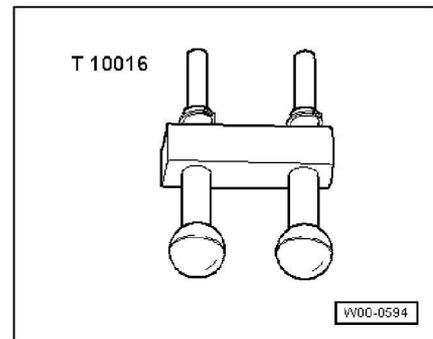


Removing and installing main drive toothed belt

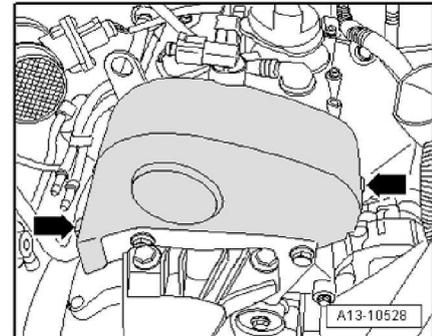
Special tools and workshop equipment required

- Camshaft lock -T10016-

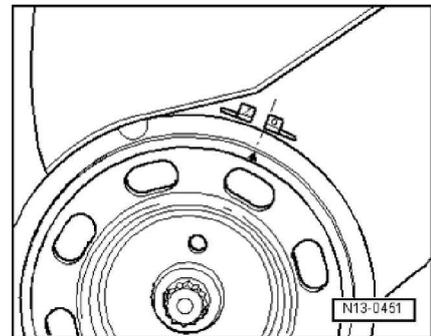


Removing

- Detach bonnet → Chapter „Detaching bonnet“.
- Remove poly V-belt → Chapter „Removing and installing poly V-belt“.
- Release retaining clips -arrows- and detach cover (top) for toothed belt.

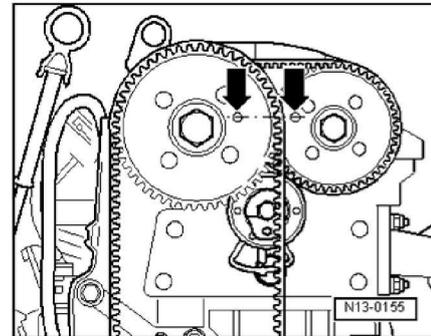


- Rotate crankshaft in normal direction of rotation to "TDC".
- Notch on crankshaft pulley must align with edge of marking -O-.



- The locating holes in the camshaft sprockets must align with the corresponding holes in the camshaft housing -arrows-.

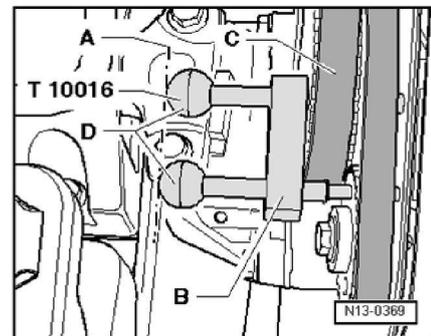
Note
If the locating holes are positioned on the opposite side, the crankshaft must be turned one revolution further.



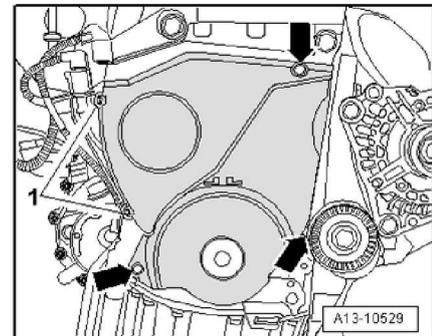
- Insert locking pins -D- on camshaft lock -T10016- all the way into locating holes in camshaft housing as follows:
 - Through locating hole in inlet camshaft sprocket -C-.
 - Through locating hole in exhaust camshaft sprocket.
 - The knobs on locking pins must be on a level -line A-.
- Push retainer -B- onto inlet camshaft sprocket as far as stop.
- Remove engine mounting → Chapter „Removing and installing engine mountings“.

Caution
Risk of damage to engine.

