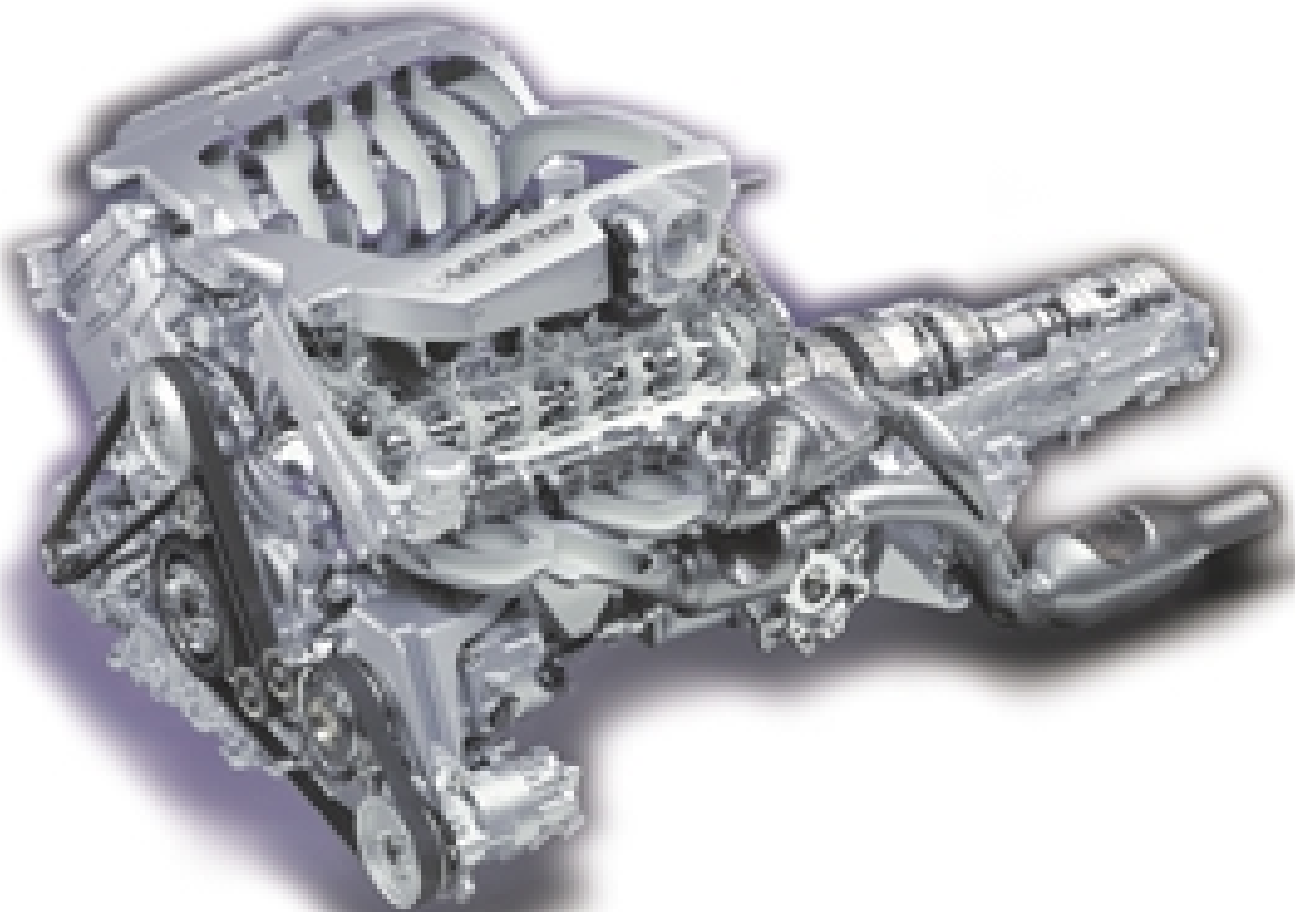


## The 6.0 I W12 engine in the Audi A8 - Part 1

Self-study programme 267

VW 12 6.0





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The self-study programme contains information on design features and functions.

