

## Valvetrain Overview



### Note

Cylinder heads with cracks between the valve seats can continue to be used without reducing the service life, as long as the cracks have a Max. width of 0.5 mm.

#### 1 - Seal

- ❑ Do not lubricate or grease the sealing lip on the seal.
- ❑ Before installing, remove any remaining oil from the camshaft journal with a clean cloth.
- ❑ To install, tape over the groove on the camshaft taper.
- ❑ Removing and installing, refer to  
→ **Chapter „Camshaft Seal“**.

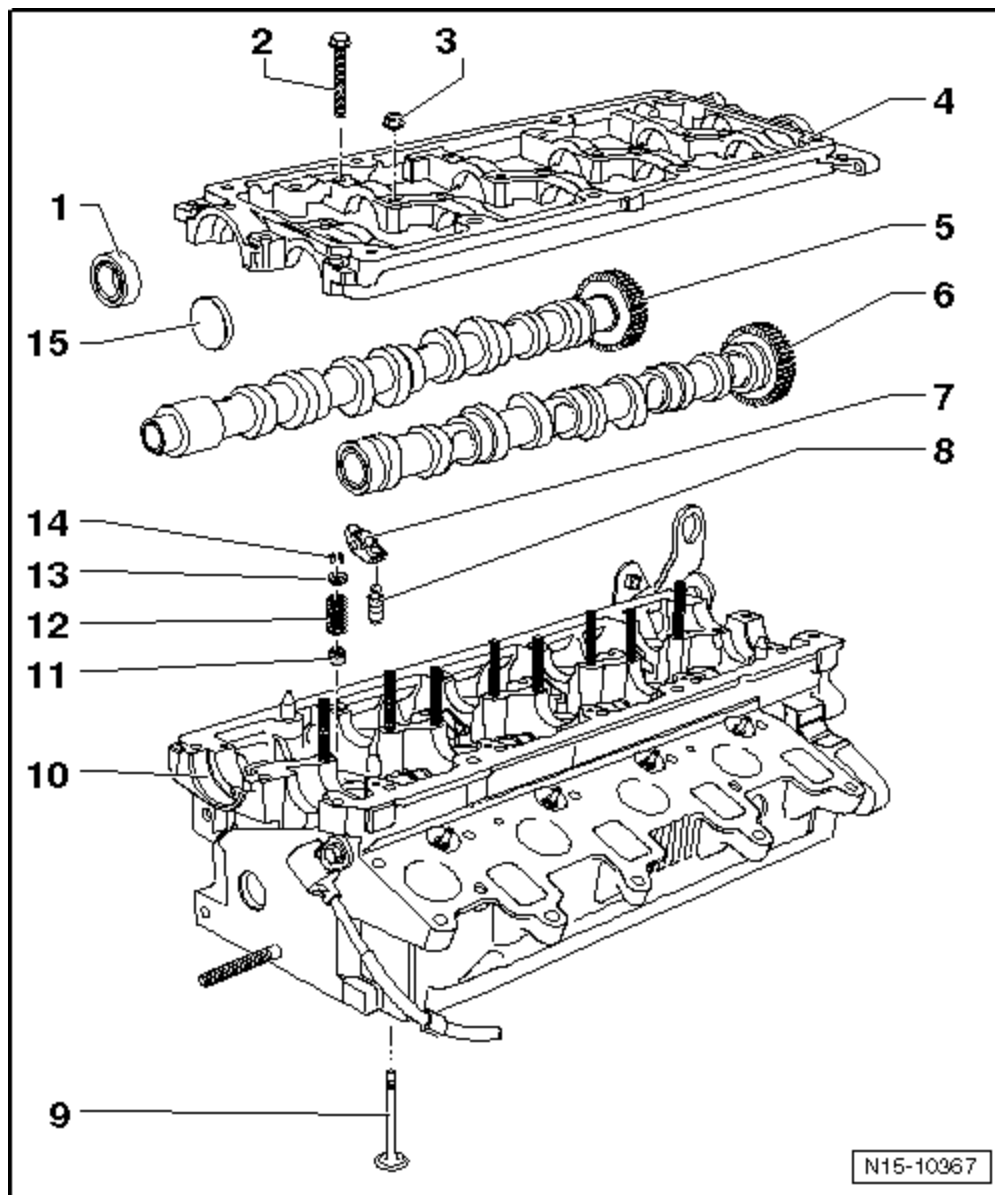
#### 2 - Bolt

- ❑ 10 Nm

#### 3 - Nut

- ❑ 10 Nm

#### 4 - Bearing Frame



- ❑ Follow the loosening/tightening sequence. Refer to → **Chapter „Camshaft“**.
- ❑ Seal using silicone sealant -D 176 501 A1-.

#### 5 - Exhaust Camshaft

#### 6 - Intake Camshaft

#### 7 - Roller Rocker Arm

- ❑ Mark the installed position.

- ❑ Do not interchange.
- ❑ Check the roller for easy movement.
- ❑ Lubricate the contact surface.

#### **8 - Hydraulic Lash Adjuster**

- ❑ Mark the installed position.
- ❑ Lubricate the running surfaces before installing.

#### **9 - Valve**

- ❑ Do not grind, only hand lapping is permitted.
- ❑ Mark the installed position for installation later.
- ❑ Valve dimensions, refer to → [Chapter „Valve Dimensions“](#).
- ❑ Checking the valve guides, refer to → [Chapter „Valve Guide, Checking“](#).

#### **10 - Cylinder Head**

- ❑ See the note in the → [Chapter „Cylinder Head Overview“](#).
- ❑ Removing and installing, refer to → [Chapter „Cylinder Head“](#).

#### **11 - Valve Stem Seal**

#### **12 - Valve Spring**

#### **13 - Valve Spring Retainer**

#### **14 - Valve Retainer**

#### **15 - Sealing Cap**

- ❑ Always replace.