TAD1670-1672VE

NEW!

16 litre, in-line 6 cylinder - 405, 450 & 515 kW

EU Stage IV / US EPA Tier 4 Final

TAD1670-1672VE is a powerful, reliable and economical off-road Diesel Engine range built on the Volvo in-line six concept.

Low cost of ownership

World class fuel efficiency combined with a reliable exhaust aftertreatment system gives high uptime as well as low cost of ownership. No downtime for regeneration or decreased service intervals.

Compact & simple installation

SCR technology selected by Volvo does not increase amount of cooling capacity needed. As optional equipment all material needed in order to install the engine can be ordered from Volvo Penta. Installation guidelines as well as drawings and CAD models are easy to access. The result is an engine and aftertreatment system that is easy to install with minor impact on existing machine layout.

Durability & low noise

Long experince with SCR systems in combination with base engine development reduces risk of downtime. Well-balanced to produce smooth operation with low noise.

Power & torque

Maximum power and torque available at low rpm. As a result noice as well as fuel consumption is very low. Useful engine speed for the TAD1670-1672VE is due to power and torque layout very flexible

Low exhaust emission

Efficient injection as well as robust engine design in combination with optimised SCR technology and a light EGR contributes to excellent combustion and low fuel consumption.

Easy service & maintenance

Easily accessible service and maintenance points contribute to the ease of service of the engine. As optional equipment possible to remote mount filters and service points.

- **Proven and straight-forward design - built on Volvo Group technology**
- **Low cost of ownership and operation**
- **High power and torque already at low engine speed**
- **SCR and light EGR only - no DPF, DOC or regeneration**
- **Compact, simple installation and easy to service**
- **Similar engine footprint for all emission standards**
- **Wide range of optional equipment**

Technical description

Engine and block

- Cast iron cylinder block
- Wet, replaceable cylinder liners
- Replaceable valve guides and valve seats
- Overhead camshaft and four valves per cylinder

Lubrication system

- Full flow disposable spin-on oil filter, for extra high filtration
- Gear type lubricating oil pump, gear driven by the transmission
- Oil level sensor at startup

Fuel system

- Electronic high pressure 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

Cooling system

- Available as Power pack or base engine.
- Belt driven coolant pump with high degree of efficiency

Turbo charger

- Electronically controlled Waste-gate

Electrical system

- Engine Management System 2 (EMS 2.3), an electronically controlled processing system which optimizes engine performance.
- The instruments and controls connect to the engine via the CAN SAE J1939 interface. Options available for engine control equipment.

Exhaust aftertreatment system

- SCR and light EGR only
- Airless urea injection
- Wide range of options available, including different sized AdBlue® / DEF tanks (also possible for OEM to design own tank).

VOLVO PENTA

TAD1670-1672VE

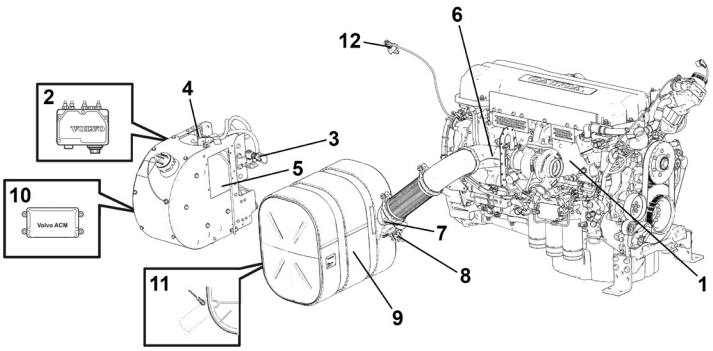
Technical Data

General

Engine designation	TAD1670-1672VE
No. of cylinders and configuration	in-line 6
Method of operation	4-stroke
Bore, mm (in.)	144 (5.67)
Stroke, mm (in.)	165 (6.50)
Displacement, l (in³)	16.12 (984)
Dry weight, engine only, kg (lb)	1322 (2915)

Engine	kW	Hp	rpm	Max Nm
TAD1670VE	405	551	1900	2750
TAD1671VE	450	612	1900	2900
TAD1672VE	515	700	1800	3200