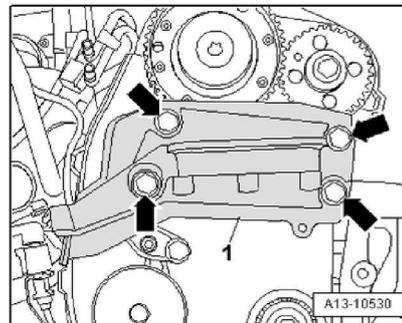
- ♦ To prevent the crankshaft sprocket from slipping off the drive lug, do not rotate the crankshaft after the poly V-belt pulley has been detached.
- ♦ Secure crankshaft sprocket with bolt and 2 washers before turning crankshaft.



- Remove poly V-belt pulley for crankshaft → Chapter „Removing and installing poly V-belt pulley for crankshaft“.
- Remove bolts -arrows- and loosen retaining clips -1- to detach toothed belt cover (bottom).



- Remove bolts -arrows- and detach engine support -1-.

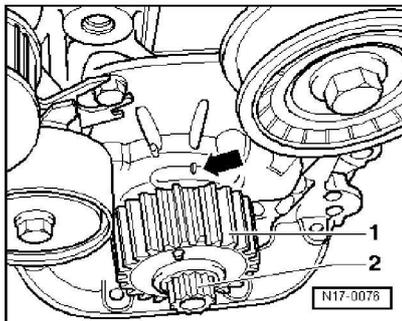


- Check "TDC" position of crankshaft:

- The flat tooth on crankshaft sprocket -1- must align with marking -arrow- on oil pump housing.

Note

Disregard item -2-.



Caution

If a used belt runs in the opposite direction when it is refitted, this can cause breakage.

Before removing, mark direction of rotation of toothed belt with chalk or felt-tip pen for re-installation.

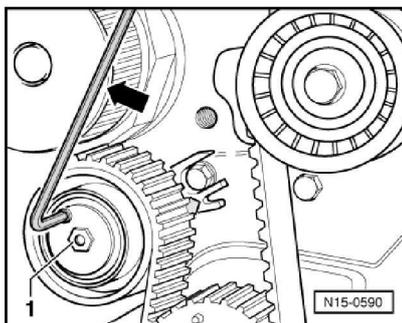
- Loosen bolt -1- for main drive tensioning roller.

- Detach camshaft lock -T10016-.

- Use an Allen key to turn tensioning roller in anti-clockwise direction -arrow- and detach toothed belt.

Note

- Camshaft lock -T10016- must be fitted again if further repair work has to be performed on the cylinder head or valve gear.
- If the toothed belt is re-installed immediately, attach camshaft lock -T10016- after installing the toothed belt.

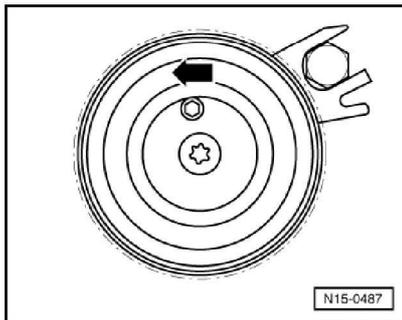


Installing

- Tightening torques → Chapter „Toothed belt drive - exploded view“

Installation is carried out in the reverse order; note the following:

- Install tensioning roller for main drive (if removed) and turn anti-clockwise to position shown -arrow- using Allen key.



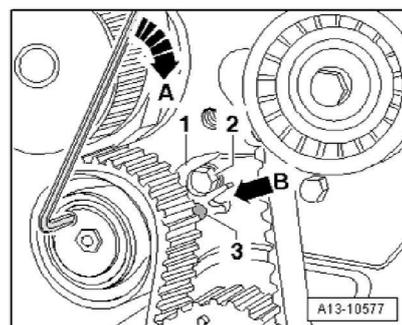
- Tighten bolt for main drive tensioning roller hand-tight.

- Bolt -2- for oil pump housing must engage in the recess in base plate -1-.

Note

Disregard items marked -3- and -arrows-.

