



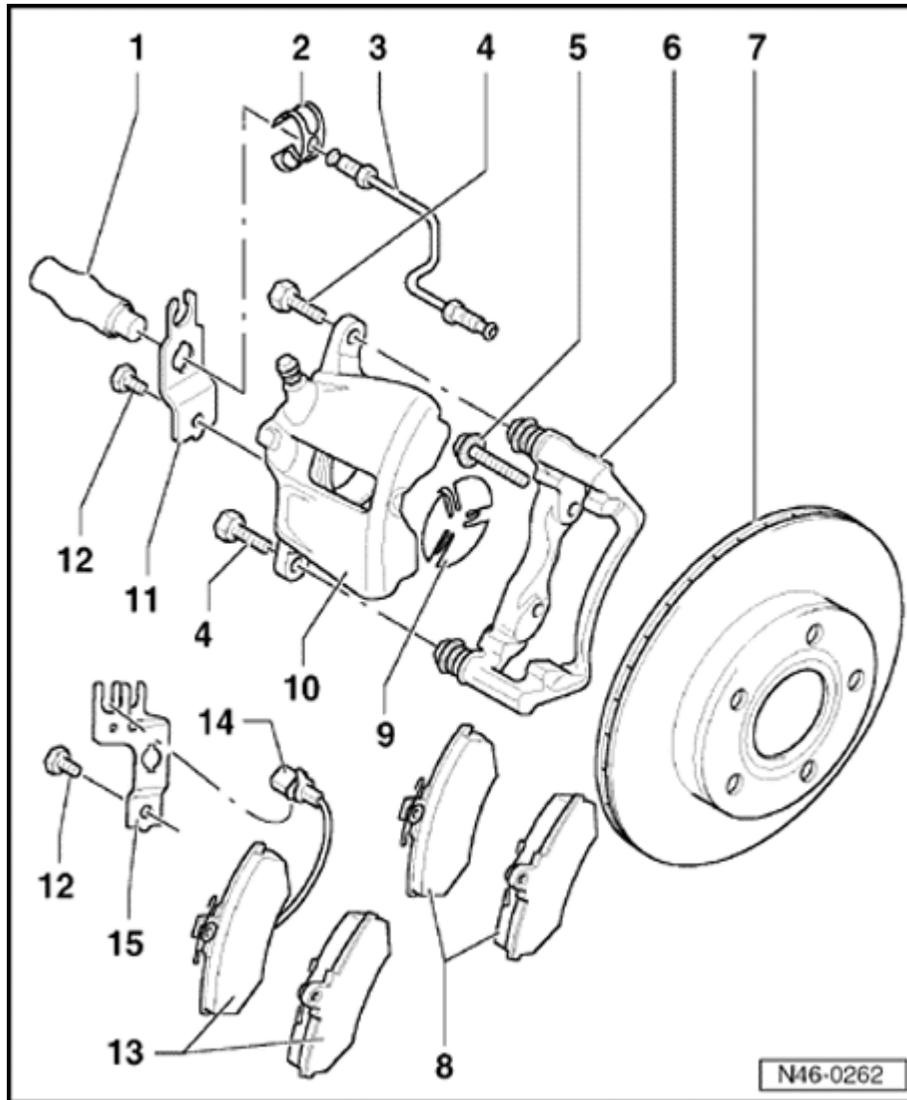
<p>V.A.G 1331</p> 	<p>V.A.G 1410</p> 
<p>V.A.G 1869/2</p> 	
	<p>W45-0003</p>

Servicing front brakes

C54 brake caliper, servicing

Special tools and workshop equipment required

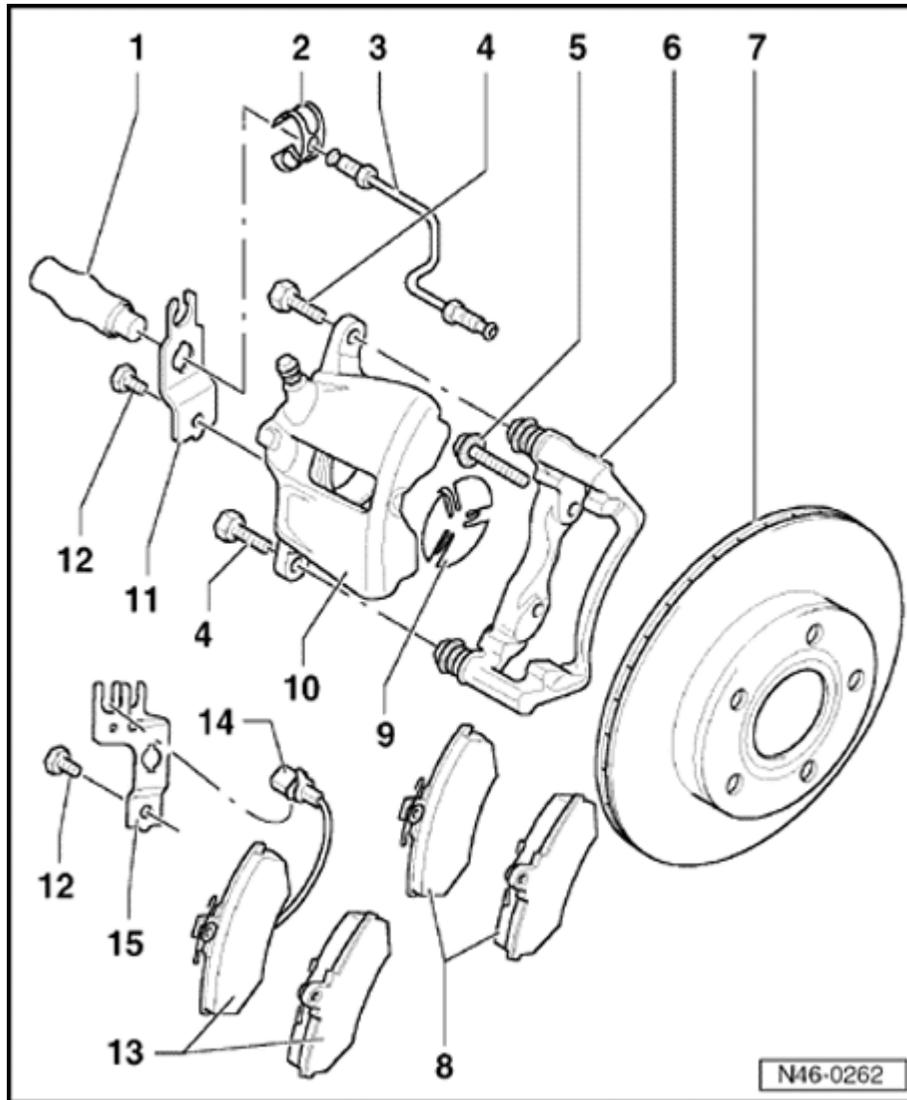
- ◆ VAG 1331 Torque wrench (or equivalent)
- ◆ VAG 1410 Torque wrench (or equivalent)
- ◆ VAG 1869/2 Brake pedal depressor



Notes:

- ◆ After replacing brake pads with vehicle stationary, depress brake pedal firmly several times so that the brake pads are properly seated in their normal operating position.
- ◆ To draw off brake fluid from the reservoir, use a bleeder bottle which is used only for brake fluid. Brake fluid is poisonous, NEVER siphon brake fluid with your mouth!
- ◆ Wheel bolt tightening torque

⇒ [Repair Manual, Suspension, Wheels, Steering; Repair Group 44; Torque setting for wheel bolts](#)



1 - Brake hose

- ◆ Do not disconnect brake hose when changing brake pads

2 - Spring clip

3 - Brake pipe, 15 Nm

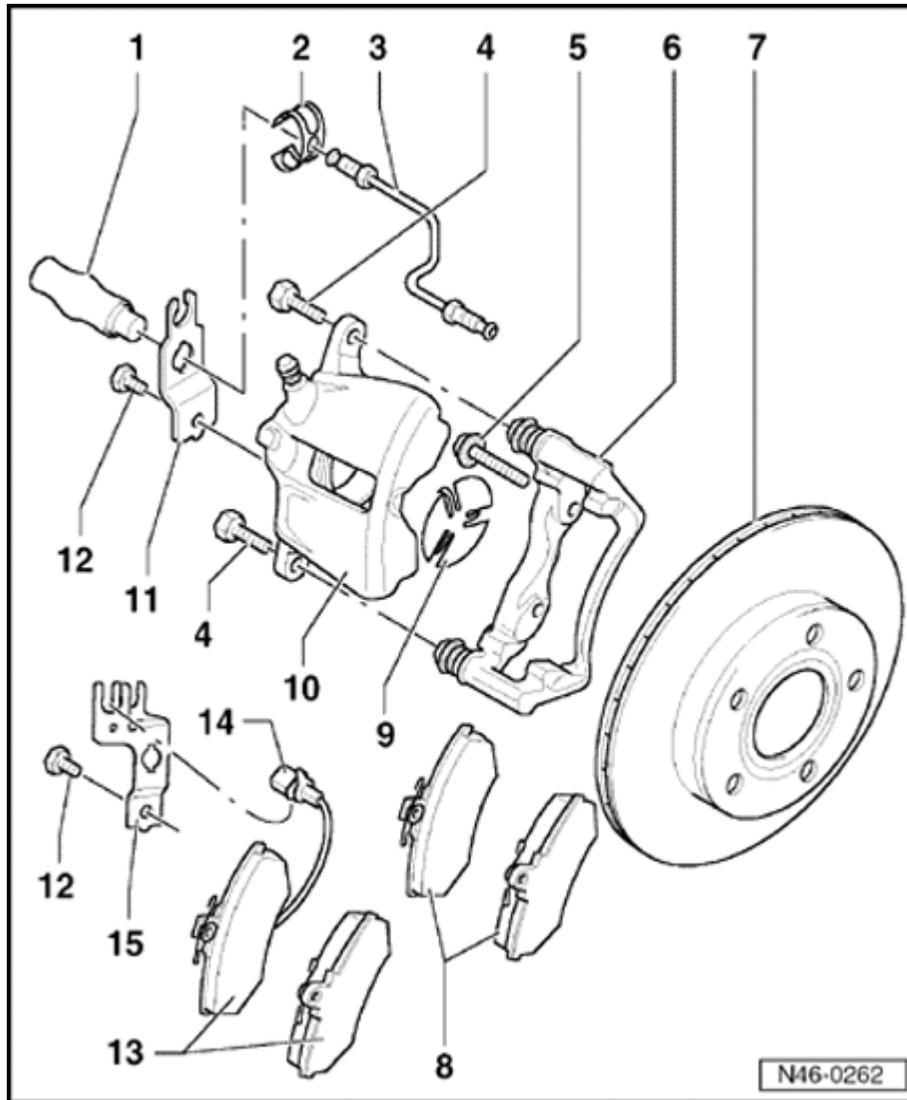
- ◆ Screw into brake caliper housing
- ◆ Screw into brake hose, counter hold hex on brake hose.
- ◆ Make sure that lugs are properly seated in retainer grooves.

