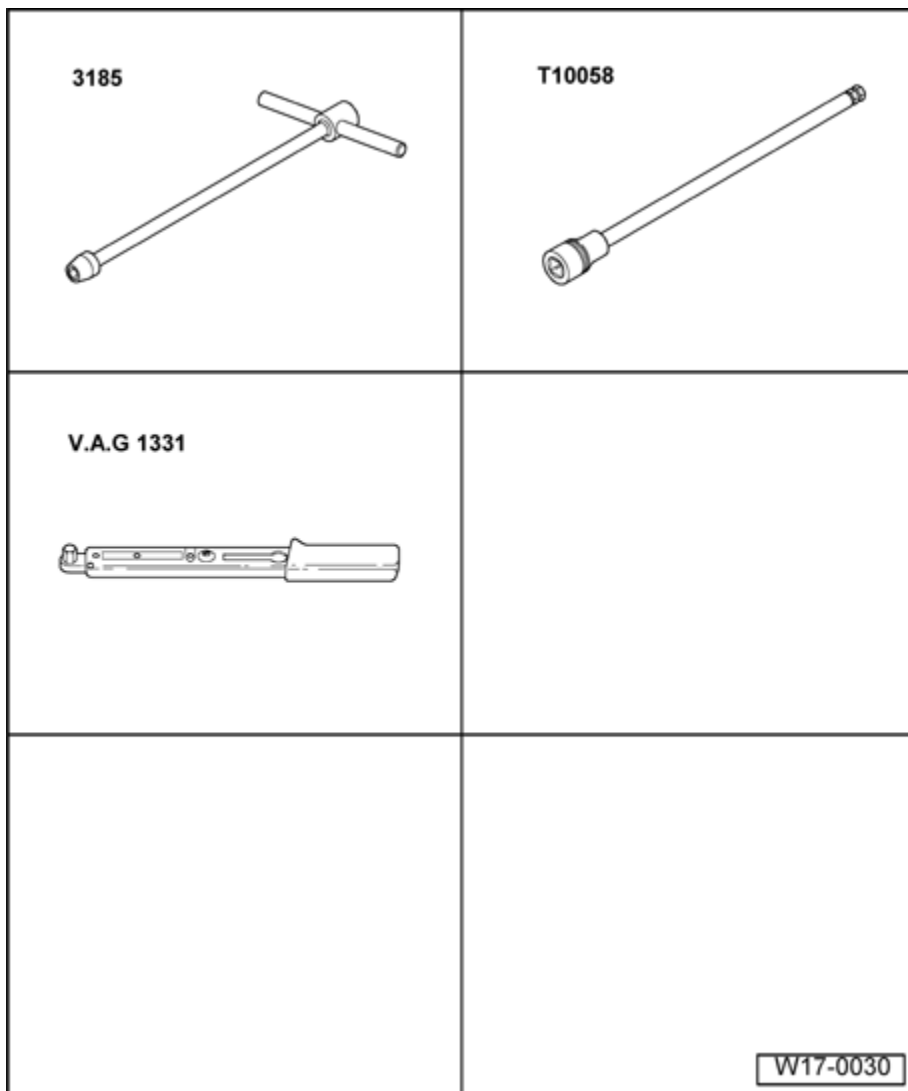


Volkswagen > New Beetle > 1998 - 2005
1.8 Liter 4-Cyl. 5V Turbo Engine Mechanical, Fuel Injection Ignition,
Engine Code(s): APH, AWP, AWV, BKF, BNU
17 - Lubrication system, servicing

Oil pan, removing and installing



Special tools, testers and auxiliary items required

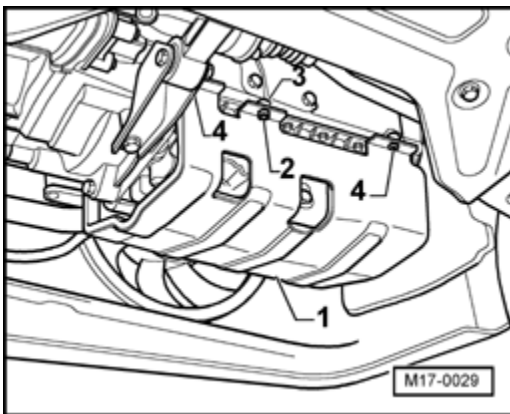
- ◆ Jointed wrench 3185
- ◆ Socket T10058
- ◆ Torque wrench V.A.G 1331
- ◆ Hand drill with plastic brush

- ◆ Protective goggles
- ◆ Flat scraper
- ◆ Silicone sealing compound D 176 404 A2
- ◆ Locking fluid D 000 600 A2

Removing

- Remove center and right sound insulation ⇒ Body Exterior - Repair Group 50.

Engines with oil pan protection



- Remove bolts - **2** - and take sleeves - **3** - off front and rear parts of oil pan protection.
- Press spreader pin out upward and remove spreader rivets - **4** - .
- Remove oil pan protection - **1** - .

Engines with LongLife Service

- Pull 3-pin connector off Oil level thermal sensor -G266-.

Continuation for all engines

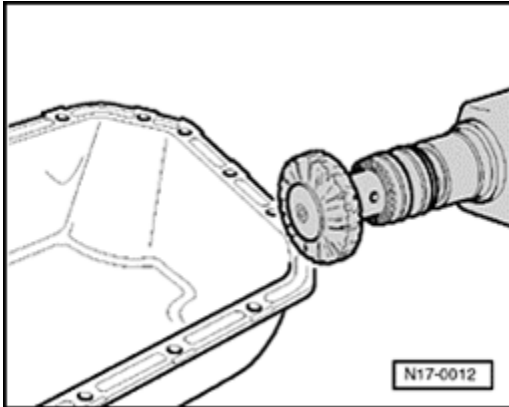
- Drain engine oil.

