



Drive

Cylinder head

- Changes

The geometry of the two intake ports (swirl port/tangential port) was optimized for the purpose of achieving improved mixture control and combustion.

The exhaust camshaft is driven by a spur gear train (as on the M47TU).

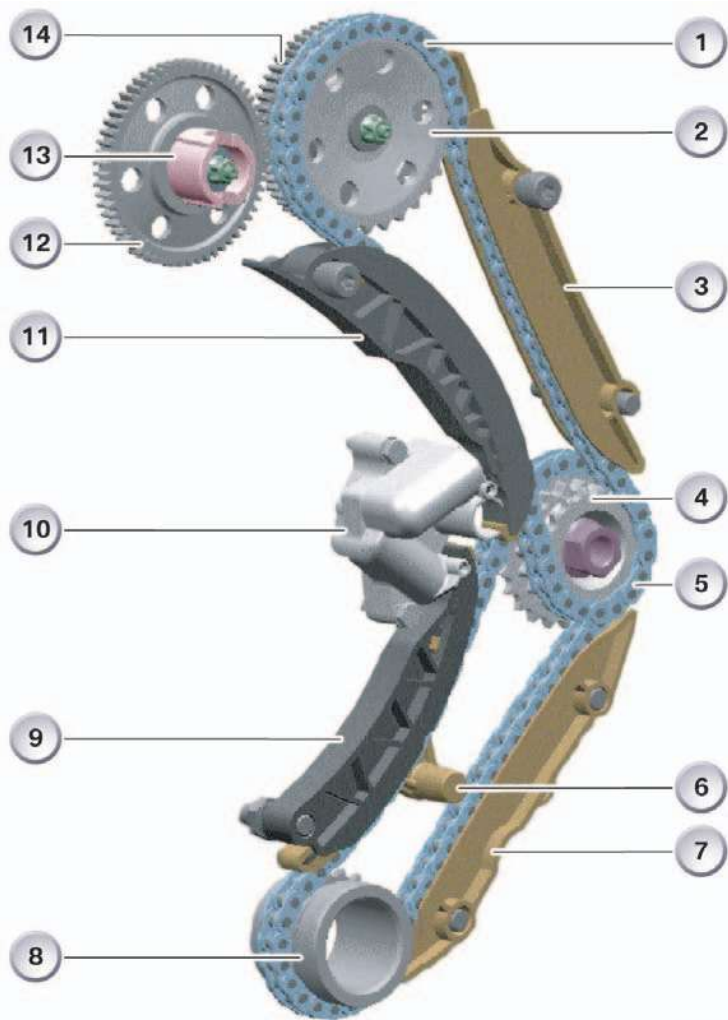
The geometry of the timing case was changed due to the modified transmission ratio of the chain drive (new common rail pump). This change also made it necessary to correspondingly adapt the shape of the cylinder head cover.

A high-power vacuum pump is used (Pierburg single-vane pump, principle same as N42).



Drive

- Chain drive



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Fig. 6: Chain drive

Index	Explanation	Index	Explanation
1	Secondary chain	8	Sprocket, crankshaft
2	Sprocket, intake camshaft	9	Primary tensioning rail
3	Secondary guide rail	10	Hydraulic chain tensioner
4	Sprocket, high pressure pump	11	Secondary tensioning rail
5	Primary chain	12	Spur gear, exhaust camshaft
6	Oil spray nozzle	13	Dog coupling
7	Primary guide rail	14	Spur gear, intake camshaft

M57TU Engine

Background Material

Chapter 3 P.3



Drive

Design

The design of the chain drive corresponds to that of the M47D20TU (common part). The exhaust camshaft is driven via a spur gear (14) by the intake camshaft.