4 - Self-locking hex bolt, 35 Nm

- ◆ Replace
- ◆ When loosening and tightening counter hold on guide pin

5 - Ribbed combi bolt, 120 Nm

- ◆ Clean ribs if re-using

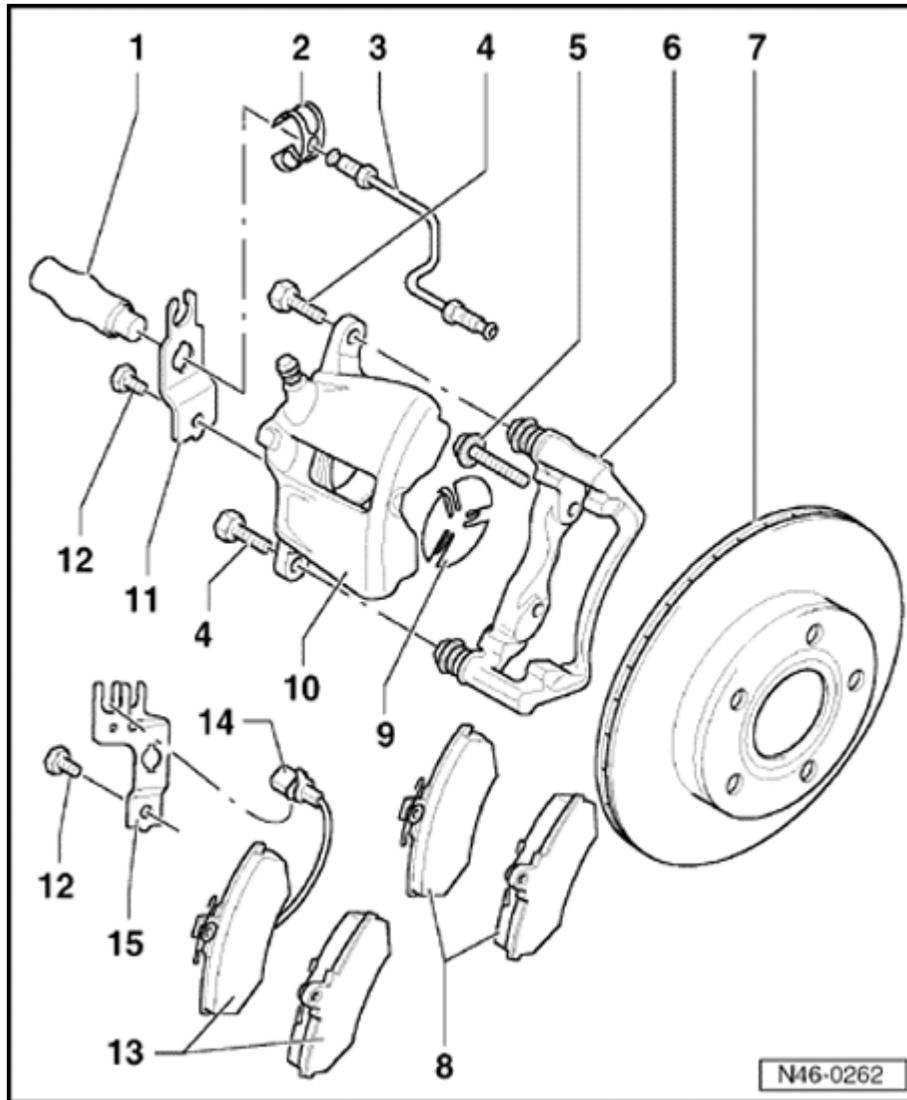


6 - Brake carrier with guide pins and protective caps

- ◆ Supplied as assembled replacement part with sufficient grease on guide pins
- ◆ If protective caps or guide pins are damaged use repair kit. Use grease packet supplied to lubricate guide pins.

7 - Brake disc

- ◆ Vented brake disc: diameter 280 mm
- ◆ Brake disc thickness: 22 mm
- ◆ Wear limit: 20 mm
- ◆ Always replace both sides
- ◆ Remove brake caliper prior to removing
- ◆ Never remove brake discs from hub by force. If necessary use penetrating fluid, otherwise brake discs can be damaged.



8 - Brake pads

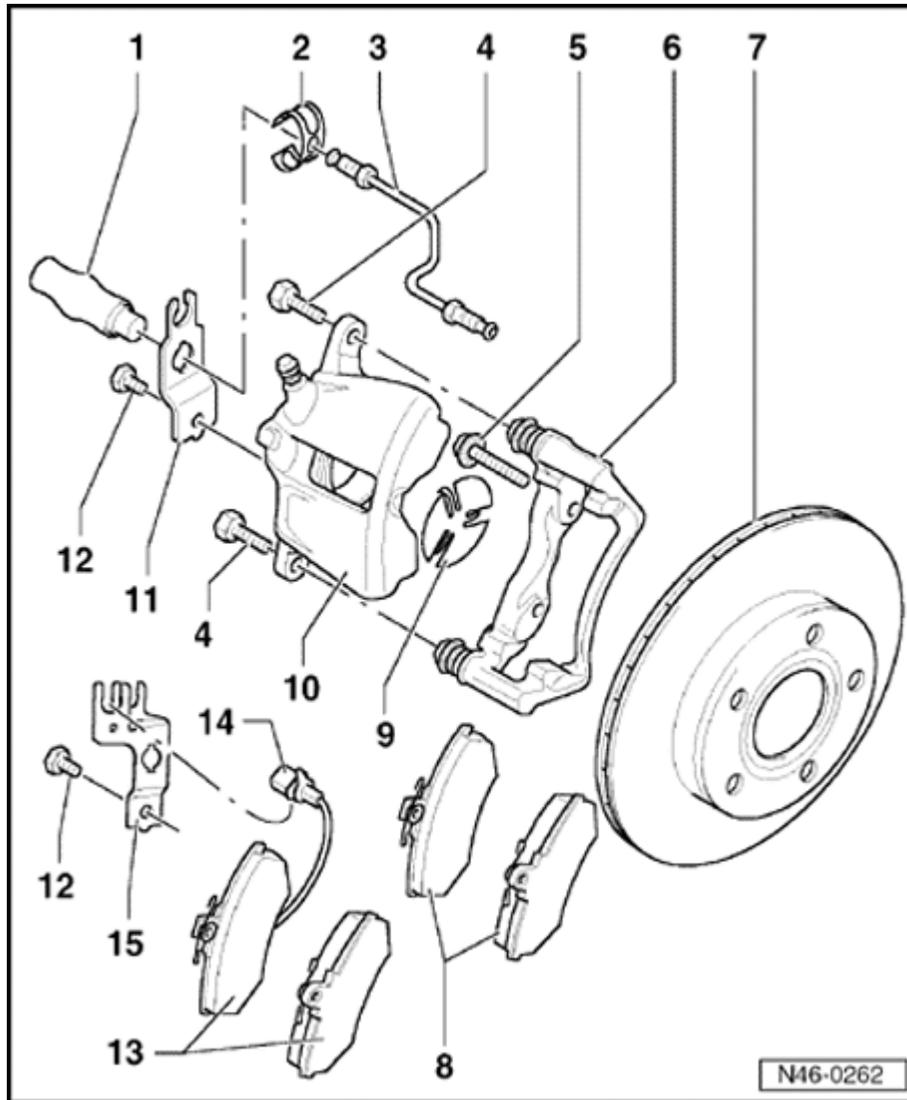
- ◆ Without wear indicator
- ◆ Thickness 14 mm
- ◆ Checking thickness

⇒ Repair Manual, Maintenance, Front and rear brake pads/linings; Checking thickness

- ◆ Always replace both sides
- ◆ Removing and installing ⇒ [Page 46-8](#)
- ◆ Wear limit: 7 mm including backing plate

9 - Heat shield

- ◆ Insert into piston



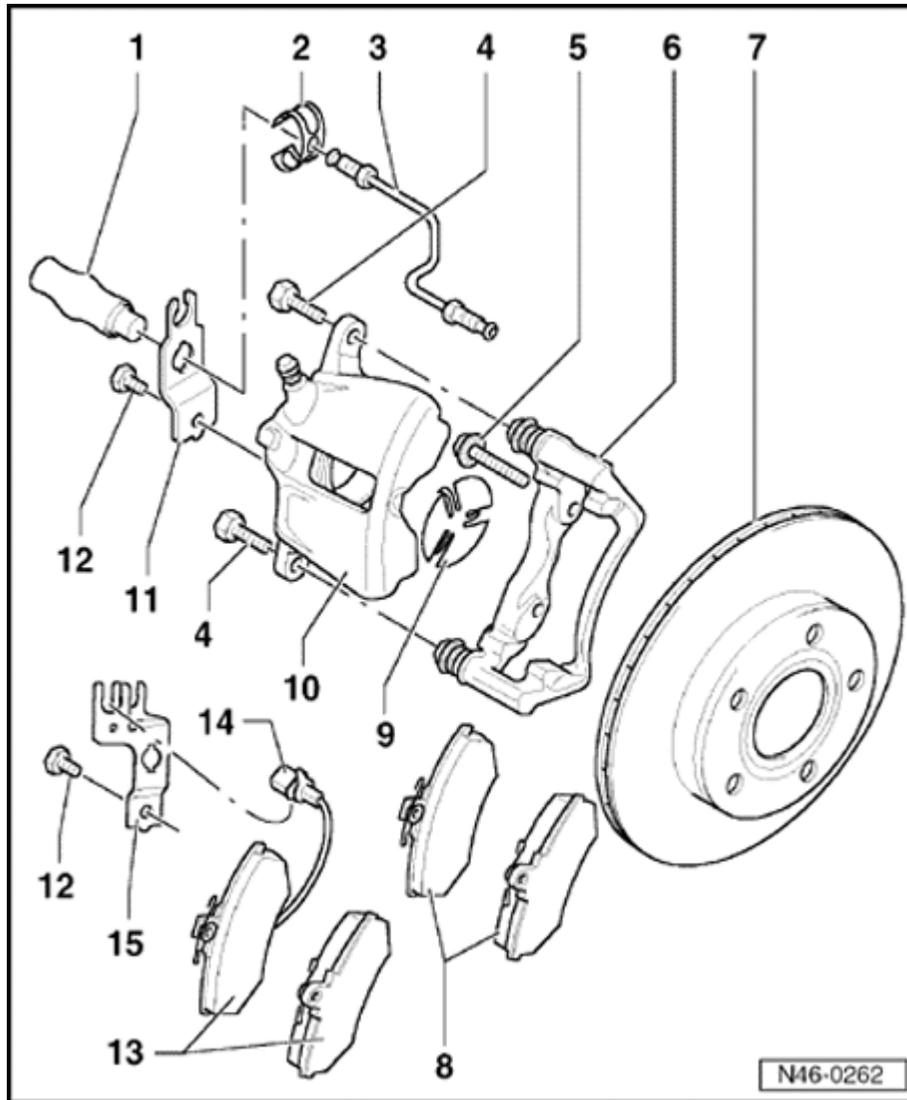
10 - Brake caliper

- ◆ Do not disconnect brake hose when changing brake pads
- ◆ Removing:
 - Remove brake pads -item 8 - ⇒ [Page 46-8](#)
 - Install brake pedal depressor VAG 1869/2
 - Unscrew brake hose -item 1 - from brake caliper
- ◆ Installing:
 - Install brake pads -item 8 - ⇒ [Page 46-10](#)
 - Install brake hose -item 1 - on brake caliper
 - Remove brake pedal depressor VAG 1869/2
- ◆ Servicing ⇒ [Page 47-1](#)

