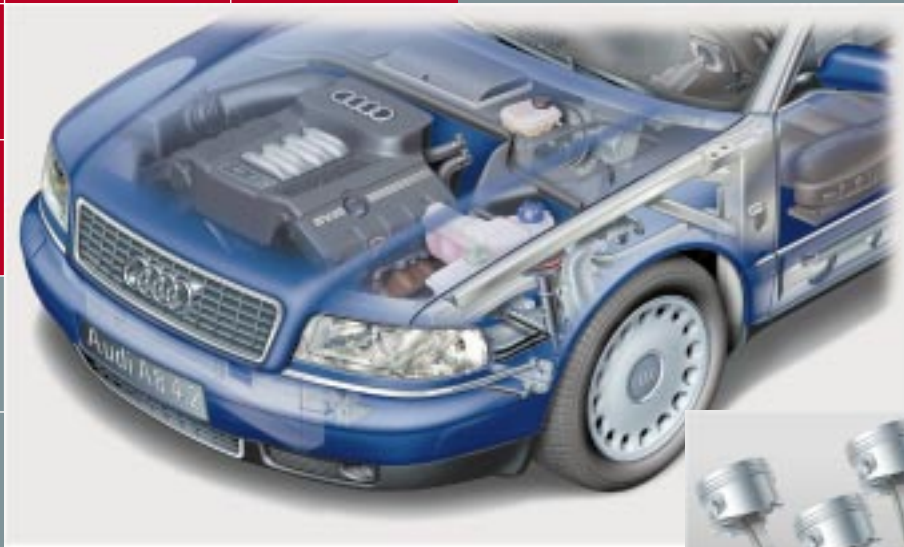


Service.



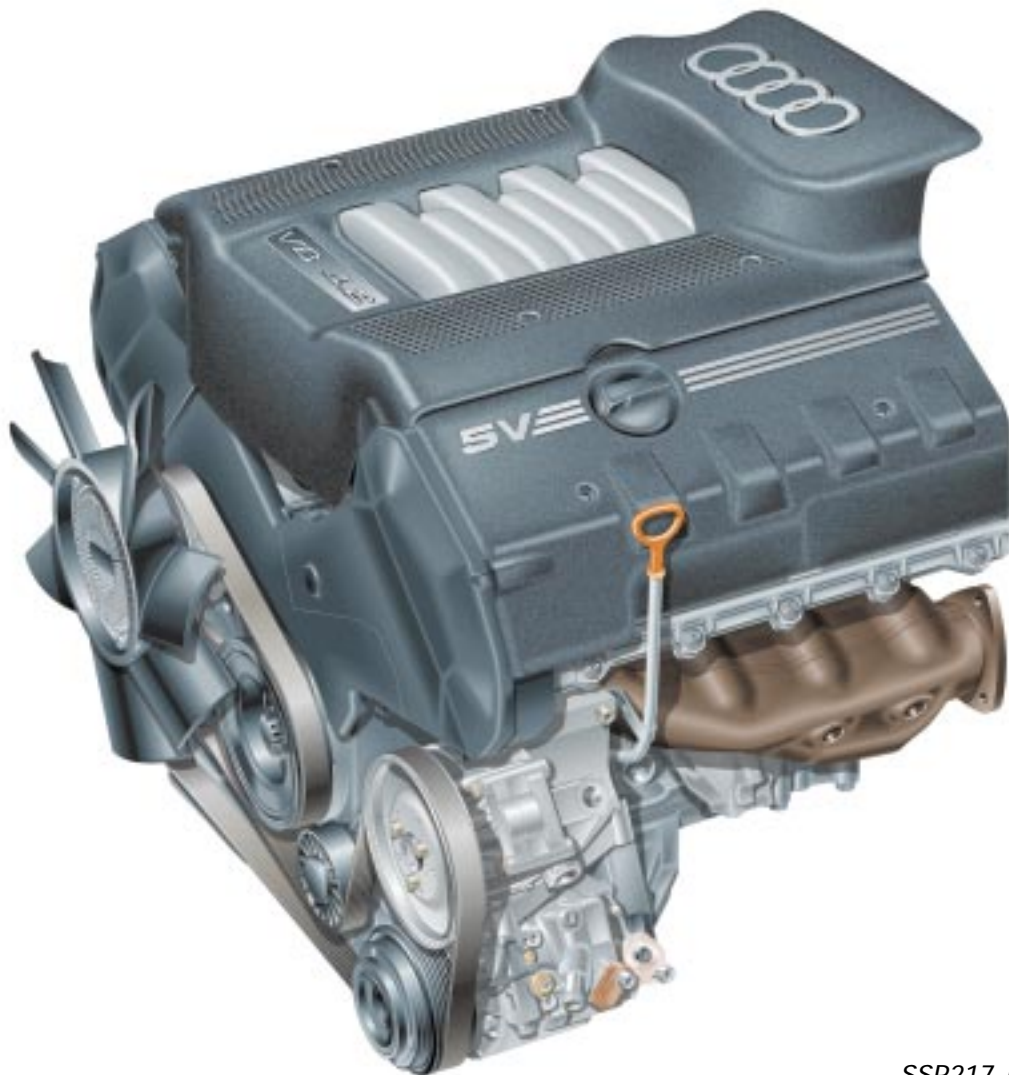
The V8-5V Engine

Construction Features and Functions

Self-Study Programme 217

AUDI has been producing advanced 8-cylinder engines since 1988. Their capacity has increased from 3.6 l to 4.2 l.

