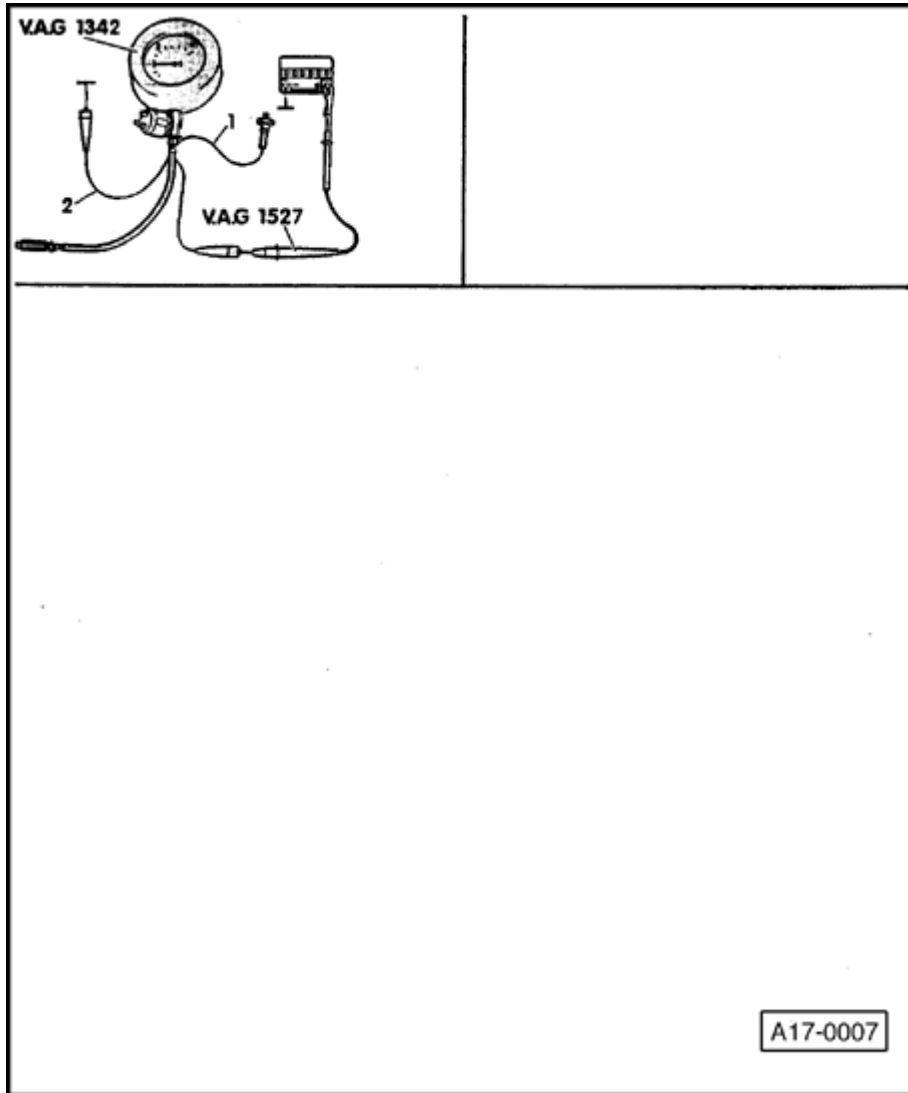


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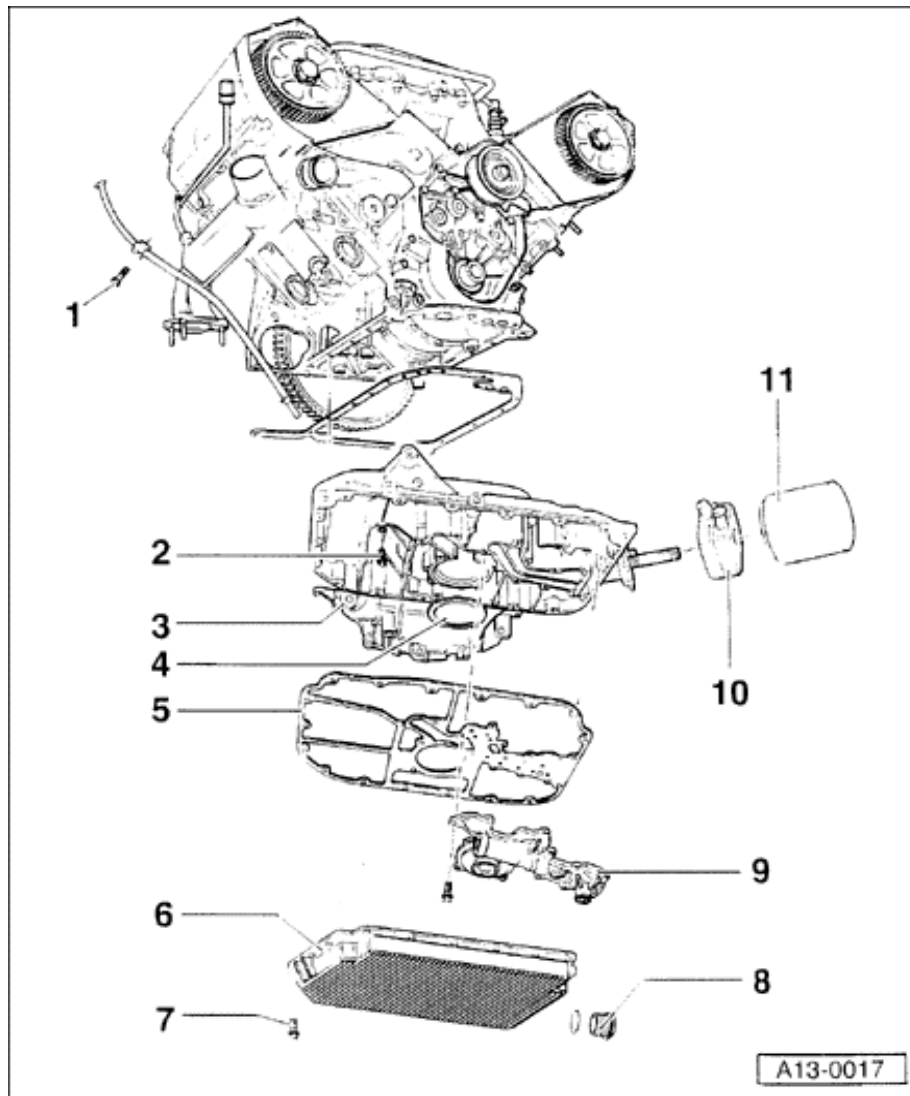


Lubrication system components, removing and installing

Special tools

The following special tools and test equipment are required for these operations

VAG 1342	Oil pressure tester
VAG 1527	Voltage tester



Component layout

Modified oil circuit

CAUTION!

Do NOT overfill with oil past the MAX mark on the oil dipstick. Damage to the three way catalytic converter could result.

Note:

- ◆ Always replace gaskets and seals

1 - 10 Nm (7ft lb)