11 - Retainer

- ◆ Bolt to brake caliper housing

12 - Hex bolt, 10 Nm



13 - Brake pads

- ◆ With wear indicator
- ◆ Thickness 14 mm
- ◆ Wear limit: 7 mm including backing plate
- ◆ With wear indicator
 - When wear limit is reached (limit: 2 to 3 mm) warning lamp lights up on instrument cluster
- ◆ Checking thickness

⇒ Repair Manual, Maintenance, Front and rear brake pads/linings; Checking thickness

- ◆ Always replace both sides
- ◆ Removing and installing ⇒ [Page 46-8](#)

14 - Connector

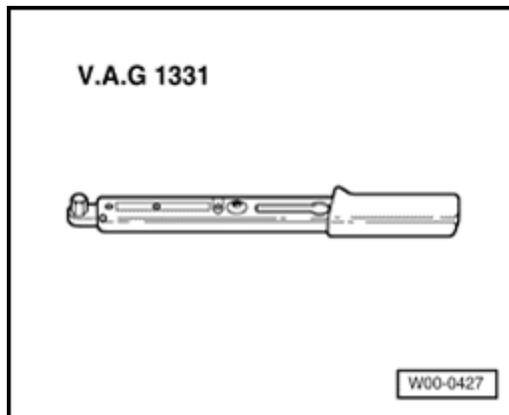
- ◆ When changing pads remove from bracket -item 15 -

15 - Bracket



Brake pads, removing and installing

Special tools and workshop equipment required



A

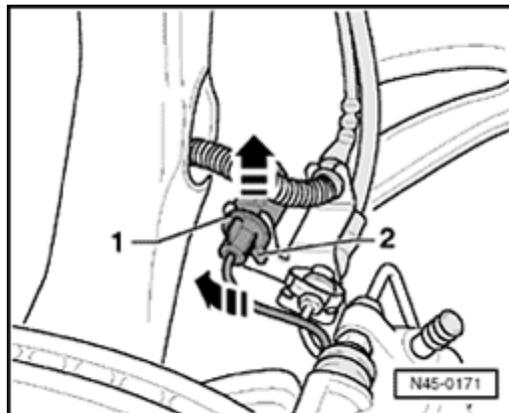
- ◆ VAG 1331 Torque wrench (or equivalent)
- ◆ Piston resetting tool

Removing

Note:

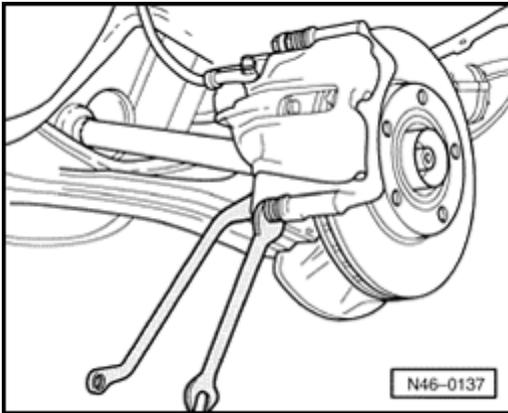
When reusing brake pads mark location, install in same position otherwise uneven braking!

- Remove wheels.

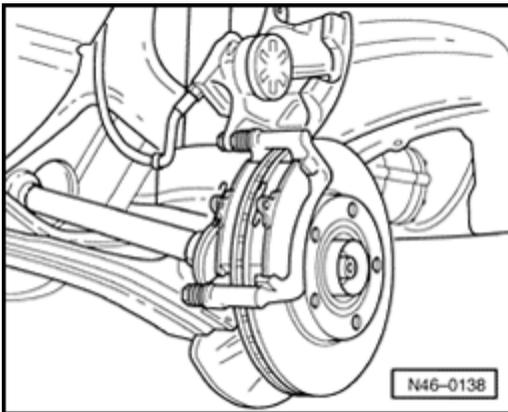


A

- For vehicles with brake wear indicator disconnect the connector -1-.
- Lift locking tab slightly on connector lower part -2- and then turn 90°.
- Pull connector lower part out of bracket.



- A**
- Remove lower brake caliper housing securing bolt. Counter hold on guide pin.



- A**
- Swing brake caliper housing upward.
 - Remove brake pads.

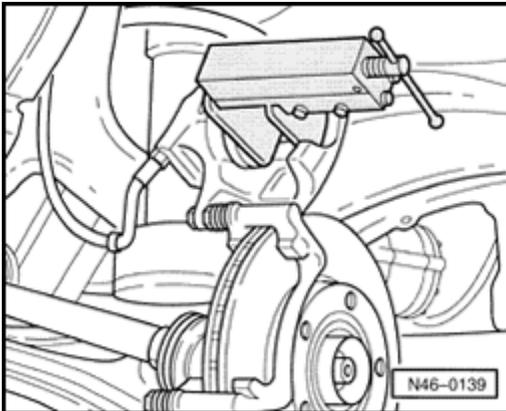


Installing

Note:

Press piston back into the cylinder with resetting tool. Before inserting new brake pads, draw off brake fluid from the reservoir with a bleeder bottle. Before pressing the piston back, make sure the reservoir has not been topped off, otherwise brake fluid will overflow and cause damage.

Use only appropriate solvent for cleaning the brake caliper housing.

**A**

- Pressing piston back.
- Insert brake pads.
- Swing brake caliper housing down and secure with new self-locking bolt.
- Remove upper brake caliper housing securing bolt. Counter hold on guide pin.
- If removing the upper brake caliper housing securing bolt, it must always be replaced.
- Bolt on brake caliper housing ⇒ [Page 46-3](#) ; item 4 .



- Insert brake wear indicator connector into bracket on brake caliper.

The brake wear indicator wiring must be routed between the brake carrier and brake line.

Notes:

- ◆ *The repair kit includes four self-locking hex bolts which must be installed.*
- ◆ *After changing each brake pad and with vehicle stationary. Firmly depress brake pedal several times so that the brake pads are properly seated in their normal operating position.*
- ◆ *Check brake fluid level, after changing brake pads.*

