Audi > C5 Platform > 1998 - 2005
4.2 Liter V8 5V Engine Mechanical, Engine Code(s): ART, AWN, BBD
13 - Engine - Crankshaft, Cylinder block

Toothed belt, removing from camshaft sprockets

Special tools and equipment

- Pin wrench 3212
- Open end wrench 3312
- Socket attachment 3078 (22 mm)
- Set screw 3242
- Camshaft clamps T40005
- Special tool T40001
- Pin T40011

Removing

- Remove air intake hose to air cleaner.
- Remove outer ring for viscous fan -arrows-.
- Remove electric fan.

- Counter-hold viscous fan pulley with pin wrench 3212 and remove fan with wrench 3312 (left hand thread).
- Remove fan with fan shroud.
- Remove belt pulley for fan.

CAUTION!

- Mark the running direction of the belt with crayon or marker before removing. Reinstalling a used belt in reversed running direction could damage the belt.
- When installing a used ribbed belt be sure belt runs in right direction and is seated properly on belt pulleys.

- To loosen ribbed belt, turn tensioner in direction of arrow with 19 mm ring wrench until two holes are aligned. Hold in position with pin 3204.
- Remove ribbed belt.

- Move crankshaft by hand to TDC. Markings -A- and -B- must be aligned.

- Remove right and left timing belt covers by disengaging spring clips.

- Check position of camshafts: larger holes in securing plates on camshaft sprockets must be in line with each other and facing inward. If not, turn crankshaft for one revolution.

- Remove plug -arrow- from left side of cylinder block.
TDC drilling in crankshaft must be behind sealing plug hole (feel to check).

- Screw clamping bolt 3242 for crankshaft into plug hole and tighten.

Note:

The toothed belt tensioning element is oil-damped and can be compressed slowly by applying constant pressure.

- Using 8 mm Allen key, turn toothed belt tensioning lever -1- in direction of arrow until tensioning element -2- is compressed far enough to insert pin T40011 in drilling and plunger.
- Install camshaft bar T40005 on securing plates of both camshafts.
- Loosen both camshaft bolts by approximately 5 turns.
- Remove camshaft bar T40005.

Pull off both camshaft sprockets with puller T40001.

Remove toothed belt together with camshaft sprocket for cylinder bank 1-4.

**Installing**

- Place toothed belt over camshaft sprocket for cylinder bank 1-4 and install sprocket on camshaft.
- Hand-tighten both camshaft sprockets with securing plates.

**Note:**

*The camshaft sprockets must be tight enough on the camshaft tapers to be turned but not moveable axially.*

- Attach camshaft bar T40005.
Using 8 mm Allen key, turn toothed belt tensioning lever -1- in direction of arrow until pin T40011 can be removed.

- Tighten bolts on camshaft sprockets.

**Note:**

*Camshaft clamp T40005 is used to prevent camshafts from turning.*

- Remove camshaft bar T40005.
- Remove crankshaft clamping bolt 3242 and install sealing plug.
- Turn crankshaft by 2 revolutions.

Check dimension -a- of belt guard with feeler gauge.

- Dimension -a- = 1 mm (0.0393 in.)

Right cover, adjusting

- Turn crankshaft until all bolts -arrows- are exposed.
- Loosen all bolts -arrows- of cover.
- Adjust dimension -a- using feeler gauge to 1 mm (0.0393 in.).
Check dimension -a- of belt guard with feeler gauge.

- Dimension -a- = 1 mm (0.0393 in.)

Left cover, adjusting

- Turn crankshaft until all bolts -arrows- are exposed.
- Loosen all bolts -arrows- of cover.
- Adjust dimension-a- using feeler gauge to 1 mm (0.0393 in.).

**Note:**

*When installing a used ribbed belt, be sure that the belt runs in the correct direction and seats properly on the belt pulleys.*

- Install ribbed belt on crankshaft pulley and idler wheels first. Install belt on tensioning roller last.
To tension ribbed belt, turn tensioner clockwise -arrow- with 19 mm ring wrench and remove pin 3204.

Start engine and check that belt runs correctly.

Install viscous fan with outer ring (fan has left-hand thread).

Counter-hold fan pulley with pin wrench 3212 and tighten fan using open-end wrench 3312 and torque wrench (fan has left-hand thread).

Install noise insulation.

Install engine cover panel.

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