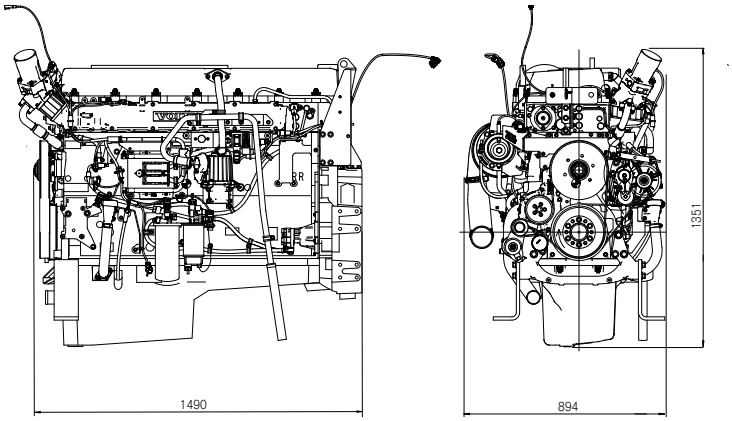
Main components - principal layout

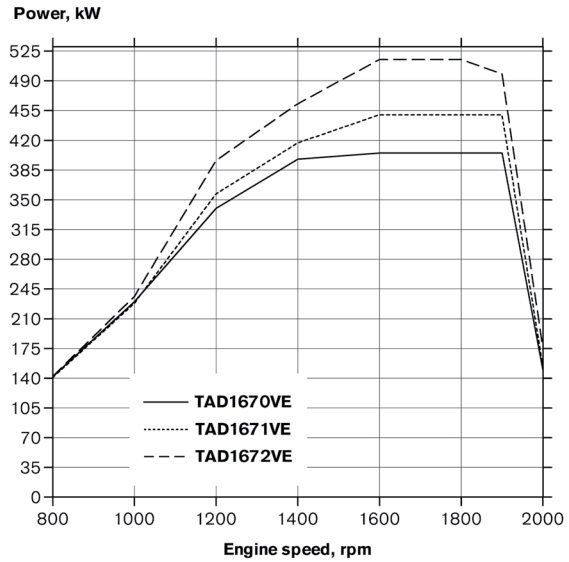


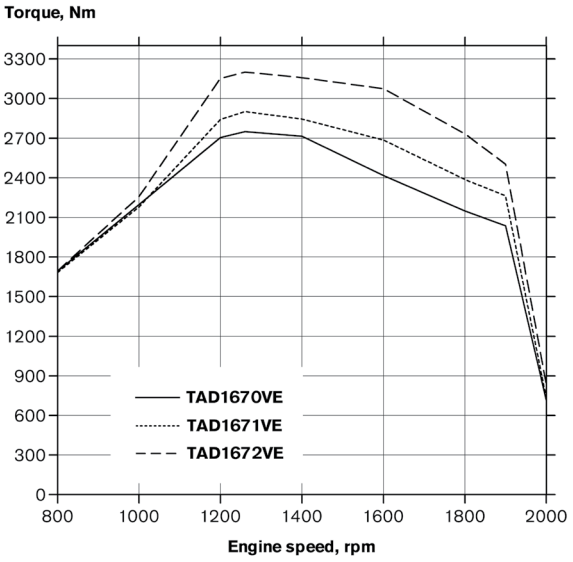
1. Engine
2. Pump unit
3. Solenoid valve, heating/cooling
4. AdBlue / DEF level sensor
5. AdBlue / DEF solution tank
6. NOx sensor
7. Temperature sensor exhaust
8. Dosage Valve
9. Muffler with catalytic converter
10. Aftertreatment control module
11. NOx sensor
12. Temperature sensor air

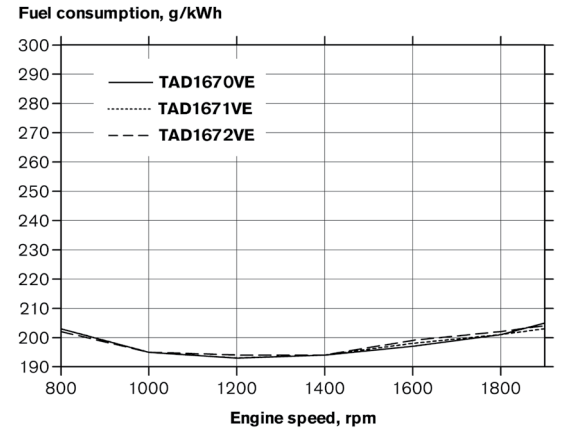
Dimensions

Not for installation. Dimensions in mm.









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.

Additional information
For additional information, please contact your Volvo Penta representative or visit www.volvopenta.com.

Not all models, standard equipment and accessories are available in all countries. All specifications are subject to change without notice. The engine illustrated may not be entirely identical to production standard engines.

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

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