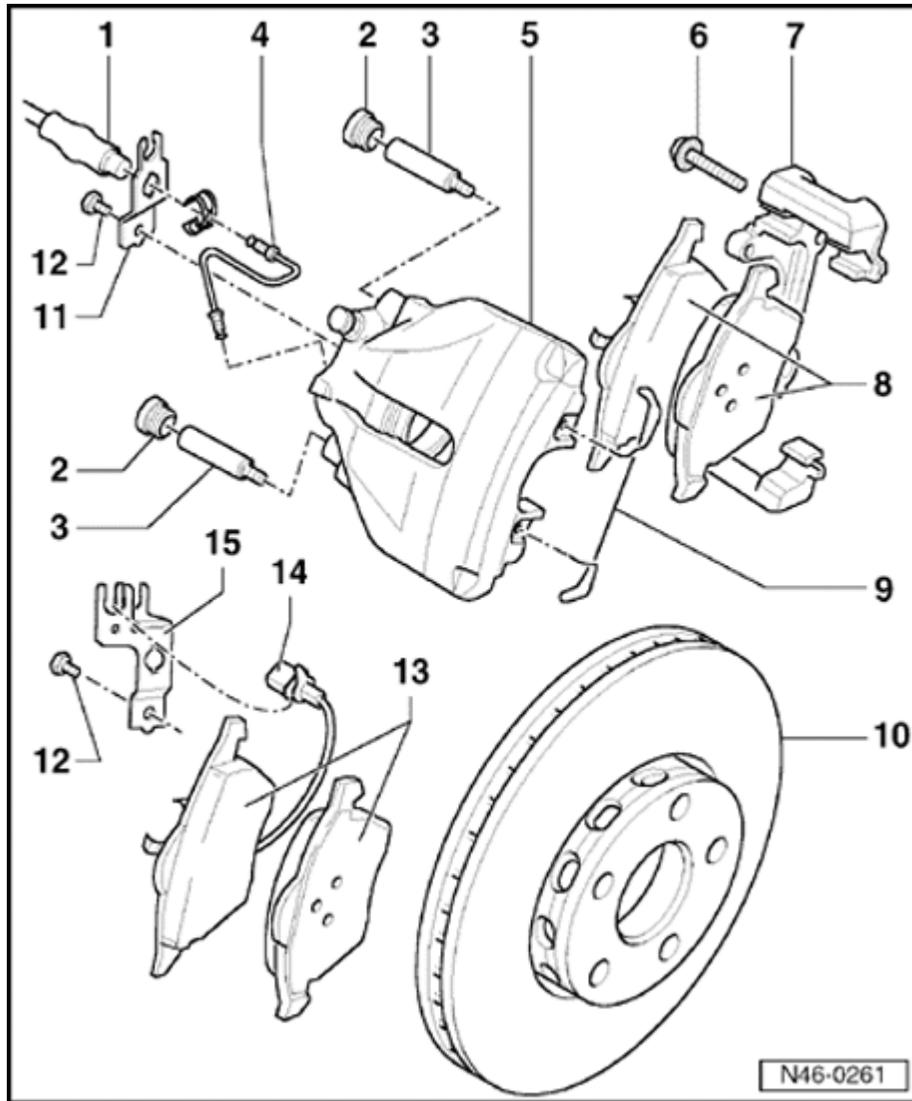


<p>V.A.G 1331</p> 	<p>V.A.G 1410</p> 
<p>V.A.G 1869/2</p> 	
	<p>W45-0003</p>

FN3 brake caliper, servicing

Special tools and workshop equipment required

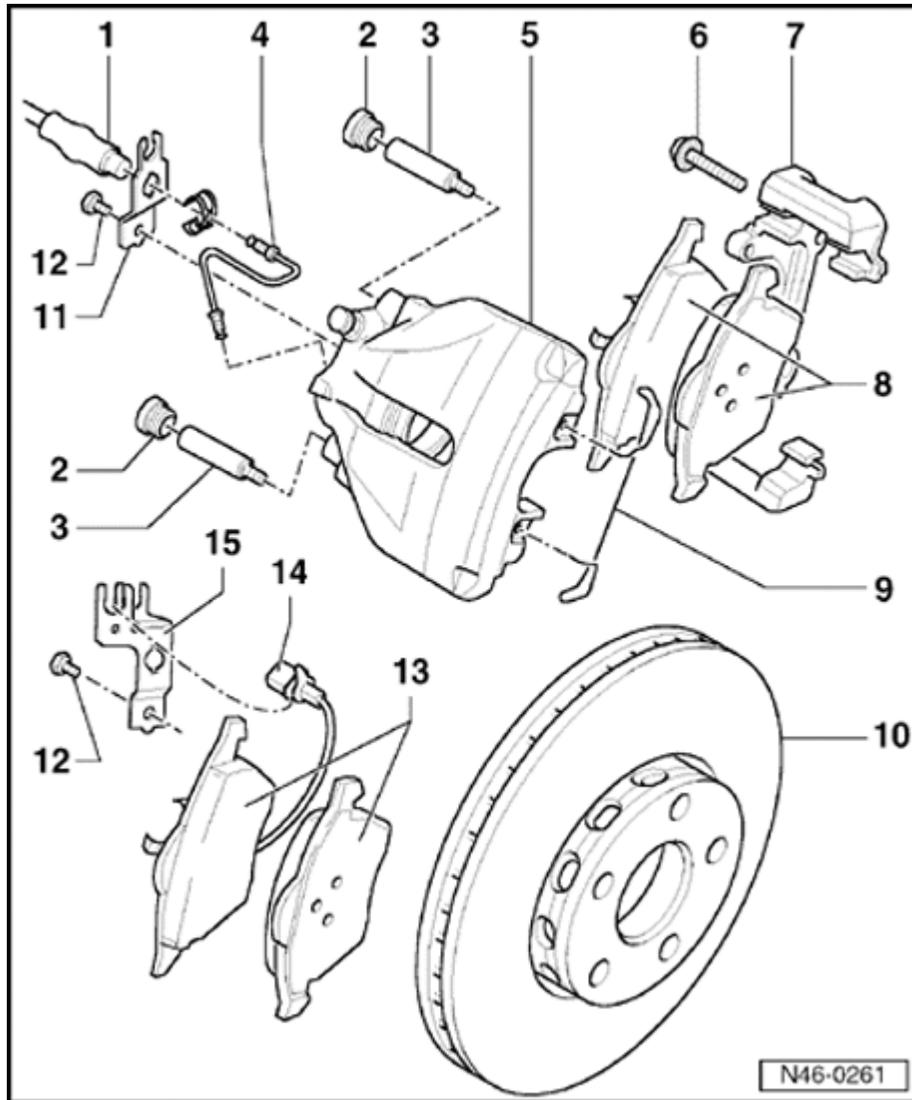
- ◆ VAG 1331 Torque wrench (or equivalent)
- ◆ VAG 1410 Torque wrench (or equivalent)
- ◆ VAG 1869/2 Brake pedal depressor



Notes:

- ◆ Install complete repair kit.
- ◆ After replacing brake pads and with vehicle stationary depress brake pedal firmly several times so that the brake pads are properly seated in their normal operating position.
- ◆ To draw off brake fluid from the reservoir, use a bleeder bottle which is used only for brake fluid. Brake fluid is poisonous, NEVER siphon brake fluid with your mouth!
- ◆ Wheel bolt tightening torque

⇒ [Repair Manual Suspension, Wheels, Steering, Repair group 44; Torque setting for wheel bolts](#)



1 - Brake hose

- ◆ Do not disconnect brake hose when changing brake pads

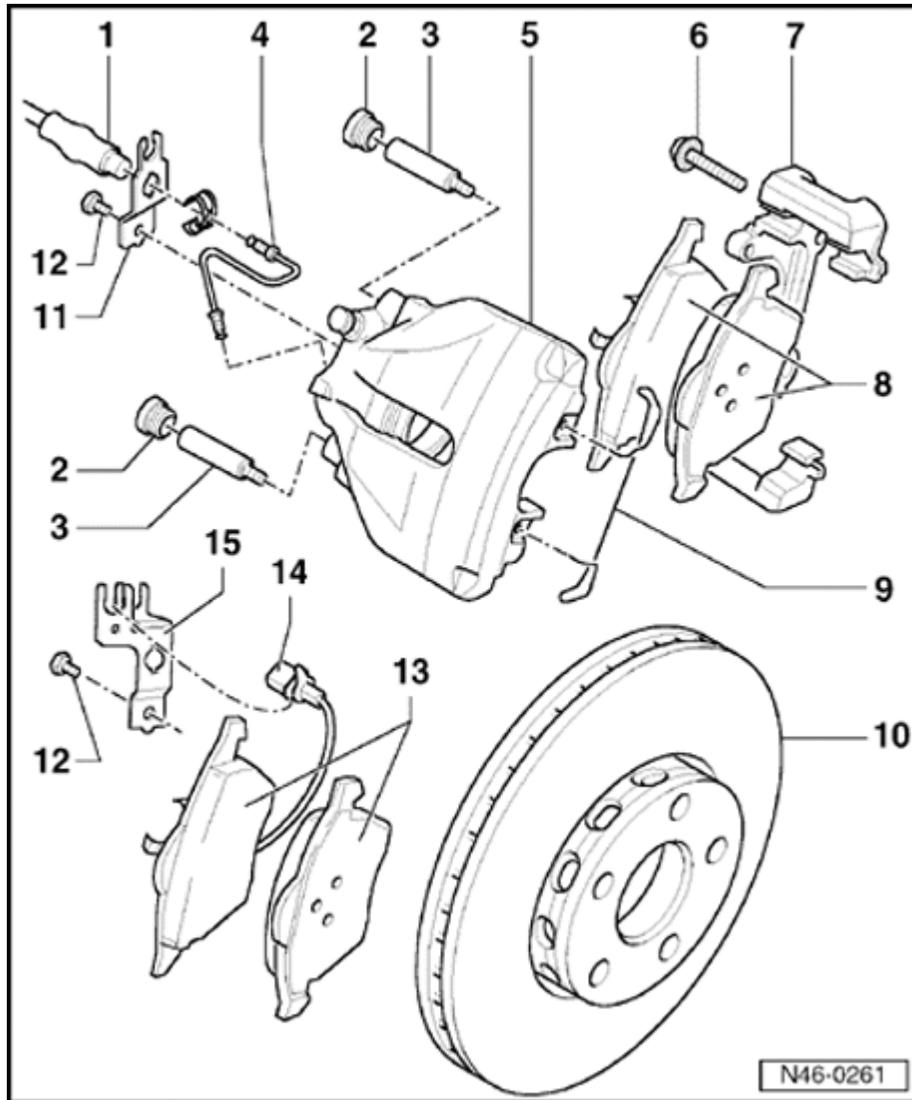
2 - Protective cap

- ◆ Remove

3 - Guide pins, 25 Nm

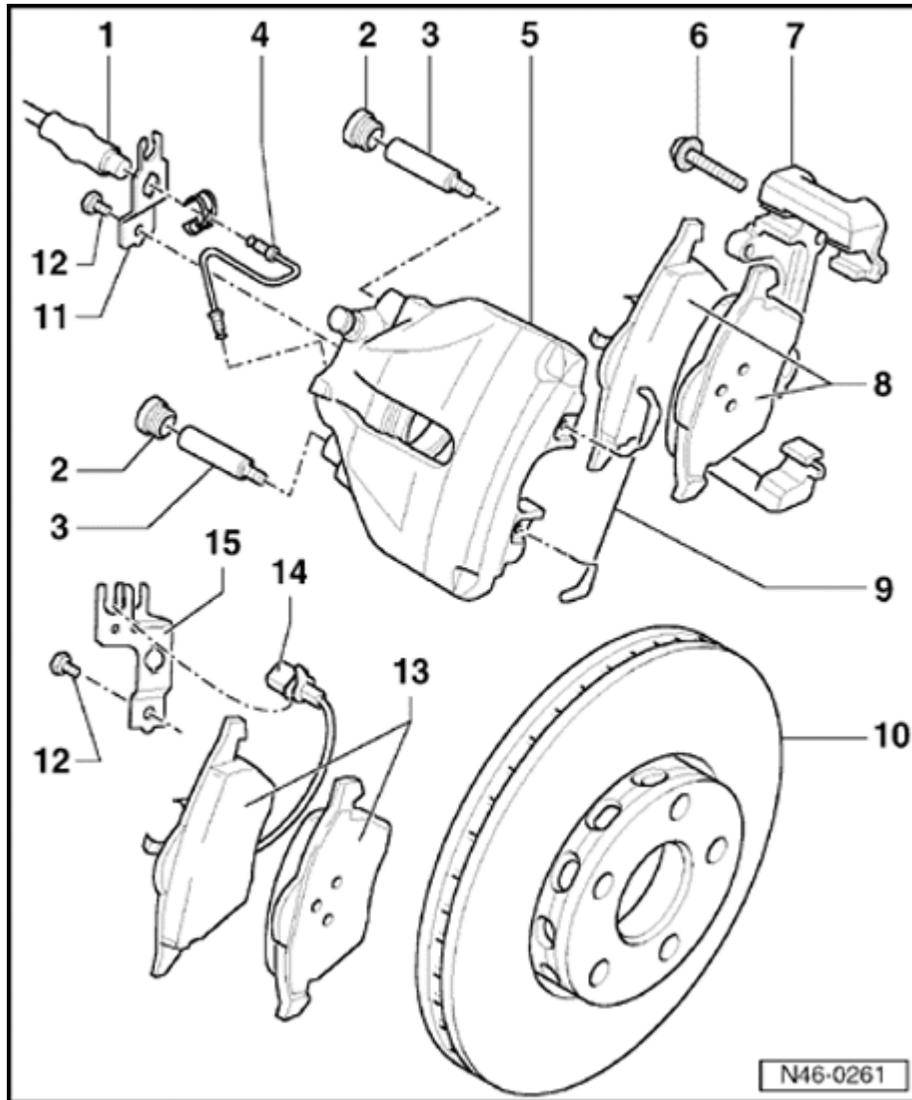
4 - Brake line, 15 Nm

- ◆ Screw into brake caliper housing
- ◆ Screw into brake hose, counter hold on brake hose hex.
- ◆ Make sure that lugs are properly seated in retainer grooves.



5 - Brake caliper

- ◆ Do not disconnect brake hose when changing brake pads
- ◆ Removing:
 - Remove brake pads -item 13 - ⇒ [Page 46-20](#)
 - Install brake pedal depressor VAG 1869/2
 - Remove brake hose -item 1 - from brake caliper
- ◆ Installing:
 - Install brake pads -item 13 - ⇒ [Page 46-22](#)
 - Install brake hose -item 1 - onto brake caliper
 - Remove brake pedal depressor VAG 1869/2
 - Bleed brake system ⇒ [Page 47-35](#)
- ◆ Servicing ⇒ [Page 47-7](#)