**The self-study programme is not intended as a Workshop Manual. Values given are only intended to help explain the subject matter and relate to the software version applicable at the time of SSP compilation.**

Use should always be made of the latest technical publications when performing maintenance and repair work.

**New**



**Attention Note**



# Introduction



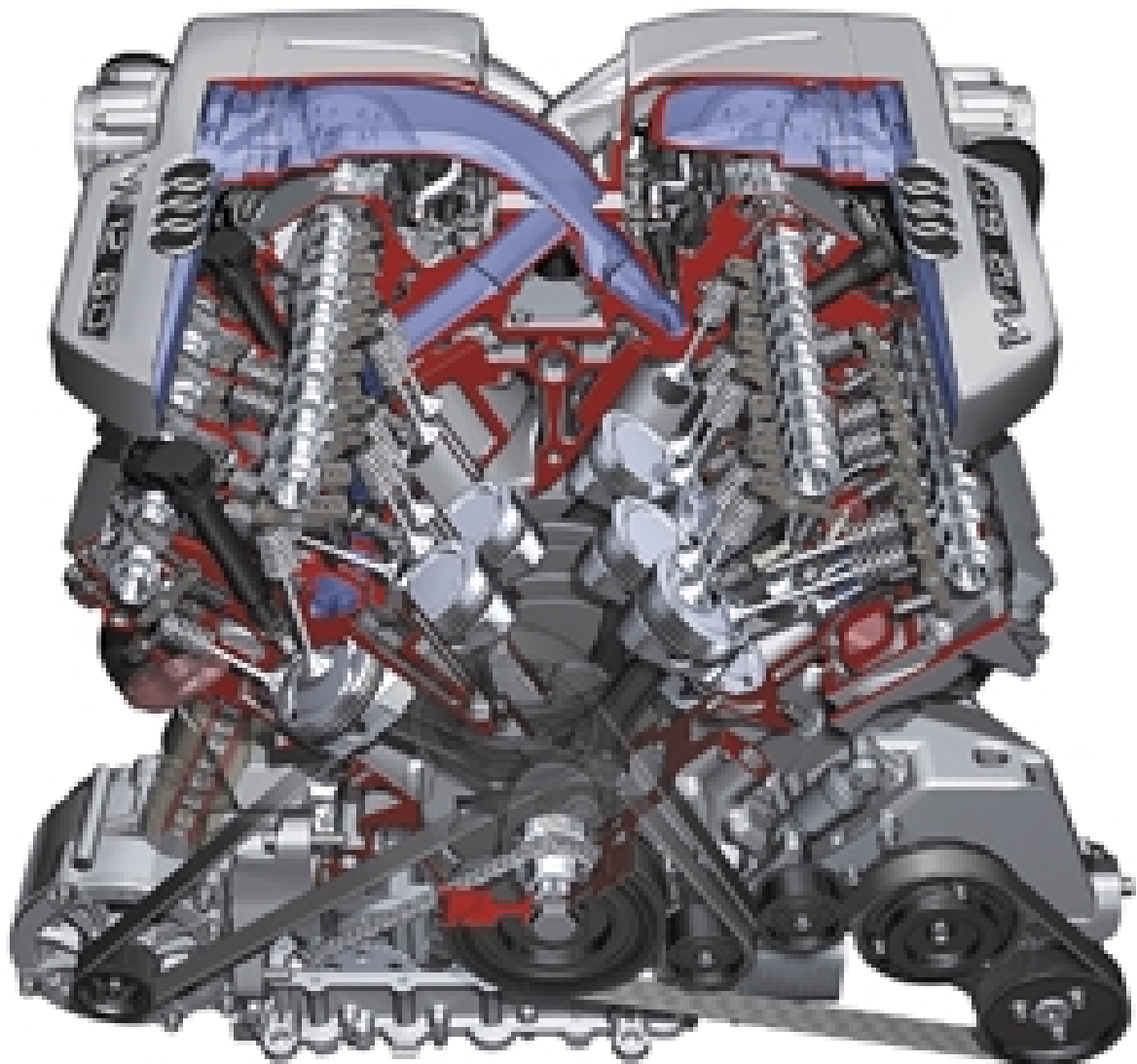
The new top of the range models from the Volkswagen Group feature an innovative generation of so-called W-engines developed from the module used for the VR engine family.