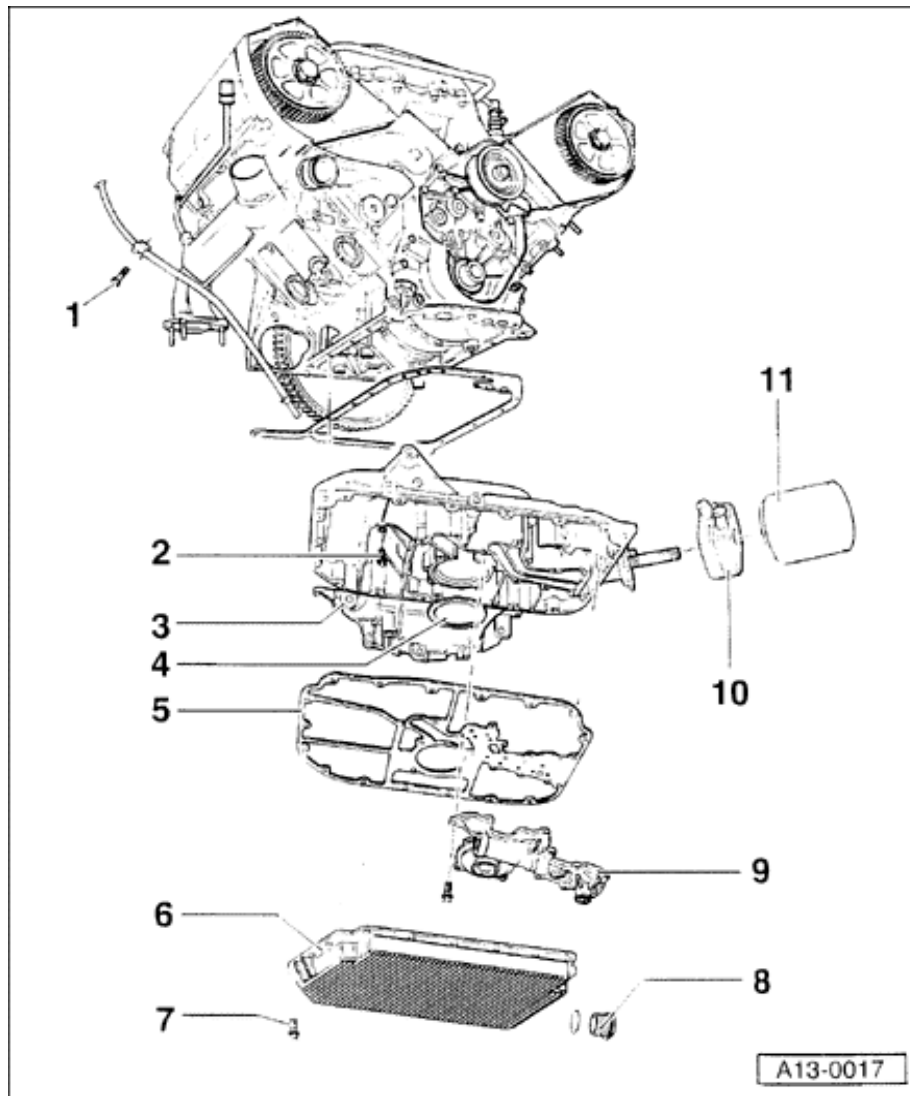
2 - 10 Nm (7 ft lb)

3 - Oil pan, upper

4 - Pick-up strainer

- ◆ Locks into upper oil pan with three lock tabs

5 - Gasket



6 - Oil pan, lower

7 - 10 Nm (7 Nm)

8 - Oil drain plug

◆ 40 Nm (30 ft lb)

9 - Cover

◆ With integrated 5 bar (72 psi) and 11 bar (159 psi) pressure relief valves

10 - Oil cooler

11 - Oil filter

◆ NOT interchangeable with older version

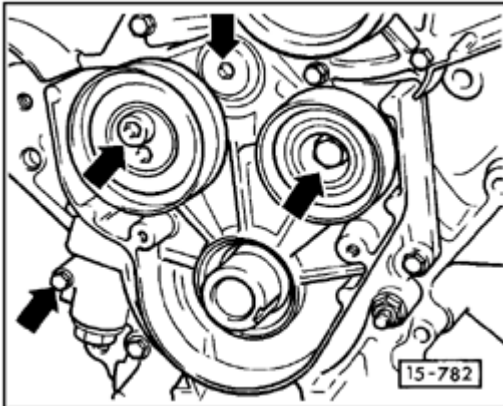
◆ Revised lubrication system requires different filter: Part no. 078 115 561 D

Oil pump, removing

Note:

If irregular valvetrain noises occur and disappear after a lengthy drive, but always re-occur on short drives, replace the oil retention valves.

- Remove oil dipstick and drain engine oil.
- Remove upper and lower parts of oil pan.
- Remove toothed belt ⇒ [page 13-11](#) .
- Remove toothed-belt tensioner and guide pulley at oil pump.
- Remove screw plug.
- Remove oil pump.