6 - Ribbed combi bolt, 120 Nm

- ◆ Clean ribs if re-using

7 - Brake carrier

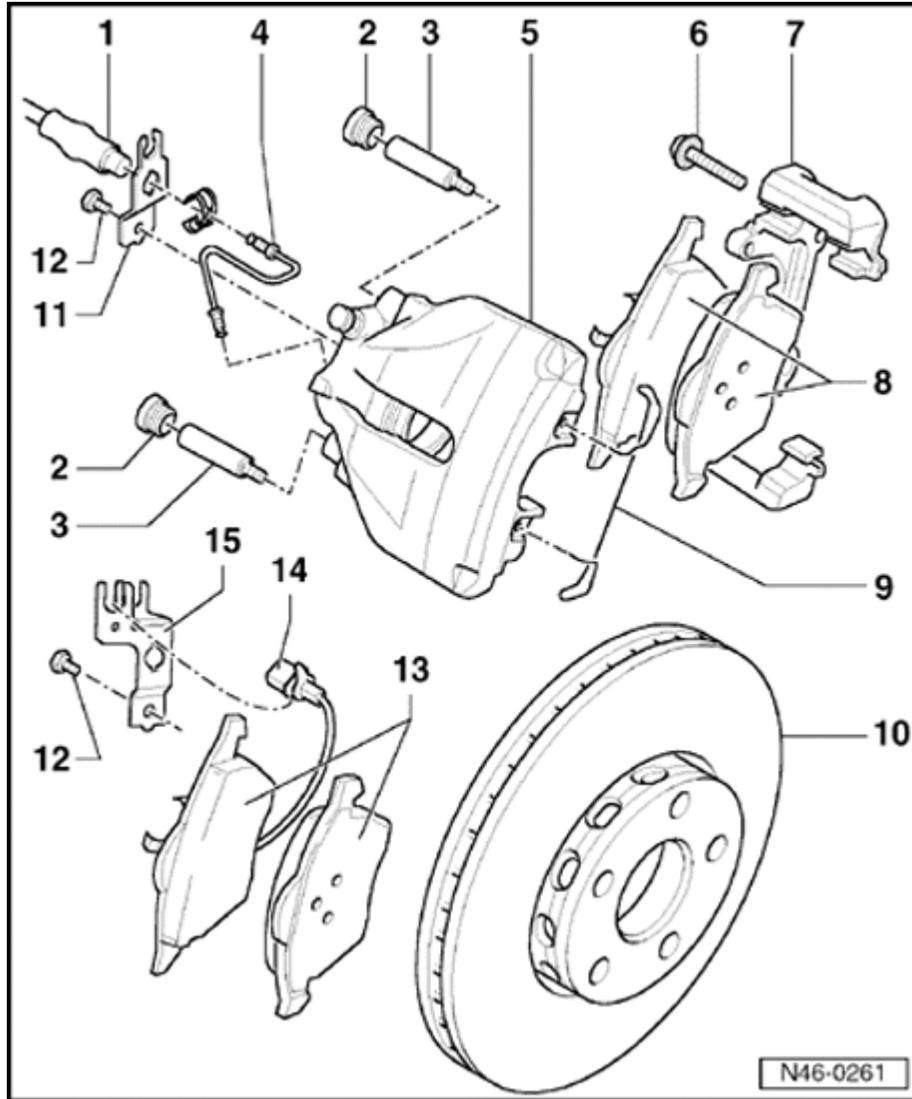
- ◆ Bolt to wheel bearing housing

8 - Brake pads

- ◆ Without wear indicator
- ◆ Thickness 14 mm
- ◆ Checking thickness

Repair Manual, Maintenance, Front and rear brake pads/linings; Checking thickness

- ◆ When worn always replace both sides
- ◆ Removing and installing ⇒ [Page 46-20](#)
- ◆ Wear limit: 7 mm including backing plate
- ◆ The arrow on the inner pad (with spring) must point in the direction of brake disc rotation when moving forward. May create noises if incorrectly installed.
- ◆ There is an adhesive foil on the backplates of the outer brake pads. The protective foil must be pulled off before inserting.

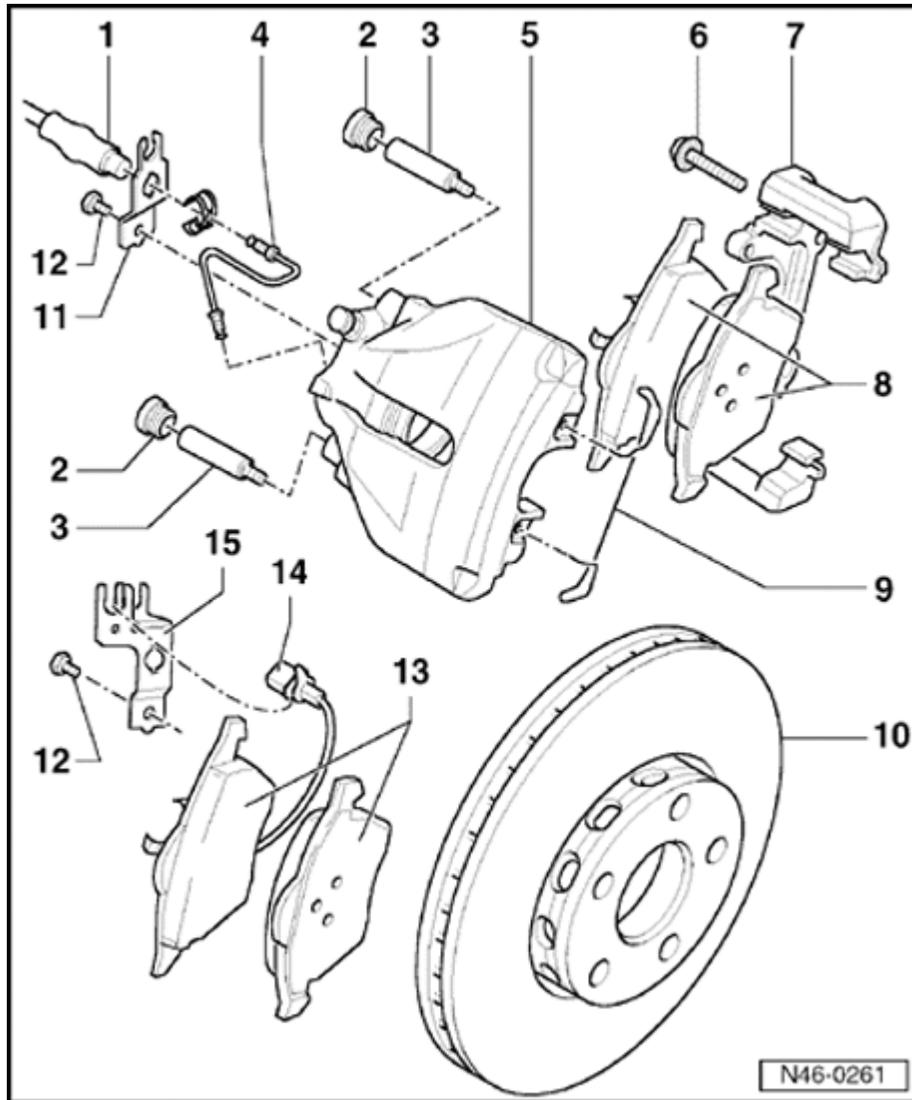


9 - Retaining spring

- ◆ Insert in both holes of brake caliper housing

Note:

The retaining spring must be pressed under the brake carrier after inserting into both holes. Faulty installation will not allow compensation of outer pad wear. This will cause pedal travel to increase.



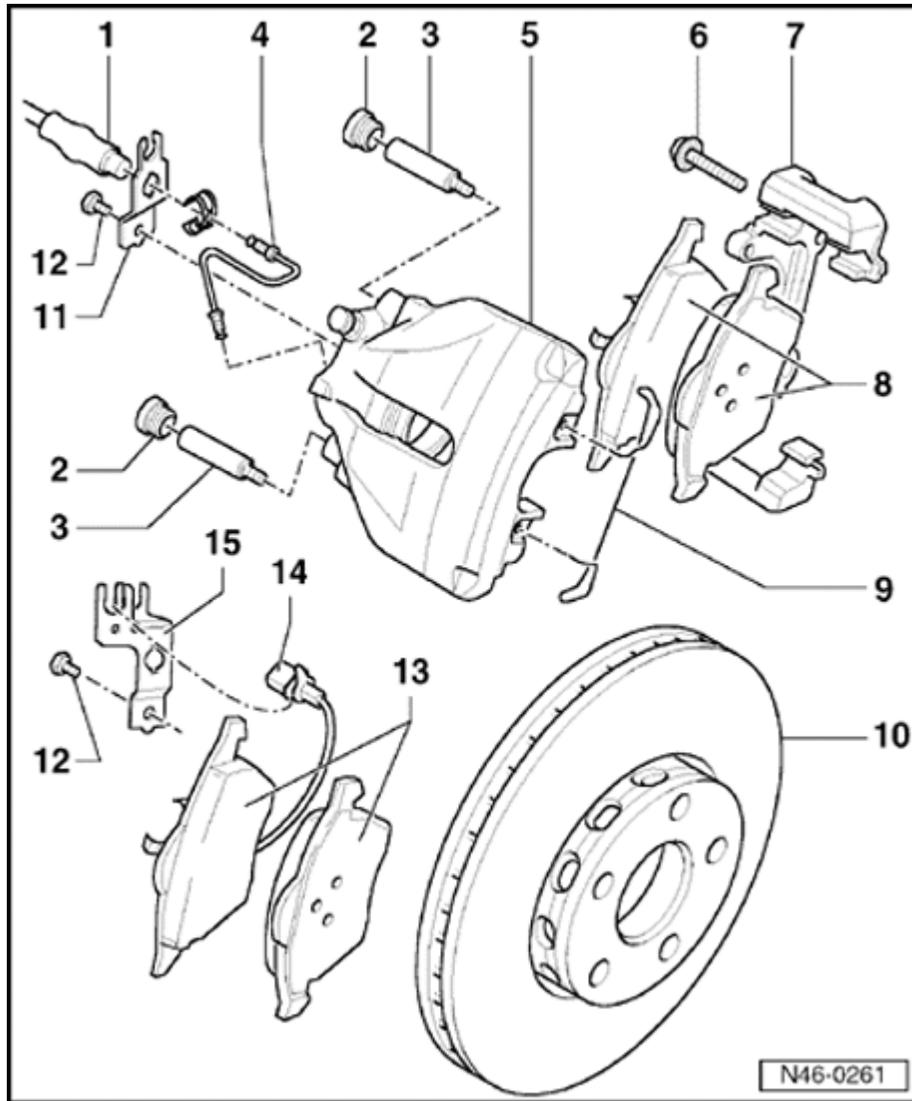
10 - Brake disc

- ◆ Vented brake disc to vehicle identity No. 3B X 124
107: diameter 282.5 mm
- ◆ Vented brake disc from vehicle identity No. 3B X 124
108: 282.5 mm
- ◆ Brake disc thickness: 25 mm
- ◆ Wear limit: 23 mm
- ◆ When worn always replace both sides
- ◆ Remove brake caliper prior to removing

11 - Retainer

- ◆ Bolt to brake caliper housing

12 - Hex bolt, 10 Nm



13 - Brake pads

- ◆ With wear indicator
 - Warning lamp lights up on instrument panel when wear limit is reached (limit: 2 to 3 mm)
- ◆ Thickness 14 mm
- ◆ Checking thickness

⇒ Repair Manual, Maintenance, Front and rear brake pads; Checking thickness

- ◆ Always replace both sides
- ◆ Removing and installing ⇒ [Page 46-20](#)
- ◆ Wear limit: 7 mm including backing plate

14 - Connector

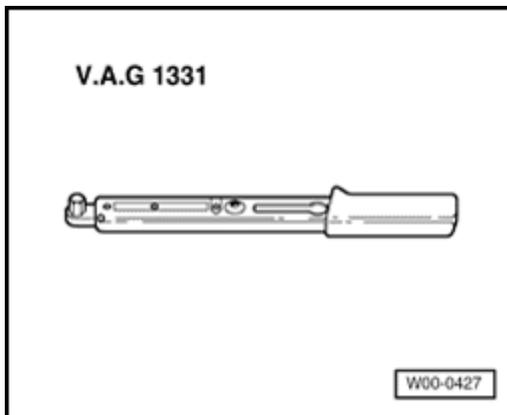
- ◆ For pad replacement remove from bracket -item 15 -

