

Assembly overview

1 - 5 Nm + $\frac{1}{8}$ turn (45°) further

2 - Exhaust camshaft bearing cap

- ❑ Installation sequence → Chapter

3 - Seal

- ❑ Renew complete if leaking
- ❑ When installing control housing, lightly lubricate contact surfaces of seals
- ❑ When replacing seals, do not spread too widely

4 - Exhaust camshaft

- ❑ Checking radial clearance with Plastigage; wear limit: 0.1 mm.
- ❑ Runout: max. 0.01 mm
- ❑ Checking axial clearance → Fig.
- ❑ Identification and valve timing → Fig.
- ❑ Removing and installing → Chapter

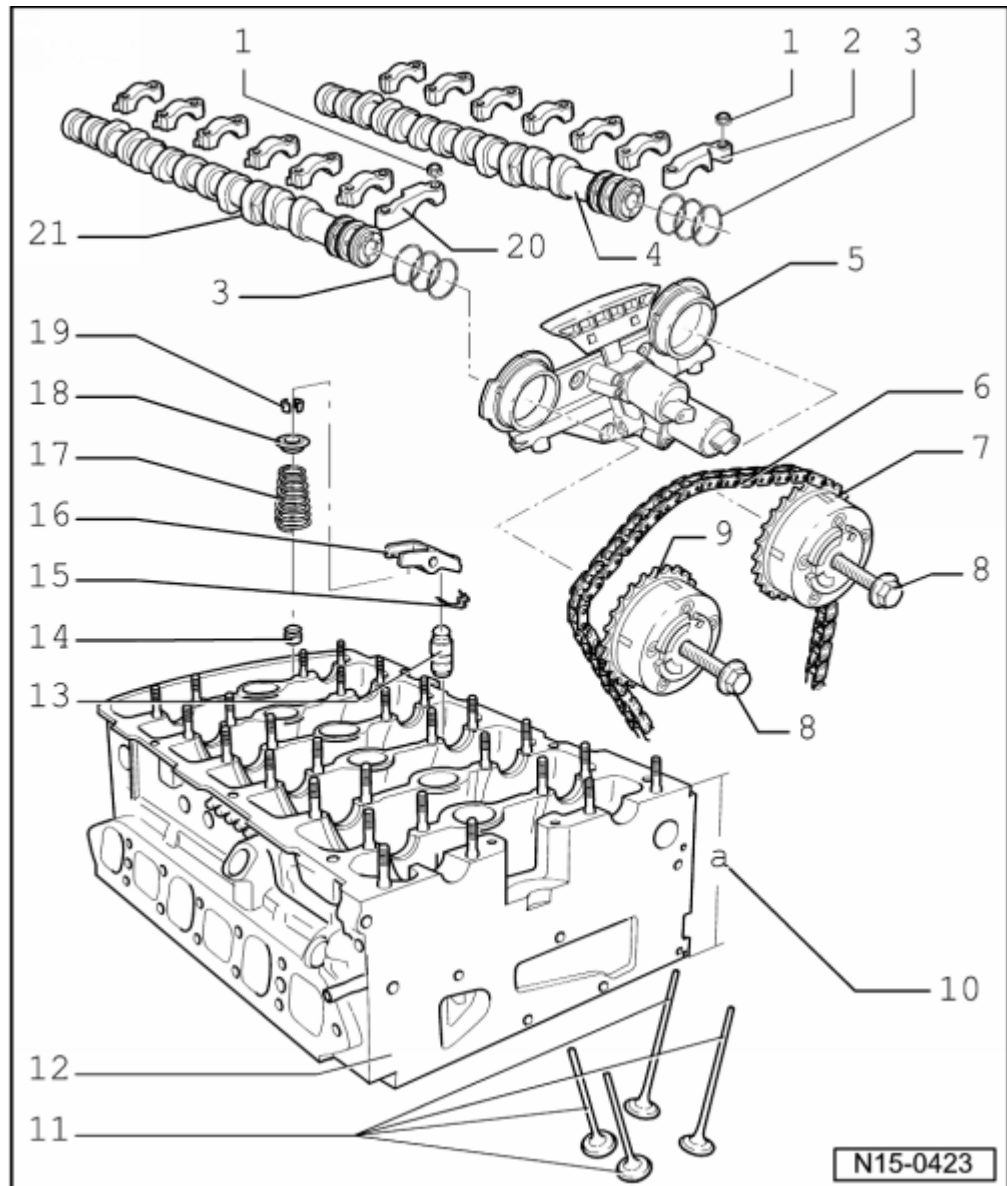
5 - Valve timing housing

- ❑ Lightly lubricate contact surface of seals before installing
- ❑ Dismantling and assembling → Fig.
- ❑ Before installing control housing, check strainer for soiling → Fig.
- ❑ Removing and installing → Chapter.