Note:

When installing the oil pump check alignment of oil pump drive

Tightening torques

◆ Oil pump	10 Nm (7 ft lb)
◆ Guide pulley	20 Nm (15 ft lb)
	30 Nm (22 ft lb)

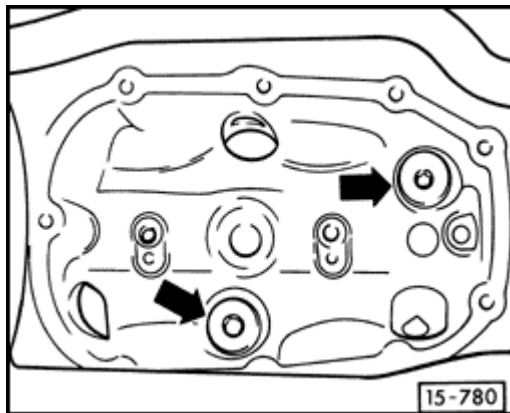
- ◆ Screw plug
- ◆ Toothed belt tensioner 45 Nm (33 ft lb)

Oil retention valves, replacing

Note:

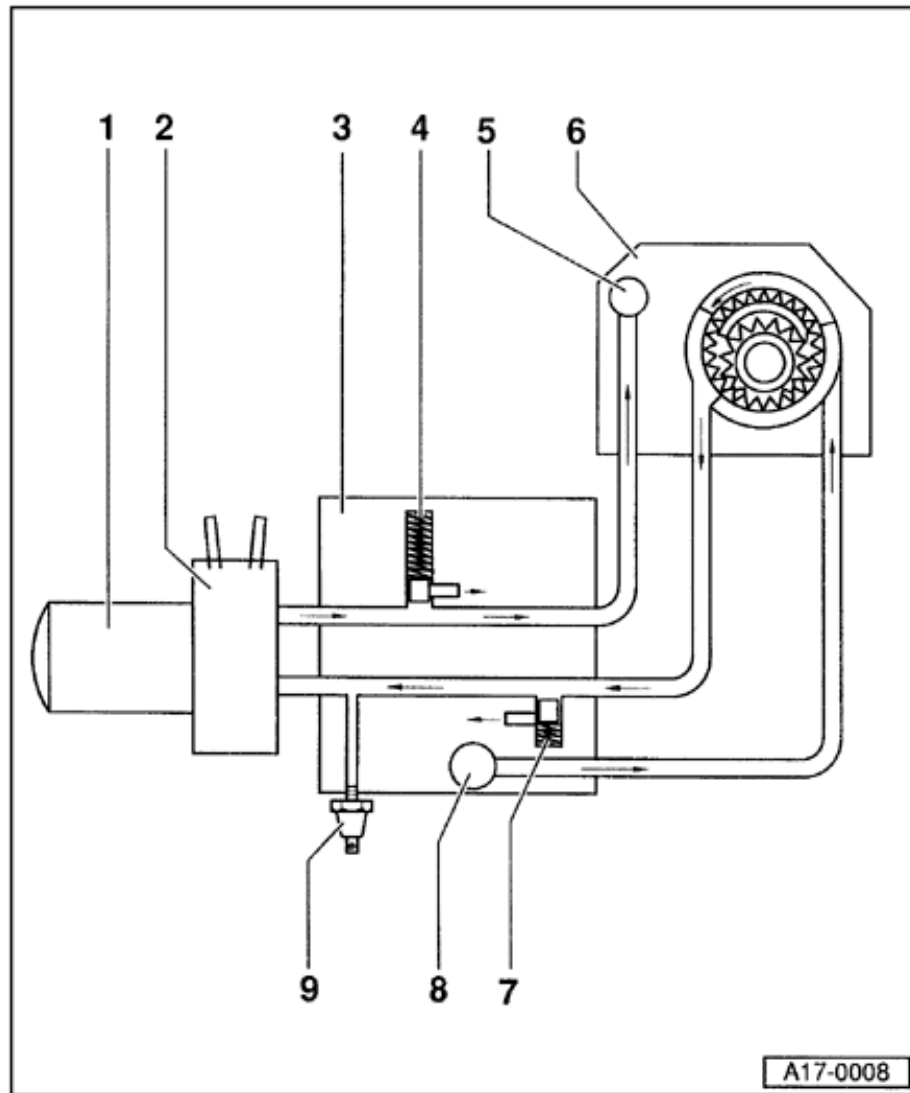
- ◆ *The oil retention valves must be replaced if the valvetrain sounds noisy on short drives, although the noise may go away on longer drives.*
- ◆ *When installing the oil pump, ensure that the driver at the crankshaft engages in the oil pump,*