15 - Bracket



Brake pads removing and installing

Special tools and workshop equipment required

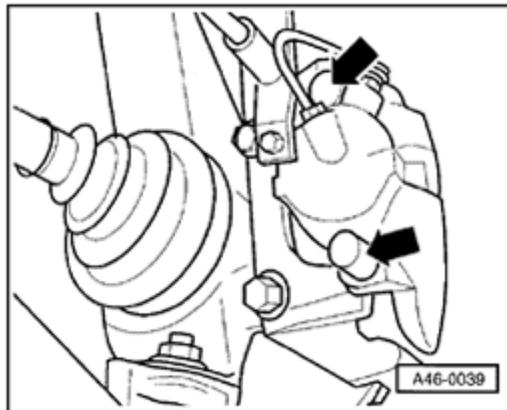


- A ♦ VAG 1331 Torque wrench (or equivalent)
- ♦ Piston resetting tool

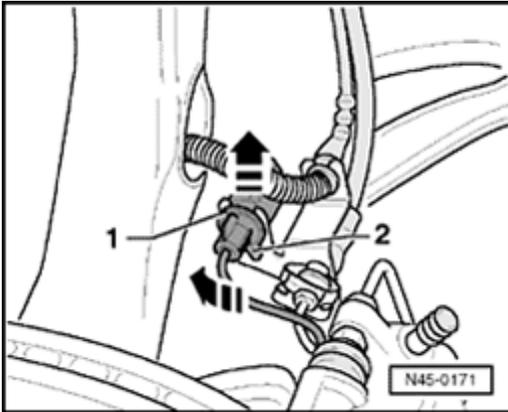
Removing

Note:

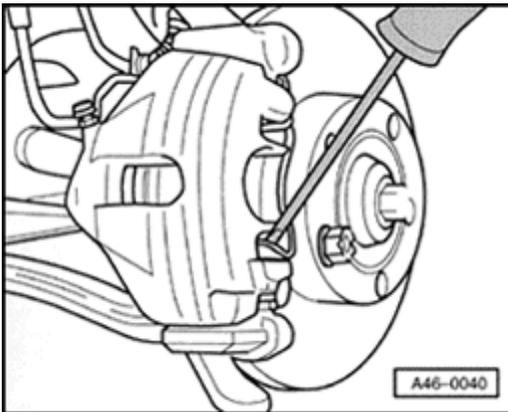
When reusing brake pads mark location and install in same position, otherwise uneven braking will occur!



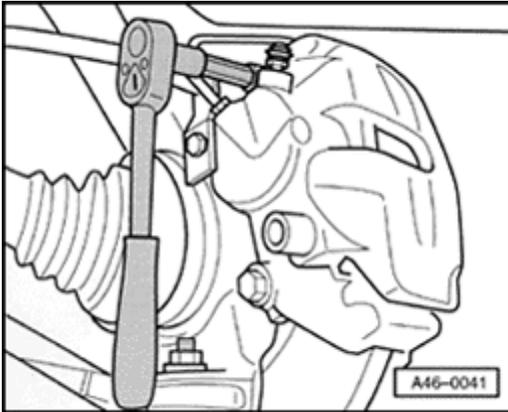
- A - Remove protective caps -arrows-.

**A**

- For vehicles with brake wear indicator disconnect the connector -1-.
- Lift locking tab slightly on connector lower part -2- and then turn 90°.
- Pull connector lower part out of bracket.

**A**

- Using a screwdriver pry off brake pad retaining spring from brake caliper housing and remove.



A

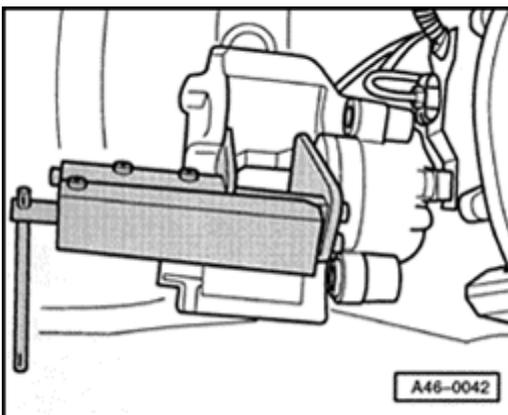
- Remove both guide pins from brake caliper.
- Remove brake caliper housing and lay to one side so that the weight of the brake caliper does not stress or damage the brake hose.
- Remove brake pads out of brake caliper housing or from brake carrier.

Use only appropriate solvent for cleaning the brake caliper housing.

Installing

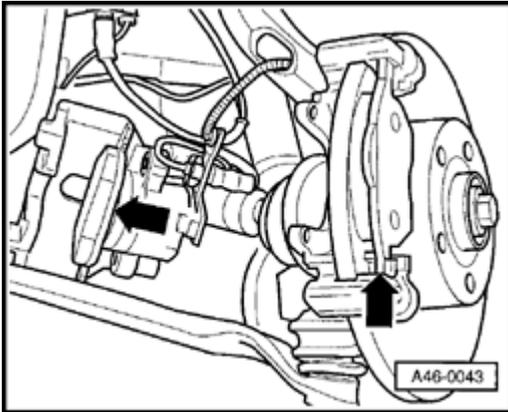
Note:

Press piston back into the cylinder with resetting tool. Before inserting new brake pads, draw off brake fluid from the reservoir with a bleeder bottle. Before pressing the piston back, make sure reservoir has not been topped off, otherwise brake fluid will overflow and cause damage.



A

- Press piston back into brake caliper.

**A**

- Insert brake pad with retaining spring in brake caliper housing (piston).

Note:

The inner pad (with spring) has an arrow. The arrow must point in the direction of the forward rotation of the disc brake. May create noises if incorrectly installed.

- Remove protective foil on backing plate of outer brake pad.
- Install outer brake pad to brake carrier.
- Tighten brake caliper housing bolt to brake carrier with both guide pins ⇒ [Page 46-14](#) ; item 3 .
- Install both protective caps.
- Install retaining spring into brake caliper housing.
- Insert brake wear indicator connector into bracket on brake caliper.

The wiring for the brake wear indicator must be routed between the brake carrier and brake line.

**Notes:**

- ◆ *When inserting the outer brake pad, make sure that it does not stick to the brake caliper housing before achieving correct installation position.*
- ◆ *Do not damage adhesive surface.*
- ◆ *After replacing brake pads and with vehicle stationary, firmly depress brake pedal several times so that the brake pads are properly seated in their normal operating position.*
- ◆ *Check brake fluid level after changing brake pads.*



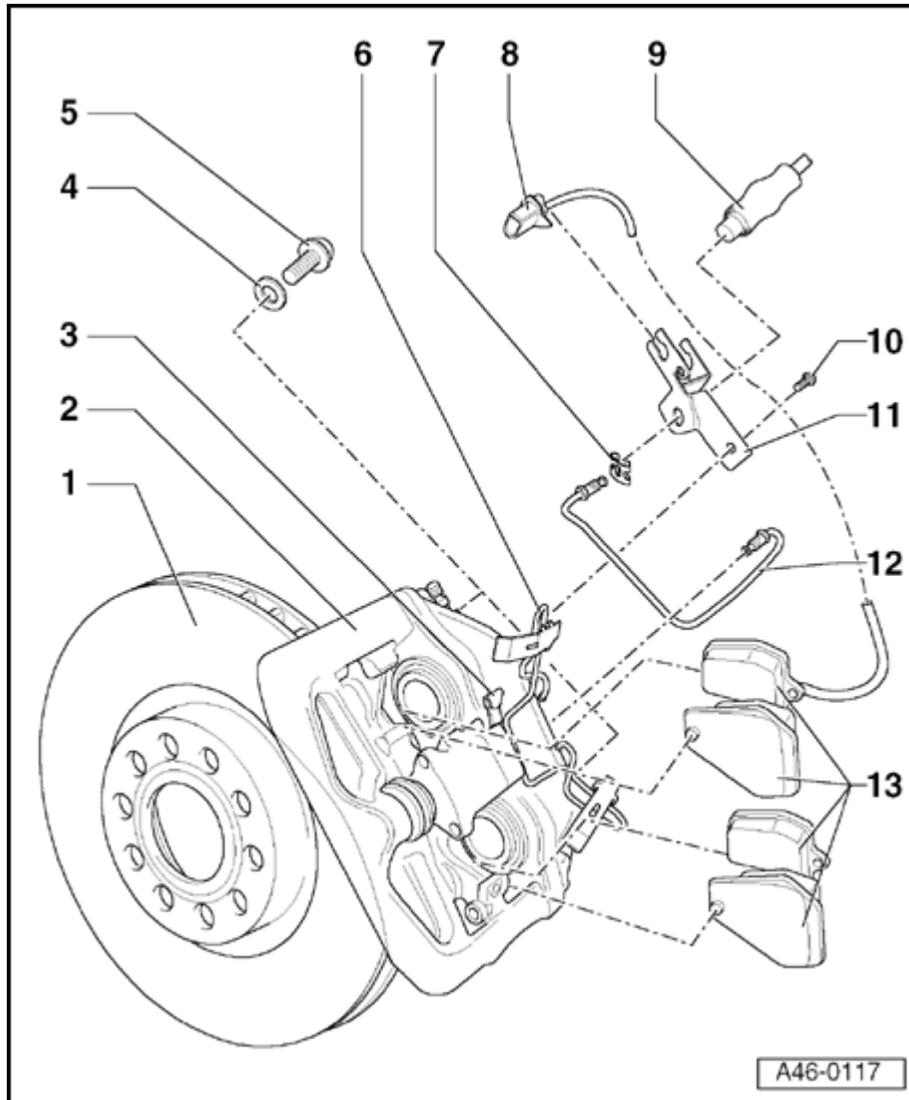
<p>V.A.G 1331</p> 	<p>V.A.G 1410</p> 
<p>V.A.G 1869/2</p> 	
	<p>W45-0003</p>

HP-2 brake caliper, servicing

Vehicles with W8 engines only.

