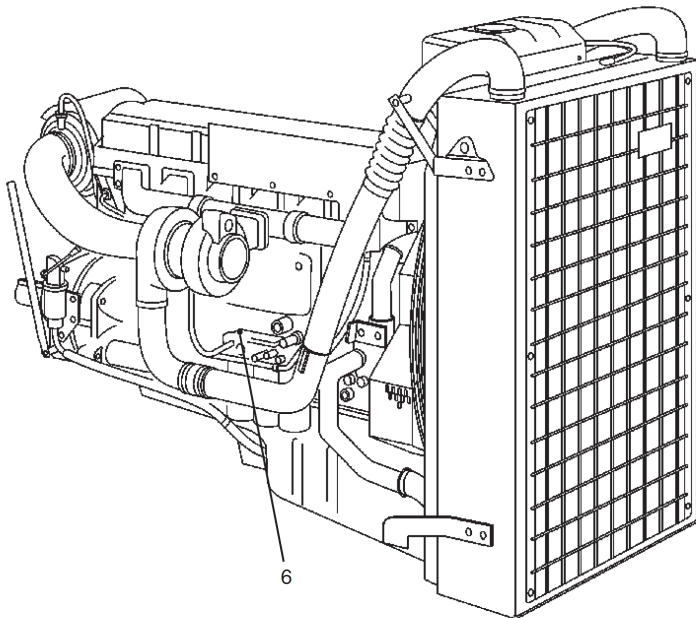




Engine Description

TAD1642GE

- 1 Crankcase pressure
- 2 Oil pressure
- 3 Charge air pressure and charge air temperature after the charge air cooler
- 4 Fuel feed pressure(pre-filter)
- 5 Fuel feed pressure(after the filter)
- 6 Piston cooling oil pressure



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