- Remove intake manifold.
- Remove cover plate beneath intake manifold.
- ◀ - Replace oil retention valves (arrows).



Tightening torques

- ◆ Intake manifold 20 Nm (15 ft lb)
- ◆ Cover 10 Nm (7 ft lb)
- ◆ Oil retention valves 25 Nm (18 ft lb)



Revised oil circulation system

Note:

- ◆ Modifications compared to previous 2.8 liter V6 (Audi 90, Audi 100).
- ◆ Only the modified components should be installed on this engine.

1 - Oil filter

- ◆ Larger outer dimensions

2 - Oil cooler

- ◆ Larger cross-sectional flow area

3 - Cover for oil pan

- ◆ New

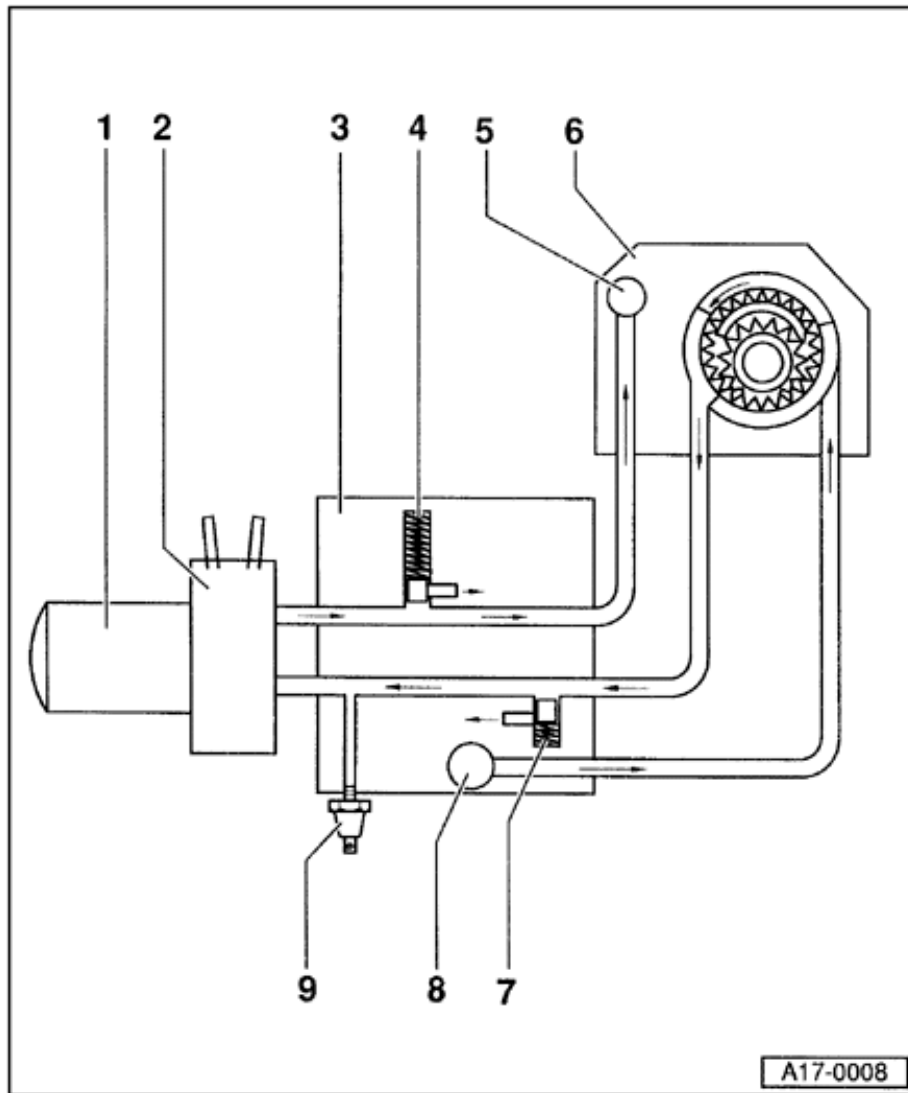
4 - Pressure relief valve

- ◆ New

5 - Oil supply to engine

6 - Oil pump

- ◆ New

**7 - Pressure relief valve 11 bar**

◆ New

8 - Oil pick-up

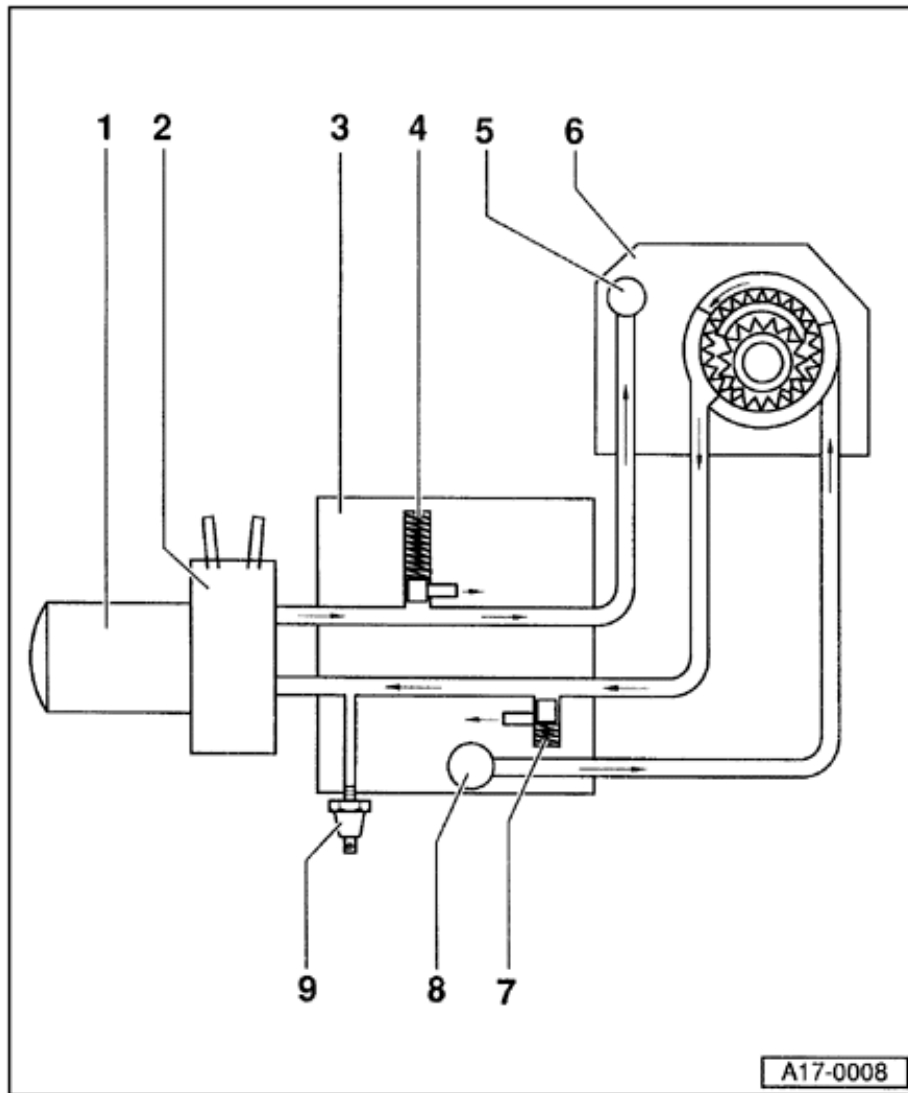
◆ New

9 - Oil pressure switch 1.8 bar

◆ Color: Brown

◆ Checking ⇒ [page 17-9](#)◆ Dynamic oil pressure warning system
function ⇒ [page 17-11](#)

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Function of revised oil circulation

Intake side

Oil is taken in from the oil pump -6- via the oil pick-up pipe -8-.

