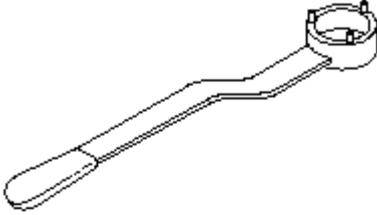
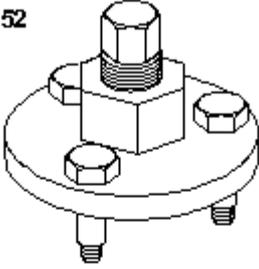


## Removing and installing camshaft

<p>T10051</p> 	<p>T10052</p> 
<p>V.A.G 1331</p> 	<p>V.A.G 1332</p> 
	<p>W15-0083</p>

### Special tools and workshop equipment required

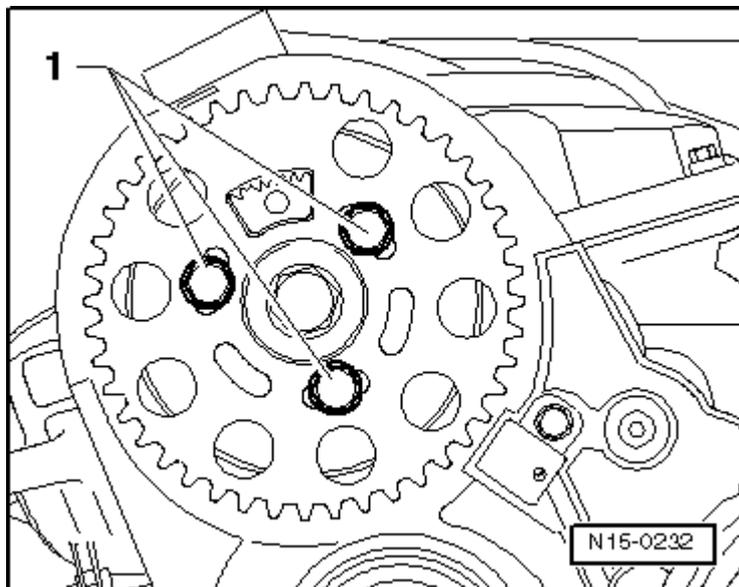
- ◆ Counter-hold tool -T10051-
- ◆ Puller -T10052-
- ◆ Torque wrench -V.A.G 1331-
- ◆ Torque wrench -V.A.G 1332-
- ◆ Sealant -AMV 17400401-

### Removing

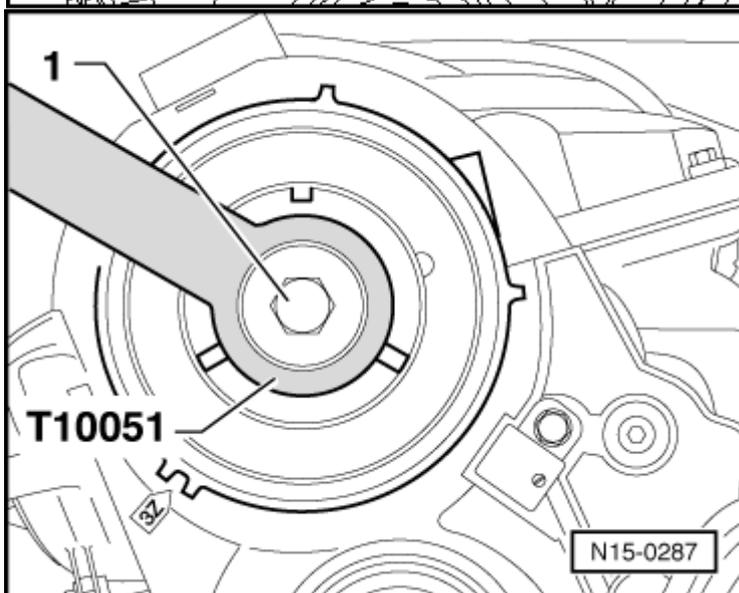
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- 

Remove poly V-belt  
→ Chapter.  
Remove toothed belt  
→ Chapter.

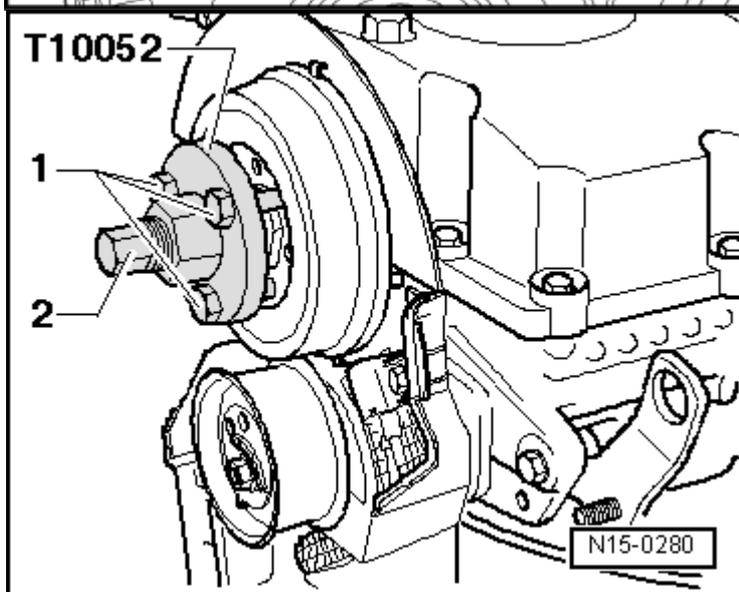
Remove securing bolts for camshaft toothed belt pulley -1-.  
Pull camshaft toothed belt pulley off hub.



