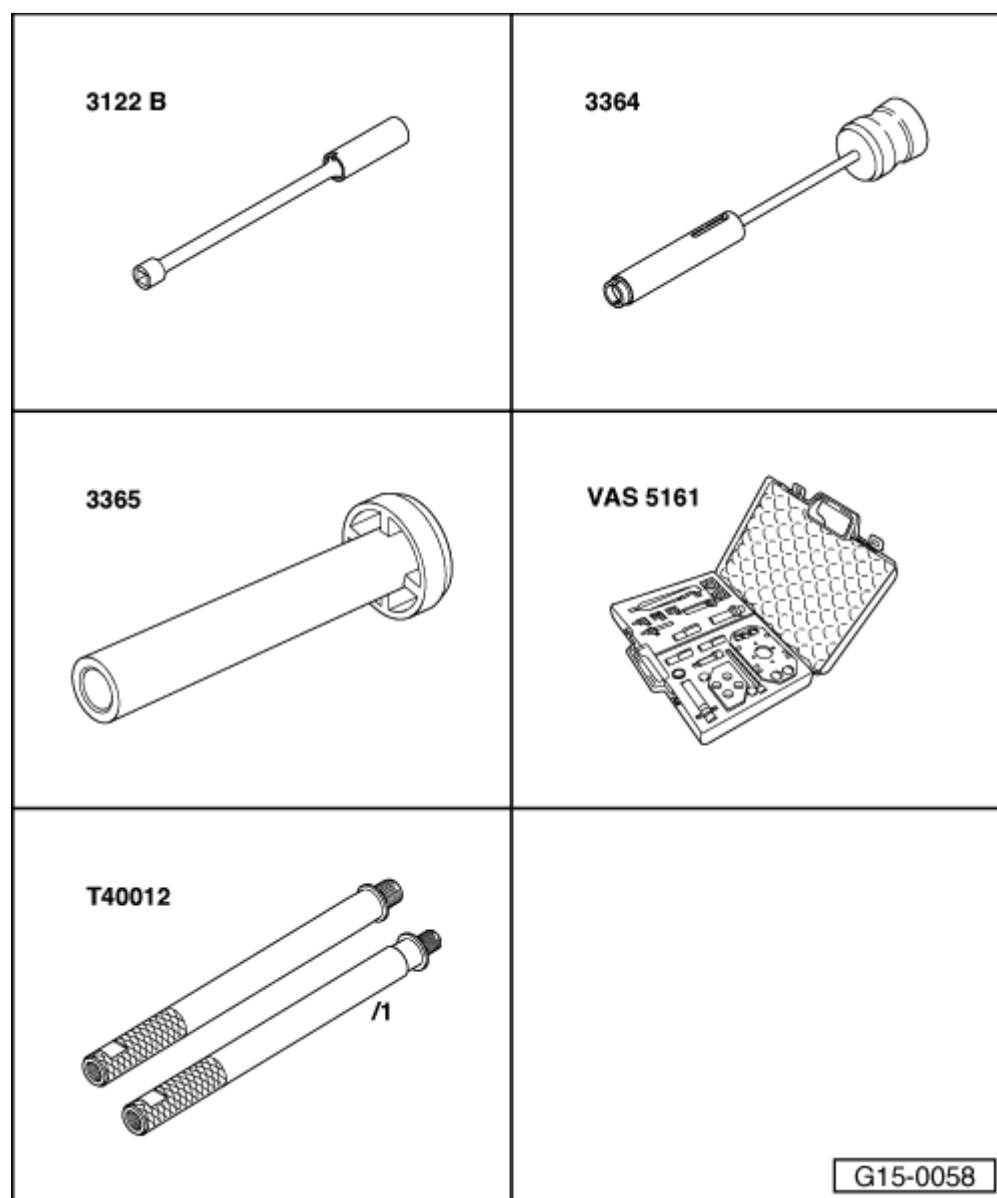


## Renewing valve stem oil seals with cylinder head installed



### Special tools and workshop equipment required

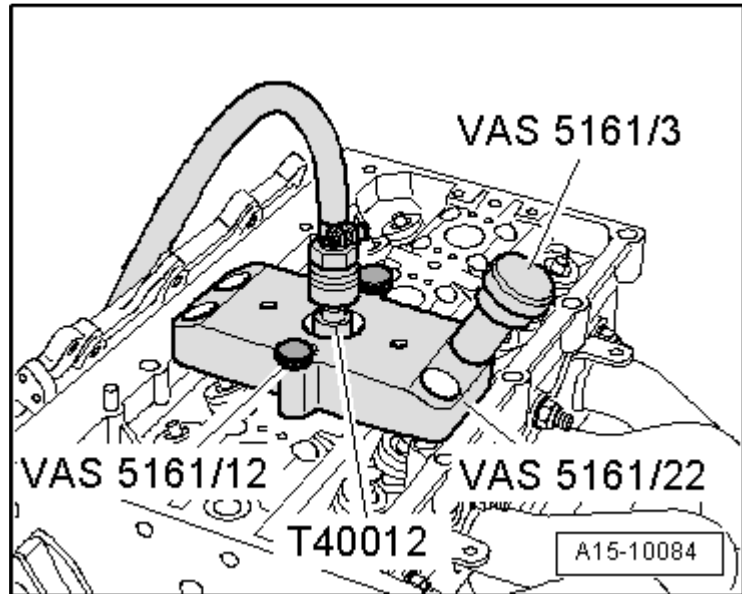
- ♦ Spark plug socket and extension -3122 B-
- ♦ Valve stem seal puller -3364-
- ♦ Valve stem seal fitting tool -3365-
- ♦ Removal and installation device -VAS 5161-
- ♦ Adapter -T40012-