To achieve this, successfully mass-produced components were integrated into a completely new engine concept.

This process yielded a range of extremely compact multi-cylinder petrol engines of a consistently high standard not previously attained in passenger car series production.

One example is the W12 6.0 I engine, featured for the first time by the Audi A8.

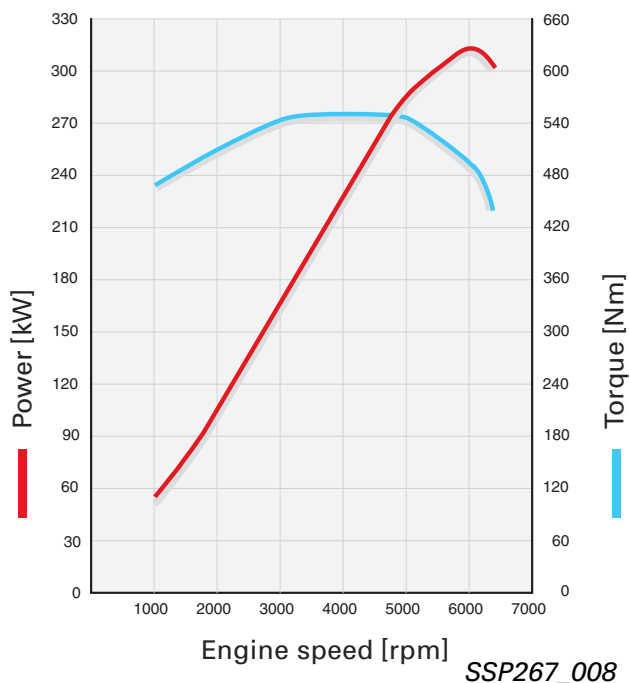
The W12 6.0 I is currently the most powerful 12-cylinder engine available in this vehicle class, offering a combination of outstanding quality and optimum performance.





## Technical data

Engine code letters:	<b>AZC</b>
Design:	W-engine with a V-angle of 15° and a bank angle of 72°
Capacity:	5998 cm <sup>3</sup>
Max. power:	309 kW (420 hp) at 6000 rpm
Specific power output:	51.5 kW/l 70.0 hp/l
Max. torque:	550 Nm at 3500 - 4750 rpm*
Specific torque:	91.7 Nm/l
Bore:	84.0 mm
Stroke:	90.268 mm
Compression ratio:	10.75: 1
Weight:	245 kg
Fuel:	Premium Plus Unleaded 98 RON
Firing order:	1-12-5-8-3-10-6-7-2-11-4-9
Ignition interval:	60° crankshaft
Engine management:	Motronic ME 7.1.1
Emission standard:	D4/EU 3
Service interval:	LongLife Service max. 30,000 km or max. 2 years



Engine oil:	LongLife oil VW 50301 (OW-30)
Oil change quantity:	approx. 10.5 l (with filter)
Idling speed:	560 rpm



The performance data given are only attained when using 98 RON.  
The use of 95 RON will result in reduced power.