The V8 engine in combination with Aluminium Space Frame technology was the technical basis for Audi's breakthrough into the luxury class.

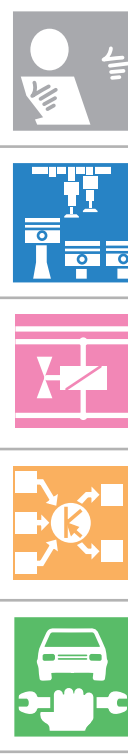


SSP217_048

Steps to enhance the value of the Audi A8 have included the redesign of the V8 engine.

The new V8-5V engines are now also available for the Audi A6 model range.

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The self-study programme provides you with information concerning the engine's construction features and functions.

The self-study programme is not a repair manual!

When carrying out maintenance and repair work, it is essential to use the latest technical literature.

New!



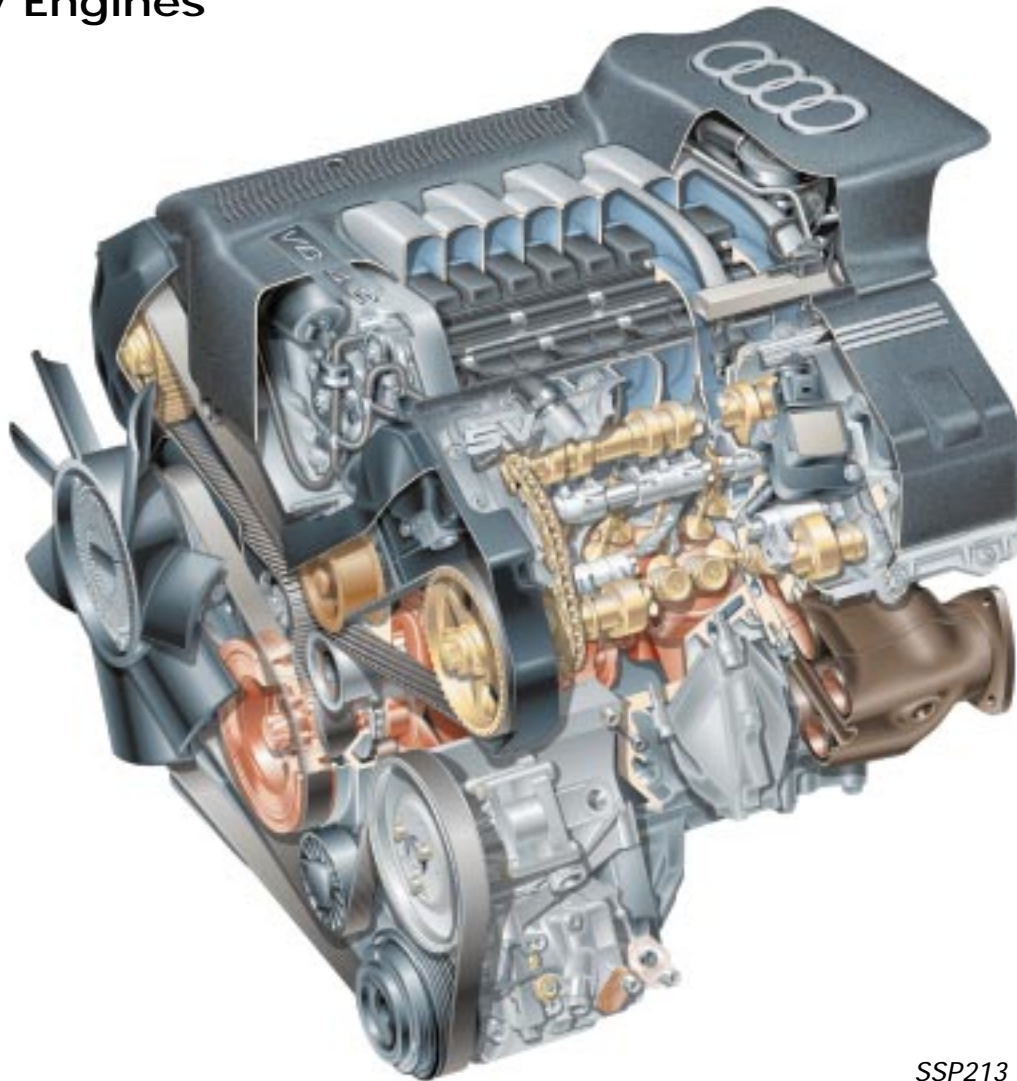
Caution!
Important!



