Demand-controlled oil pump

The engine ancillaries offer tremendous potential for efficiency. A new generation of oil pumps, which Audi employs in a number of models, are an important component. Smaller in terms of delivery rate, these volumetric-flow-controlled oil pumps operate only as required, and no longer need to circulate oil continuously.

These regulated pumps switch from the low to the high pressure stage either at a defined engine speed or in a continuously variable fashion, depending on the design. If the design includes spray jets for cooling the piston crown, they are activated at this point. Variable operation is possible with both of the common designs: gear pumps and vane pumps. A number of methods can be used to switch the pump between stages – an electrohydraulic mechanism, for example.

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