Special tools and workshop equipment required

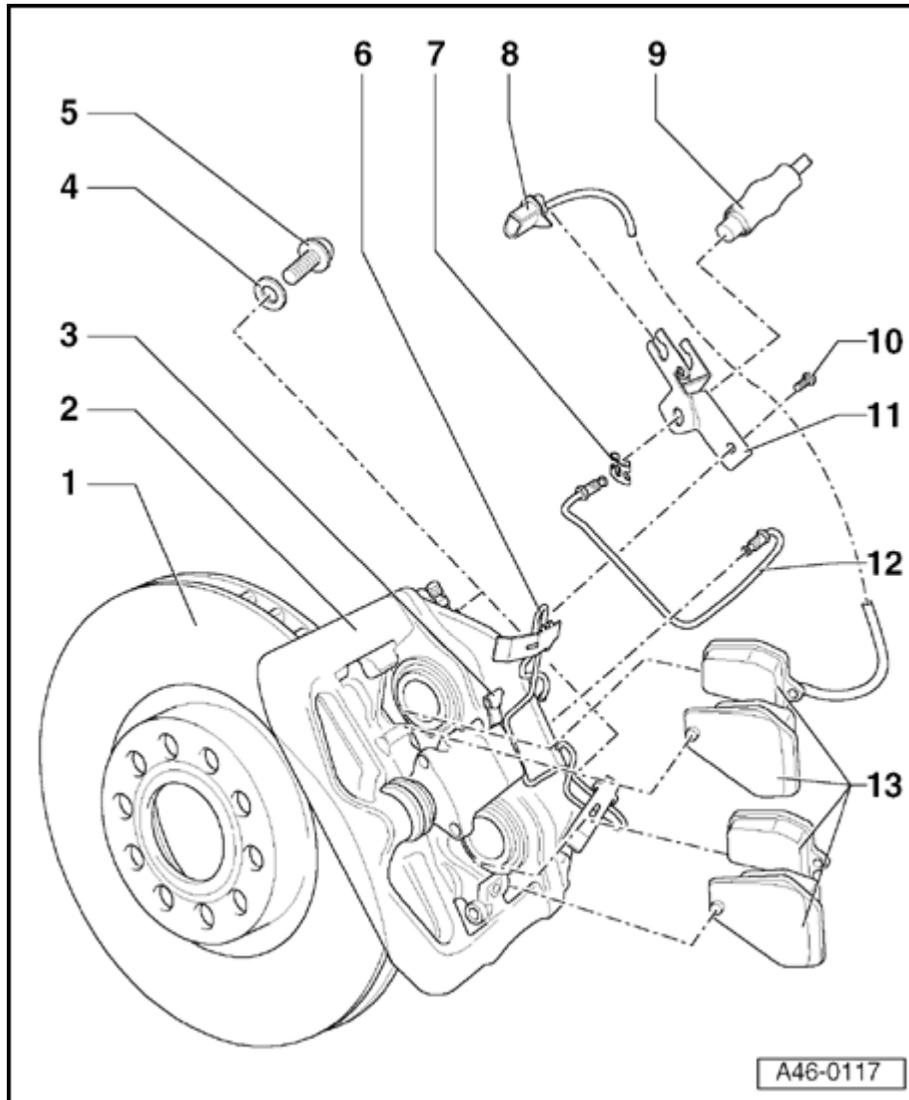
- ◆ VAG 1331 Torque wrench (or equivalent)
- ◆ VAG 1410 Torque wrench (or equivalent)
- ◆ VAG 1869/2 Brake pedal depressor



Notes:

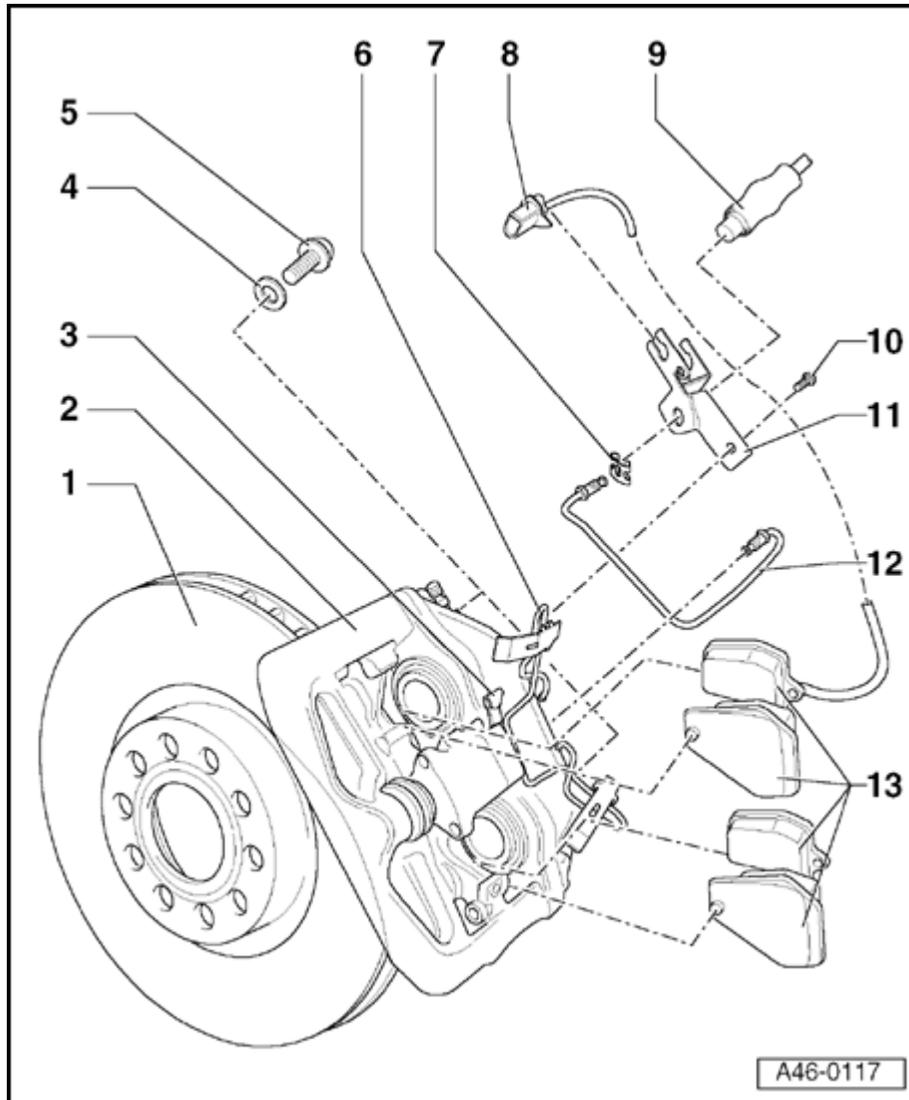
- ◆ *Install complete repair kit.*
- ◆ *After replacing brake pads, and with vehicle stationary depress brake pedal firmly several times so that the brake pads are properly seated in their normal operating position.*
- ◆ *To draw off brake fluid from the reservoir, use a bleeder bottle which is used only for brake fluid. Brake fluid is poisonous, NEVER siphon brake fluid by mouth!*
- ◆ *Wheel bolt tightening torque*

⇒ [Repair Manual, Suspension, Wheels, Steering, Repair Group 44; Torque setting for wheel bolts](#)



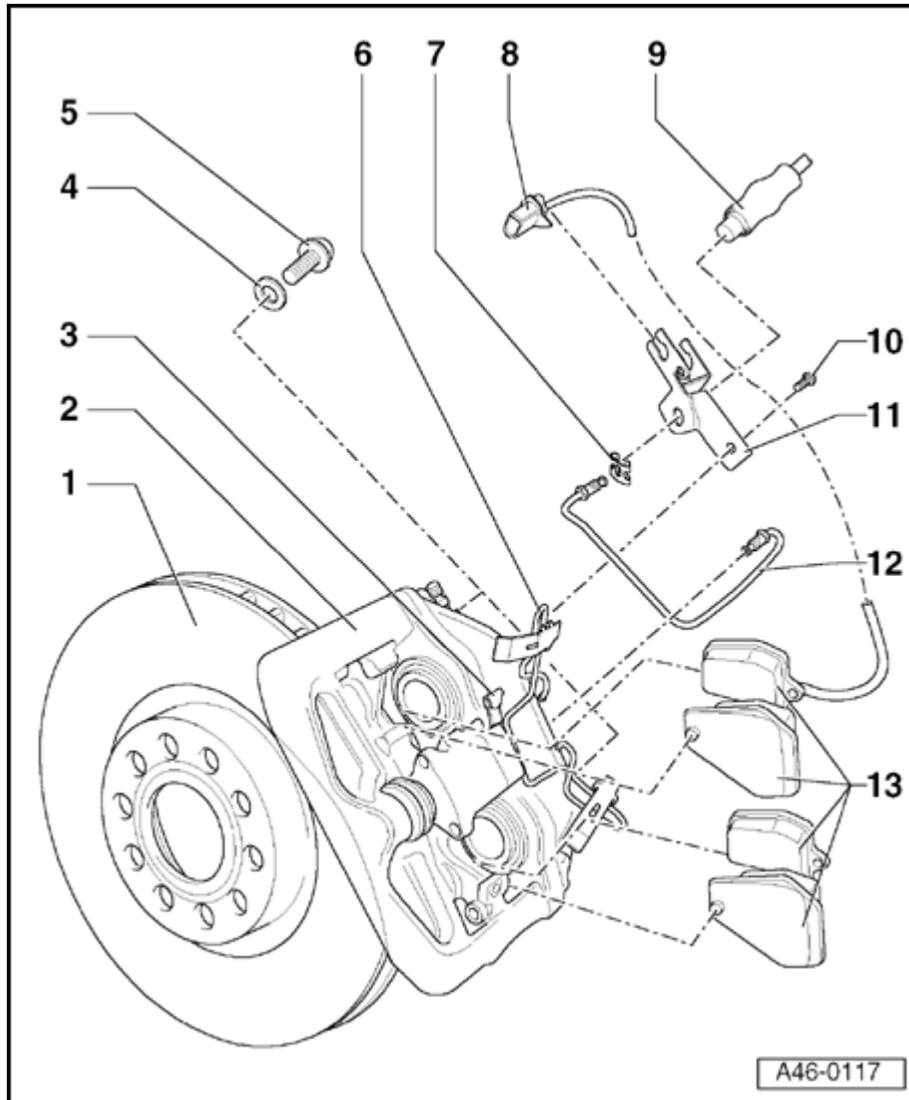
1 - Brake disc

- ◆ Ventilated brake disc: diameter 321 mm
- ◆ Brake disc thickness: 30 mm
- ◆ Wear limit: 28 mm
- ◆ Always replace both sides
- ◆ Remove brake caliper prior to removing



2 - Brake caliper

- ◆ Do not disconnect brake hose when changing brake pads
- ◆ Removing:
 - Remove brake pads -item 13 - ⇒ [Page 46-31](#)
 - Install brake pedal depressor VAG 1869/2
 - Remove brake hose -item 9- from brake caliper
- ◆ Installing:
 - Install brake pads -item 13 - ⇒ [Page 46-31](#)
 - Install brake hose -item 9- to brake caliper
 - Remove brake pedal depressor VAG 1869/2
 - Bleed brake system ⇒ [Page 47-35](#)
- ◆ Servicing ⇒ [Page 47-13](#)