Loosen hub securing bolt -1-.  
To do this, use counter-hold tool -T10051-.  
Loosen hub securing bolt about 2 turns.



Fit puller -T10052- and align it with holes in hub.  
Insert securing bolts -1- in hub.  
Apply tension to hub by evenly tightening puller central bolt -2- until hub releases from taper of camshaft.



Note

When doing this, hold puller with 30 mm spanner.

Remove hub from taper of camshaft.  
Remove cylinder head cover.  
Remove rocker arm shaft.



Note

First loosen the outer and then both inner securing bolts, using diagonal sequence.

Remove tandem pump → Chapter.  
First remove bearing caps 2 and 3. Loosen bearing caps 1 and 4 alternately and diagonally.



Note

Bearing cap 4 is marked as bearing cap 5

Installing



Note

- ◆ When camshaft is installed, No. 1 cylinder cams must point upwards.
- ◆ Do not interchange used bearing shells (mark).
- ◆ When installing the camshaft, ensure proper seating of retaining lugs in bearing caps and cylinder head.
- ◆ Before installing bearing caps, ensure that cylinder head bolt washers are inserted in the cylinder head.
- Oil running surfaces of shell bearings.
- Tighten bearing caps 2 and 3 alternately and diagonally to 8 Nm + 1/4 turn (90°) further.
- Install bearing caps 1 and 4 and also tighten to 8 Nm + 1/4 turn (90°) (renew bolts).

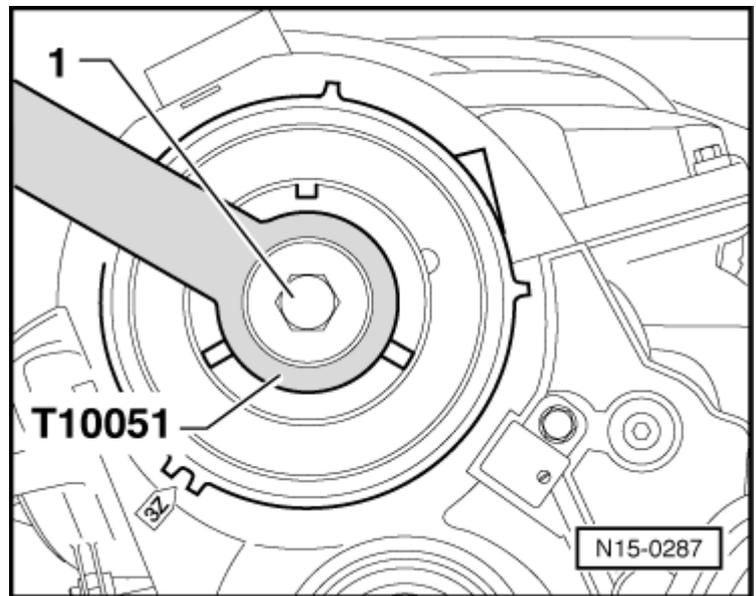


Note

- ◆ Bearing cap 4 is marked as bearing cap 5
- ◆ Seal parting surfaces of bearing caps 1 and 4 with sealant -AMV 17400401- → Fig..
- ◆ Bearing cap 4 must be flush with outer edge of cylinder head, otherwise leaks can occur at the tandem pump.
- Install camshaft oil seal → Chapter.
- Install rocker arm shaft, first tighten the inner and then the outer securing bolts evenly using diagonal sequence.  
Torque setting: 20 Nm + 1/4 turn (90°) further.
- Set hub on camshaft.

Tighten hub securing bolt  
-1- Tightening torque: 100 Nm.

To do this, use counter-hold tool -T10051-.



Push camshaft toothed belt pulley onto hub.



Note

The toothed segment -arrow- of the camshaft belt pulley must be on top.

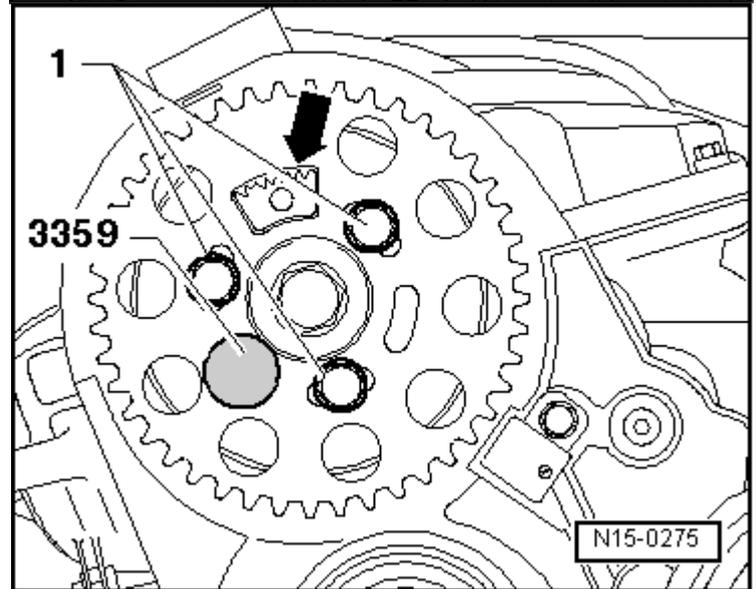
Align camshaft toothed belt pulley at centre of elongated holes.

Hand tighten securing bolts -1- to camshaft toothed belt pulley so that there is no play.

Lock the hub using diesel injection pump locking pin -3359-.

Install and tension toothed belt → Chapter.

Install tandem pump → Chapter.



Note

When new bucket tappets have been installed the engine must not be started for about 30 minutes. Hydraulic valve compensation elements have to settle (otherwise valves will strike pistons).