Introduction



V8-5V Engines



SSP213_073

Major modifications were made to the V8 engines during the course of further development.

Emphasis was placed on the following development objectives:

- compliance with future exhaust-emission regulations
- reduction of fuel consumption
- increase in torque and power
- improvement of comfort and convenience
- reduction of engine weight
- increased use of shared components for the AUDI engine series.

The following new features and modifications have been incorporated in the V8 4-valve engine.

New features

- Five-valve cylinder head with roller rocker
- Camshaft adjustment
- 3-stage variable intake manifold
- Engine management system, Bosch ME 7.1
- Electro-hydraulic engine mounting

Modifications

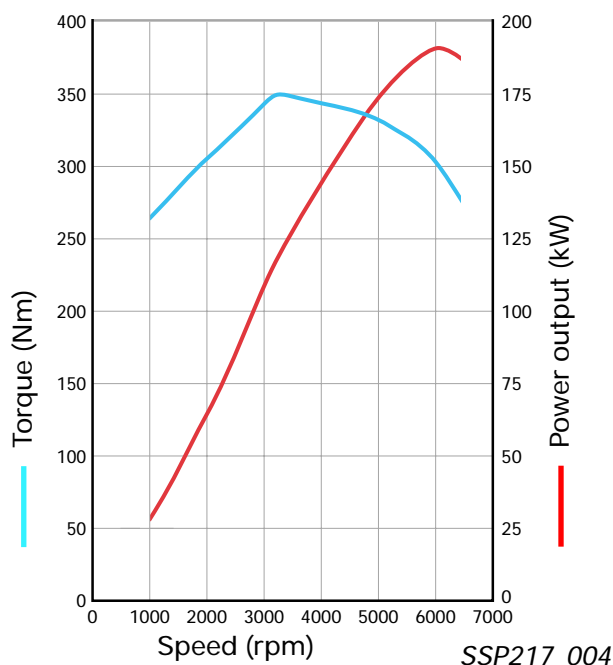
- to crankcase and crankgear
- to oil circuit
- to cooling circuit



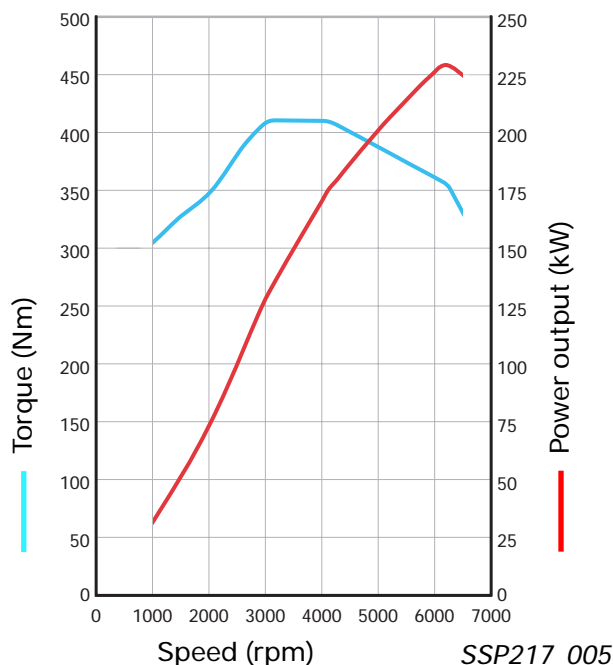
Technical data

	3.7 l	4.2 l
Engine code	AQG	AQF (A8) ARS (A6)
Design	V8 engine with 90° V angle	
Capacity	3697 cm ³	4172 cm ³
Power output	191 kW 260 hp at 6000 rpm	228/220 kW 310/300 hp at 6000 rpm
Specif. output	51.6 kW/l 70.3 hp/l	54.6 kW/l 74.3 hp/l
Torque	350 Nm at 3200 rpm	410 Nm at 3000 rpm
Specif. torque	94.7 Nm/l	98.3 Nm/l
Bore	84.5 mm	84.5 mm
Stroke	82.4 mm	93.0 mm
Compression ratio	11:1	11:1
Weight	198 kg	200 kg
Engine management	Motronic ME 7.1	
Fuel	98/95 RON	
Firing sequence	1 - 5 - 4 - 8 - 6 - 3 - 7 - 2	
Exhaust-emission standard	EU 3	

3.7 l V8-5V engine



4.2 l V8-5V engine



The specified power data is only possible if 98 RON fuel is used. A reduction in power output must be expected if 95 RON fuel is used.