Pressure side

Oil pressure comes from the oil pump -6- through the upper part of the oil pan past the pressure relief valve -7-, oil pressure switch -9-, oil cooler -2- and oil filter -1- to the pressure relief valve -4-.

Pressure relief valve -4- controls the oil pressure to the engine.

The pressure relief valve -7- is a safety valve that opens only at high RPM and cold engine temperature.

Advantages

Oil pressure is controlled from the oil filter and oil cooler, so that the oil pressure available at those locations is supplied via the pressure relief valve -4- or from the oil pump.

Oil pressure and oil pressure switch, checking

Operational test and servicing the visible and audible oil pressure indicator:

⇒ *Electrical Wiring Diagrams, Troubleshooting & Component Locations binder.*

Test requirements

- Oil level OK
- Oil pressure warning light -K3- comes on with ignition on
- Auto-Check system indication OK, if applicable.
- Engine oil temperature approx. 80 ° C (176 ° F) and radiator coolant fan must have switched on at least once

Checking oil pressure switch

- Disconnect harness connector from oil pressure switch.



- Remove oil pressure switch and install into oil pressure tester VAG 1342.
- Connect cable -2- (brown) to Ground (GND).
- Connect cable -1- (blue) to oil pressure switch.
- Connect VAG 1527B voltage tester to cable -1- and battery positive voltage (B+).

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- Start engine and slowly increase engine speed (RPM).
- At 1.6-2.0 bar (23-29 psi) pressure, the LED must come on

If not:

- Replace 1.8 bar oil switch.

Operation of dynamic oil pressure warning system, checking

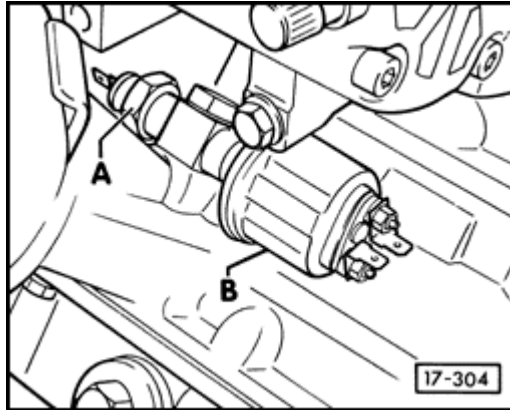
Testing oil pressure warning light:

After ignition is switched on (terminal 15 on) with the engine not running, the oil pressure warning light flashes (not on models with Auto Check System).

Warning criteria:

- ◆ Engine not running; oil pressure switch closed
- ◆ Engine coolant temperature greater than 60 ° C (140 ° F), engine speed greater than 1500 RPM and oil pressure switch open
- ◆ Engine coolant temperature less than 60 ° C (140 ° F), engine speed greater than 300 RPM and oil pressure switch open
- ◆ At an engine speed greater than 5000 rpm, an active oil warning is not cancelled, irrespective of the position of the oil pressure switch
- ◆ If the voltage supply to the control module (terminal 15) is in order and, when the engine is running, the oil pressure switch is open for

longer than 0.5sec. above 1500 RPM, this event is stored. If this condition occurs three times during "terminal 15 on," the warning also becomes or remains active below 1300 RPM.



Testing oil pressure

A

- Remove oil pressure switch and screw in VAG 1342 oil pressure gauge.
(The oil pressure sensor shown in the illustration is not installed on the A4)
- Install oil pressure switch into VAG 1342.
- Start engine.

Oil pressure specifications

- Engine oil temperature at least 80 ° C (176 ° F)
- ◆ At idle: 1.0-2.5 bar (15-36 psi)
- ◆ At 3000 RPM: 3.0-5.0 bar (44-73 psi)