Note:

- ◆ *Observe disposal regulations!*
- Remove oil pan bolts.

Note:

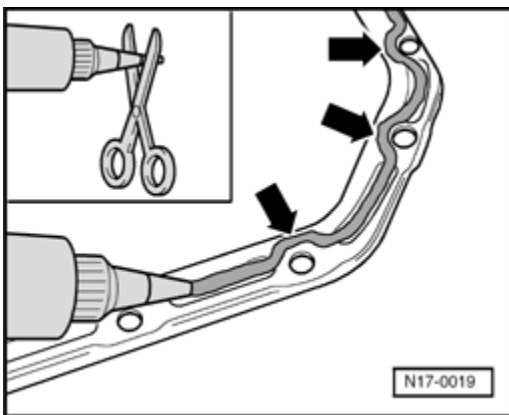
- ♦ *Loosen oil pan bolts with jointed wrench 3185 and remove with socket T10058.*
- Remove oil pan. Loosen pan with light blows of a rubber headed hammer if necessary.
- Remove sealant residue on cylinder block with a flat scraper.



- Remove sealant residue from oil pan with a rotating brush, e.g. a hand drill with a plastic brush attachment (wear protective goggles).
- Clean sealing surfaces. They must be free of oil and grease.

Installing**Note:**

- ♦ *Observe the use-by date of the sealing compound.*
- ♦ *The oil pan must be installed within 5 minutes of applying the silicone sealant.*



- Cut off tube nozzle at forward marking (approx. 3 mm diameter of nozzle).

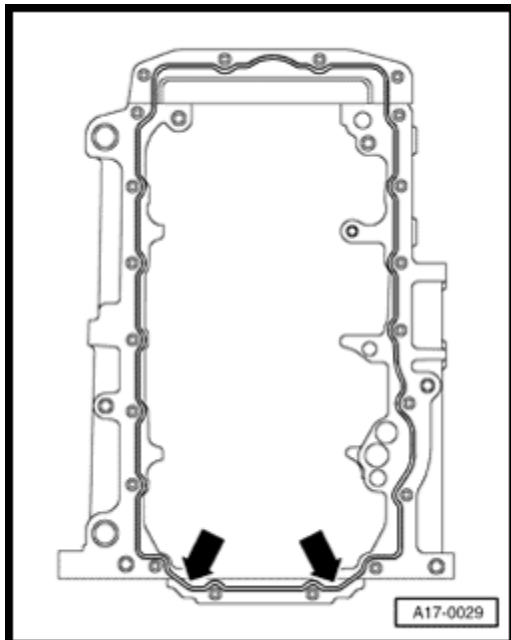
- Apply silicone sealing compound, as shown, to clean oil pan sealing surface.

Sealant bead must be:

- ♦ 23 mm thick in engines with single-unit oil pan
- ♦ 12 mm thick in engines with two-part oil pan
- ♦ Run bead along inner side of bolt holes - **arrows** - .

Note:

- ♦ *The sealing compound bead must not be thicker, otherwise excess sealing compound will enter the oil pan and may block the oil suction pipe strainer.*



- Apply sealing compound bead with particular care in area shown - **arrows** - (illustration shows position of sealing compound bead on cylinder block).
- Install oil pan immediately and tighten all oil pan bolts as follows:
 1. Tighten all bolts for oil pan to cylinder block only very lightly using alternate and diagonal sequence.
 2. Tighten the three oil pan/transmission bolts lightly.
 3. Retighten all bolts for oil pan to cylinder block lightly using alternate and diagonal sequence.
 4. Tighten all bolts for oil pan to cylinder block to 15 Nm using alternate and diagonal sequence.
 5. Tighten the three oil pan/transmission bolts to 45 Nm.

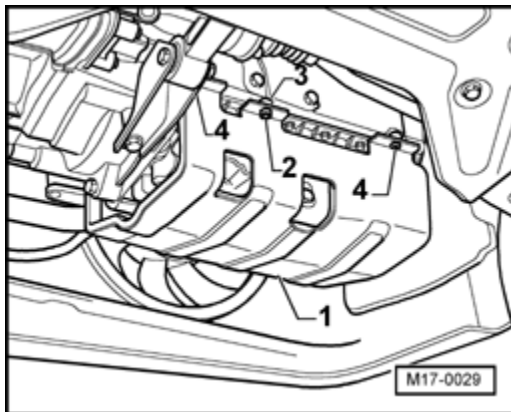
Note:

- ◆ *When installing the oil pan with the engine out of the vehicle, ensure that the oil pan is flush with the cylinder block at the flywheel end.*
- ◆ *Let sealing compound dry for approx. 30 minutes after installing the oil pan. Only then fill the engine with oil.*

Engines with oil pan protection

Note:

- ◆ *Check condition of rubber bushes in cylinder block (for mounting spreader rivets) before installing oil pan protection.*
- ◆ *Before bolts are reinstalled, clean threads and apply sealant D 000 600 A2.*



- Insert spreader pins in flush with spreader rivets - **4** - and install into oil pan protection - **1** - .
- Tighten bolts - **2** - at front and rear of oil pan to 37 Nm.

Continuation for all engines

Further assembly is basically the reverse of the disassembly procedure.