### Procedure

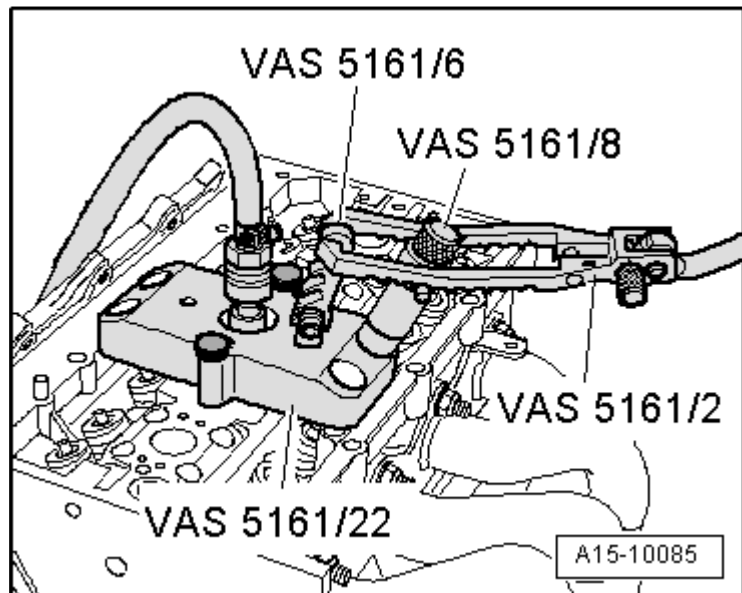
- Remove intake manifold → [Rep. gr.24.](#)
- Remove camshaft housing → [Chapter.](#)
- Detach engine lifting eyes from cylinder head.
- Remove spark plugs with spark plug socket and extension - 3122 B-.

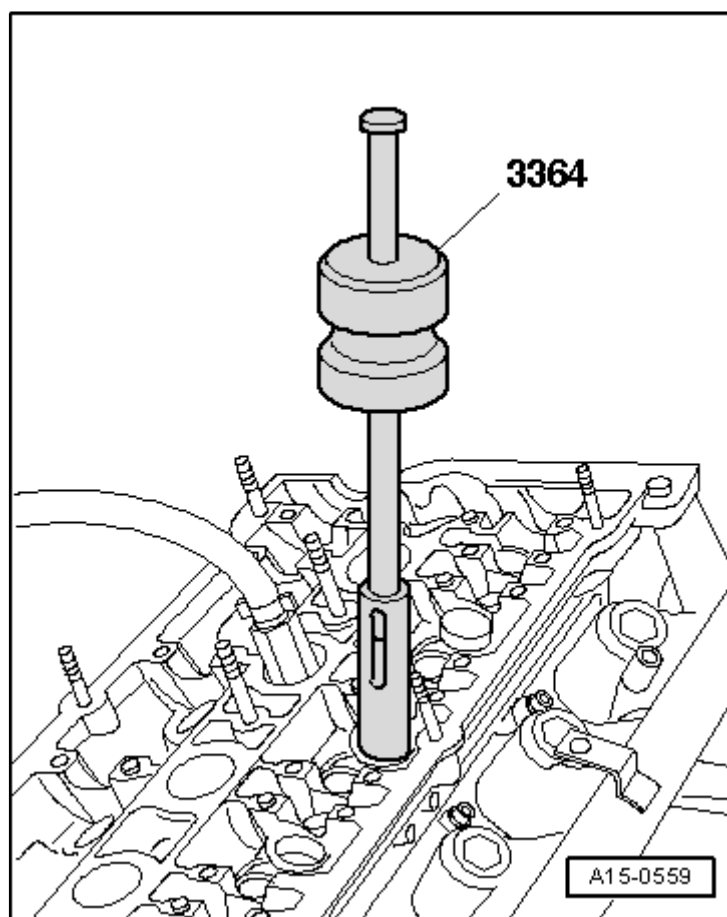
- Set piston of appropriate cylinder to „bottom dead centre“.

- Screw adapter -T40012- with seal hand-tight into the corresponding spark plug thread.
- Connect adapter to compressed air line using a commercially available connection piece, and apply constant air pressure.
- Minimum pressure: 6 bar
- Fit guide plate -VAS 5161/22- onto cylinder head.
- Secure guide plate with knurled screws -VAS 5161/12- onto cylinder head.
- Apply drift -VAS 5161/3- to guide plate and use plastic-headed hammer to release sticking valve cotters.