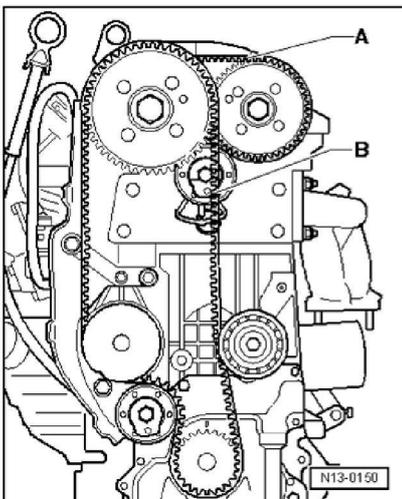
Note



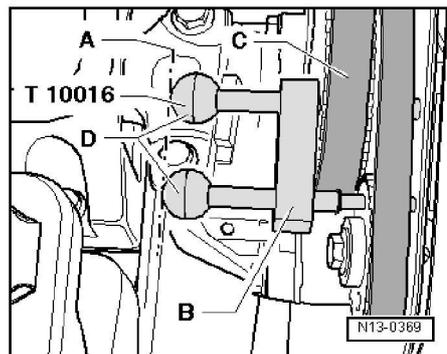
Note the marking for direction of rotation when reinstalling a used toothed belt.

- Fit main drive toothed belt -B- in the sequence coolant pump, tensioning roller, crankshaft and inlet camshaft.

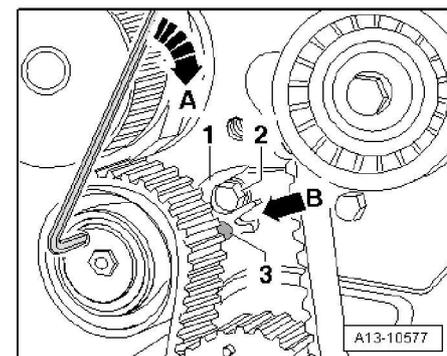
A - Coupling drive toothed belt



– Insert locking pins -D- on camshaft lock -T10016- all the way into locating holes in camshaft housing once again.

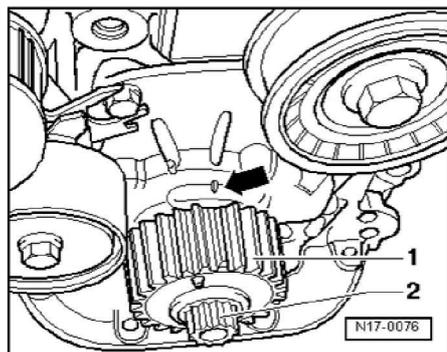


- To tension toothed belt, turn tensioning roller in clockwise direction -arrow A- until indicator -3- aligns with notch -arrow B- in base plate -1-.
- Tighten bolt for main drive tensioning roller.
- Remove camshaft lock -T10016-.
- Turn crankshaft 2 revolutions in direction of engine rotation and set to "TDC" once again.

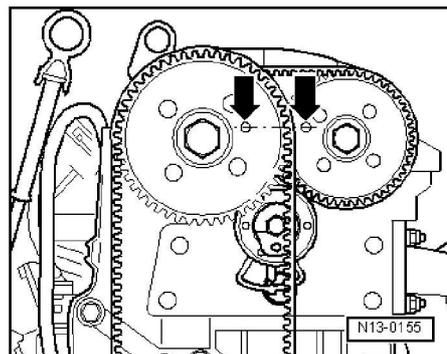


- Check "TDC" position of crankshaft:
- The flat tooth on crankshaft sprocket -1- must align with marking -arrow- on oil pump housing.

Note
Disregard item -2-.



- The locating holes in the camshaft sprockets must align with the corresponding holes in the camshaft housing -arrows-.



- Check that locking pins -D- on camshaft lock -T10016- can again be inserted all the way into locating holes in camshaft housing as follows:
- Through locating hole in inlet camshaft sprocket -C-.
- Through locating hole in exhaust camshaft sprocket.
- Repeat adjustment procedure if holes do not align → **Anchor**.

Remaining installation steps are carried out in reverse sequence; note the following:

- Install poly V-belt pulley for crankshaft → **Chapter „Removing and installing poly V-belt pulley for crankshaft“**.
- Install engine mountings → **Chapter „Removing and installing engine mountings“**.