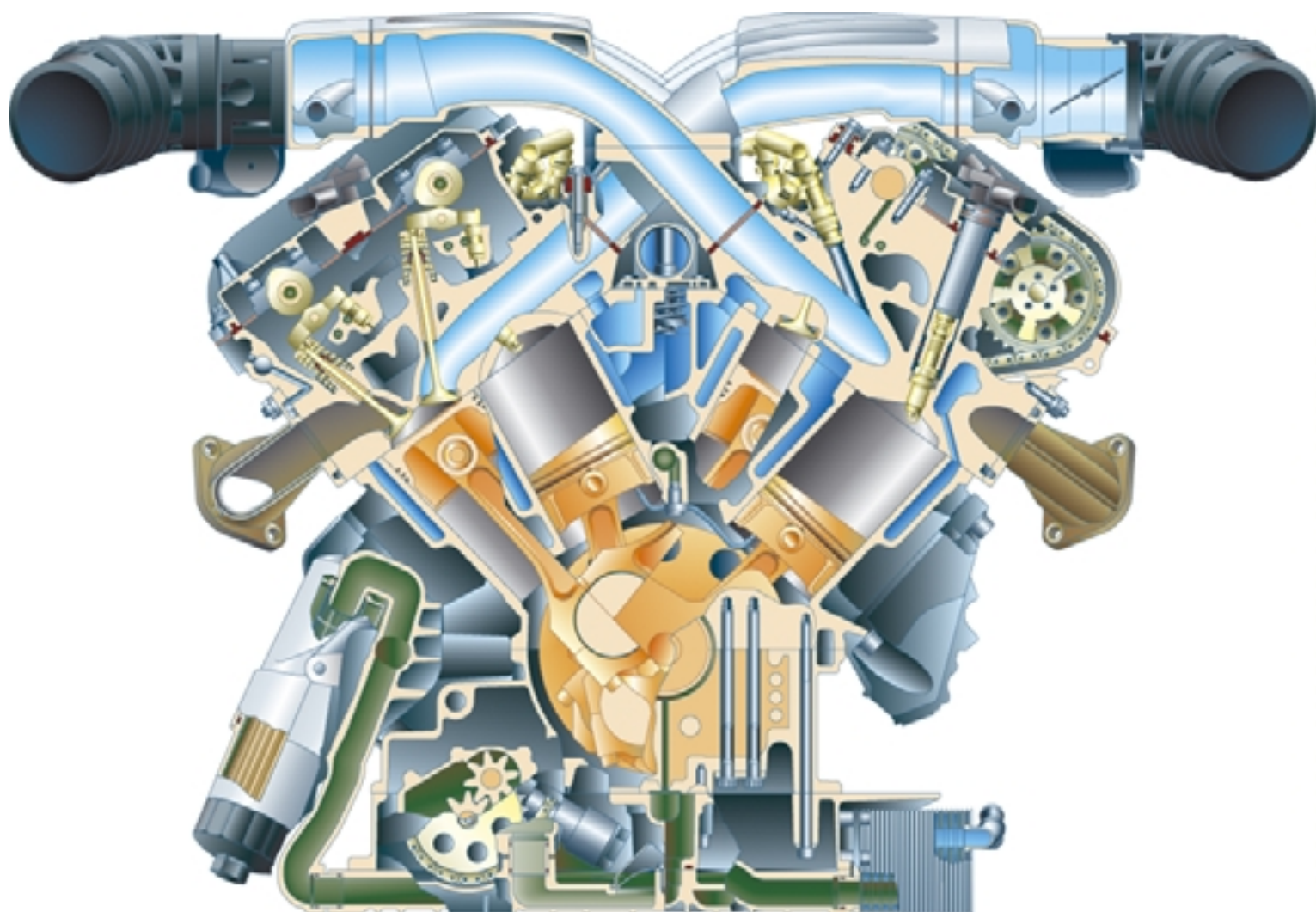
In exceptional circumstances, use can be made of regular unleaded fuel of at least 91 RON.

\* More than 90 % of maximum torque is already available as of 1800 rpm.

# Introduction



## Cross-section



SSP267\_001

### Special features of the W12 6.0 l engine in the Audi A8:

- 12-cylinder, W-design petrol engine
- Aluminium engine block and cylinder heads
- Oil supply with dry sump lubrication
- Twin overhead camshafts with 4 valves each per cylinder - valve operation by means of roller-type rocker fingers
- Infinitely variable timing control for inlet and exhaust camshafts