- Screw snap-in device -VAS 5161/6- with engaging fork -VAS 5161/5- into guide plate.
- Insert assembly cartridge -VAS 5161/8- in guide plate.
- Attach pressure fork -VAS 5161/2- to snap-in device and push assembly cartridge down.
- At the same time, turn knurled screw of assembly cartridge clockwise until tips engage in valve cotters.
- Move knurled screw back and forth slightly; the valve cotters are thus forced apart and taken up by the assembly cartridge.
- Release pressure fork.
- Take out assembly cartridge.
- Detach guide plate and turn to one side.
- The compressed air hose remains connected.
- Detach valve spring with valve spring plate.
- Pull off valve stem oil seal with valve stem seal puller -3364-.

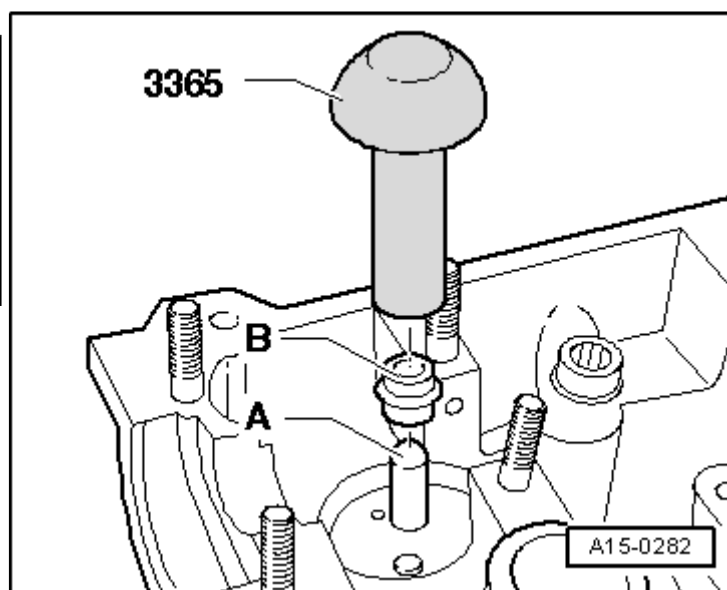


**Caution**

***Make sure valve stem oil seals are not damaged when installing.***

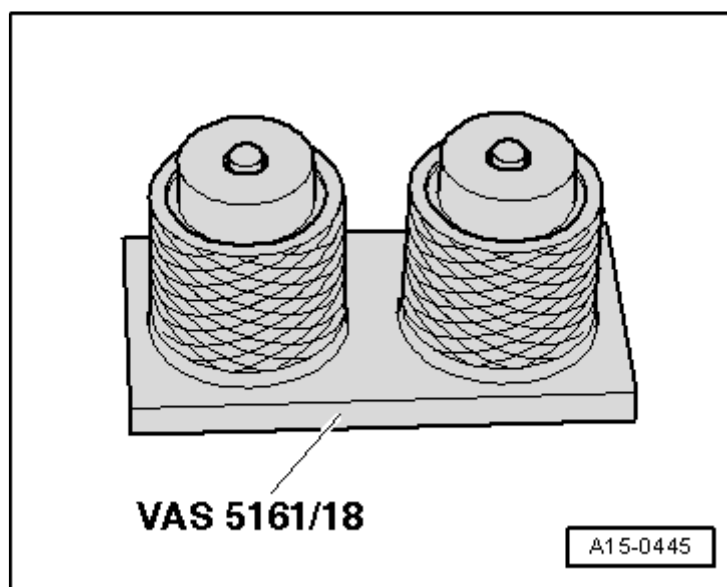
***New valve stem oil seals -B- are supplied with plastic sleeve; fit plastic sleeve -A- onto valve stem.***

- Lightly oil sealing lip of valve stem oil seal.
- Slide valve stem oil seal onto plastic sleeve.
- Carefully press valve stem oil seal onto valve guide using valve stem seal fitting tool -3365-.
- Remove plastic sleeve.



If valve cotters have been removed from assembly cartridge, they must first be inserted in insertion device -VAS 5161/18-.

- Larger diameter of valve cotters faces upwards.
- Press assembly cartridge onto insertion device from above and take up valve cotters.



- Insert valve spring and valve spring plate.
- Secure guide plate -VAS 5161/22- back onto cylinder head.
- Insert assembly cartridge -VAS 5161/8- in guide plate.
- Press down pressure fork and pull knurled screw upwards while turning screw in both directions - this will insert the valve cotter.
- Release the pressure fork with knurled screw still in pulled position.
- Repeat procedure for each valve.

### Assembling

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

- Install spark plugs → [Booklet809](#).
- Install engine lifting eyes → [Chapter](#).
- Install camshaft housing → [Chapter](#).
- Install intake manifold → [Rep. gr.24](#).