6 - Camshaft roller chain

- ❑ Before removing, mark direction of rotation (installation position) → Fig..
- ❑ Installing → Chapter.

7 - Exhaust camshaft adjuster



- ❑ Identification: 32A
- ❑ Only rotate engine when camshaft adjuster is installed and chain is fitted
- ❑ Installing → Chapter.

8 - 60 Nm + 1/4 turn (90°) further

- ❑ Renew.
- ❑ Contact surface of sender wheel must be dry around bolt head when assembled.
- ❑ To remove and install, counterhold with 32 mm open-jaw spanner on camshaft → Chapter.

9 - Inlet camshaft adjuster

- ❑ Identification: 24E
- ❑ Only rotate engine when camshaft adjuster is installed and chain is fitted
- ❑ Installing → Chapter.

10 - Cylinder head height

- ❑ Minimum height: a = 139.9 mm

11 - Valves

- ❑ Do not rework, only lapping-in is permitted
- ❑ Valve dimensions for engine codes BFH, BJS and BML → Fig.
- ❑ Valve dimensions for engine codes AQP, AUE and BDE → Fig.

12 - Cylinder head

- ❑ Check for distortion → Fig.
- ❑ See note → Chapter
- ❑ Removing and installing → Chapter
- ❑ Reworking valve seats, engine codes BFH, BJS and BML → Chapter
- ❑ Reworking valve seats, engine codes AQP, AUE and BDE → Chapter
- ❑ After renewing, renew entire coolant

13 - Support element

- ❑ Before installing, check camshaft axial clearance → Fig.
- ❑ Do not interchange
- ❑ With hydraulic valve clearance compensation

14 - Valve stem seal

- ❑ Renew → Chapter

15 - Securing clip

- ❑ Check for secure seating

16 - Roller rocker finger

- ❑ Before installing, check camshaft axial clearance → Fig.
- ❑ Do not interchange
- ❑ Check roller bearing for ease of movement
- ❑ Oil contact surface
- ❑ When installing, secure to support element using securing clip

17 - Valve spring

- ❑ Note installation position
- ❑ Removing and installing → Chapter.

18 - Valve spring plate

19 - Valve cotters

20 - Inlet camshaft bearing cap

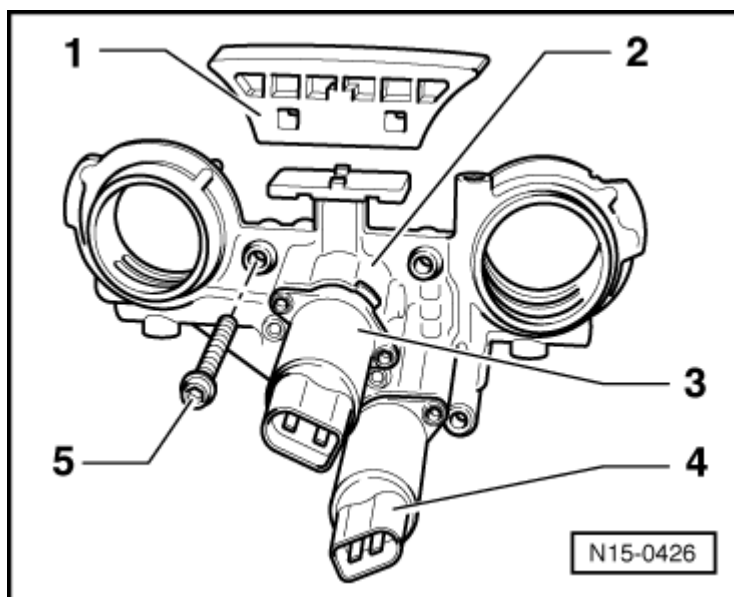
- ❑ Installation sequence → Chapter

21 - Inlet camshaft

- ❑ Checking radial clearance with Plastigage; wear limit: 0.1 mm.
- ❑ Runout: max. 0.01 mm
- ❑ Checking axial clearance → Fig.
- ❑ Identification and valve timing → Fig.
- ❑ Removing and installing → Chapter

Dismantling and assembling control housing

- 1 - Guide rail: clipped onto control housing
- 2 - Valve timing housing
- 3 - Inlet camshaft control valve 1 -N205-
- 4 - Exhaust camshaft control valve 1 - N318-
- 5 - 8 Nm



Checking control housing strainer for soiling

- Unclip strainer -2- from back of control housing -1- and remove any soiling.