3 - Cable holder for wear indicator

4 - Shim

5 - Ribbed combi bolt, 190 Nm

◆ Clean ribs if using again

6 - Retaining spring

◆ Unclip sideways

◆ Complete removal not possible

7 - Spring clip

8 - Connector

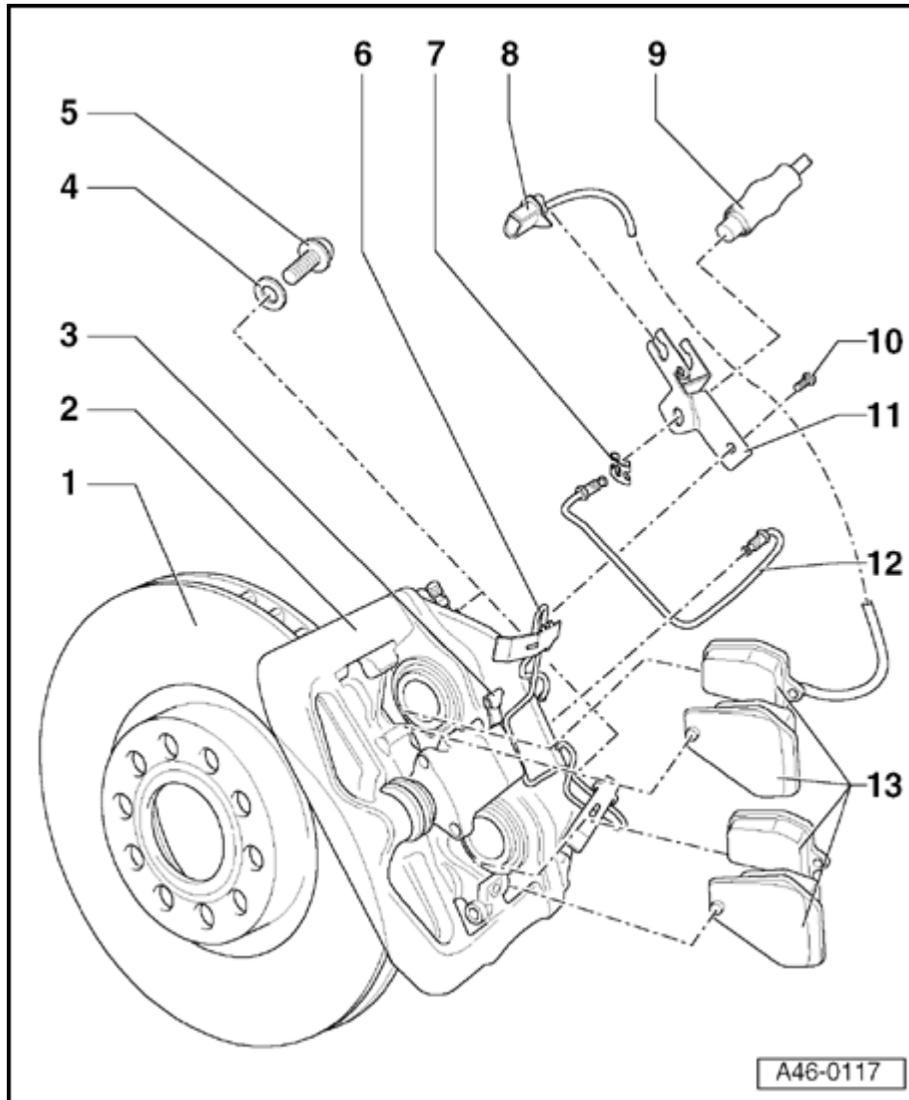
◆ Remove from bracket -item 15 - when changing pads

9 - Brake hose

◆ Do not disconnect brake hose when changing brake pads

10 - Hex bolt, 25 Nm

11 - Bracket



A46-0117

12 - Brake pipe, 15 Nm

13 - Brake pads

- ◆ With wear indicator
 - Warning light lights up on instrument cluster when wear limit is reached (limit: 2 to 3 mm)
- ◆ Thickness 14 mm
- ◆ Checking thickness

⇒ Repair Manual, Maintenance, Front and rear brake pads/linings; Checking thickness

- ◆ Always replace both sides
- ◆ Removing and installing ⇒ [Page 46-31](#)
- ◆ Wear limit: 7 mm including backing plate



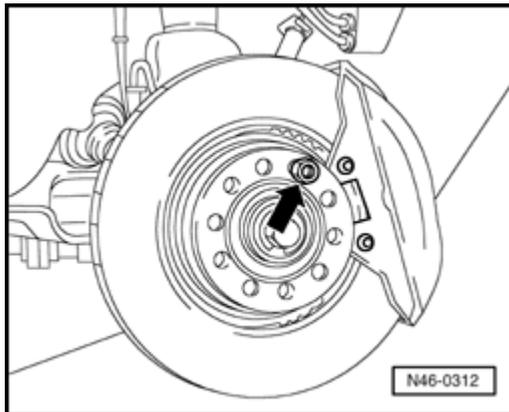
Brake pads, removing and installing

Removing

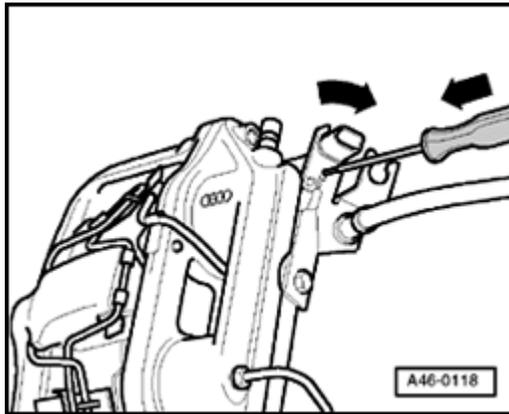
Note:

When reusing brake pads mark location and install in same position otherwise uneven braking will occur!

- Remove wheels.
- Secure brake disc by inserting a wheel bolt.

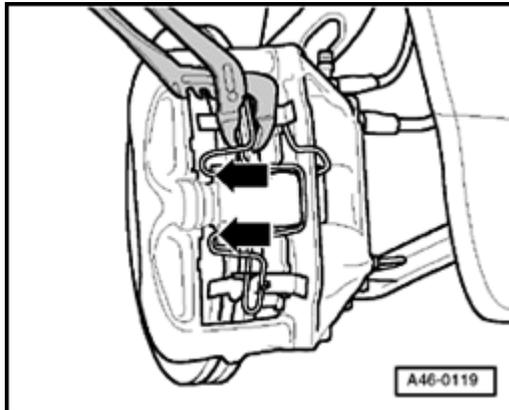


A



A

- Disconnect connector for brake pad wear indicator.
- Lift locking tab slightly on connector lower part and then turn 90° .
- Pull connector lower part out of bracket.

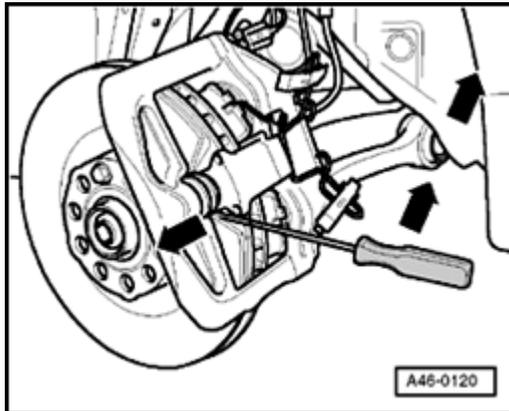


A

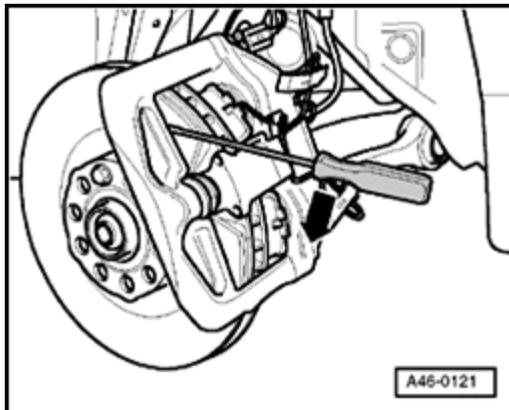
- Unclip upper and lower parts of retaining spring using a pair of pliers -see arrows-
- Push spring sideways.

**Note:**

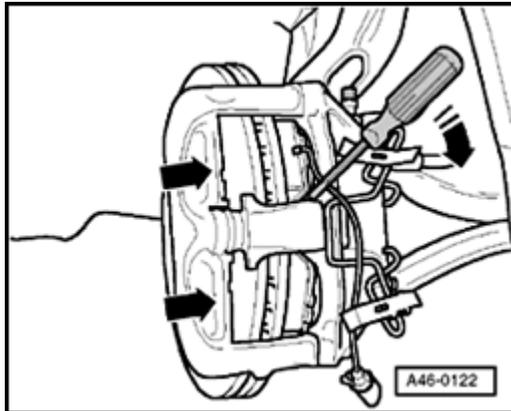
Before pressing piston back, draw off brake fluid from reservoir using a bleeder bottle. Otherwise fluid will overflow and cause damage if the reservoir was topped off during repair work.

**A**

- Press piston back.
- To do this, press floating caliper outward using a screwdriver as shown in the diagram.

**A**

- Using a screwdriver, first press outer brake pads off caliper and then remove.

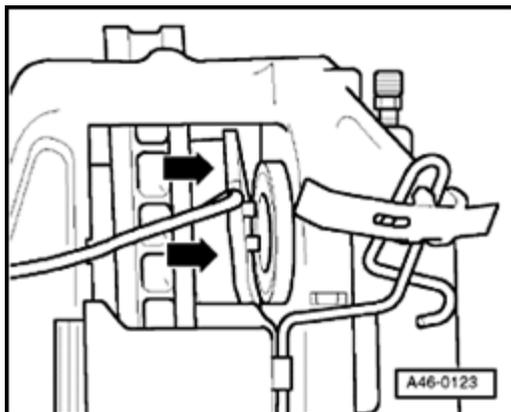


A

- Push floating caliper in direction of arrow until it stops.
- Carefully press inner brake pads out of pistons and remove from floating caliper.
- Clean floating caliper, in particular the adhesive surface for the outer brake pads. This must be free of adhesive residue and grease.

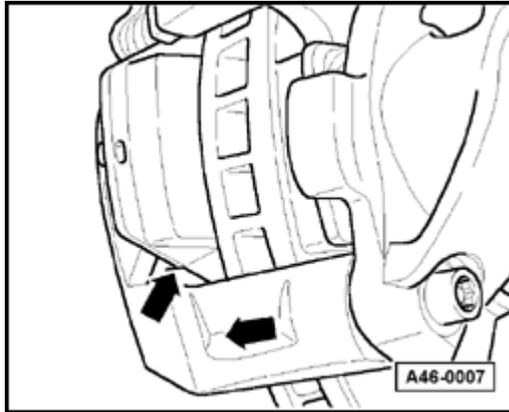
Use only appropriate solvent for cleaning the brake caliper housing.

Installing

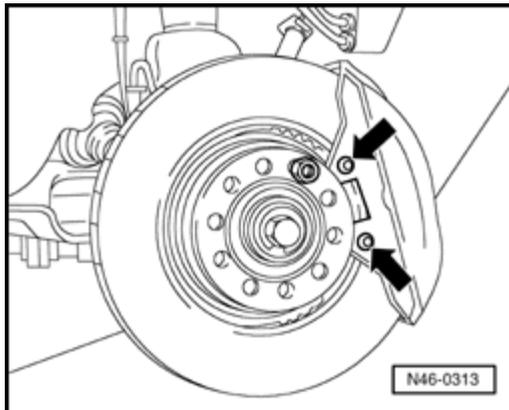


A

- Carefully install inner brake pads in pistons.

**A**

- Press floating caliper outwards until it stops.
- Pull off protective foil on backing plates of outer brake pads.
- Install brake pads in floating caliper.

**A**

- Make sure that the lugs of the backing plates are located correctly in the floating caliper.
- Install brake wear indicator connector into bracket on brake caliper.
- Clip in upper and lower parts of retaining spring.

**Note:**

- ◆ *When installing the outer brake pad, make sure that it does not stick to the brake caliper housing before it is in the correct installation position.*
- ◆ *Do not damage adhesive surface.*
- ◆ *After each brake pad change, and with vehicle stationary, firmly depress brake pedal several times so that the brake pads are properly seated in their normal operating position.*
- ◆ *Check brake fluid level after changing brake pads.*

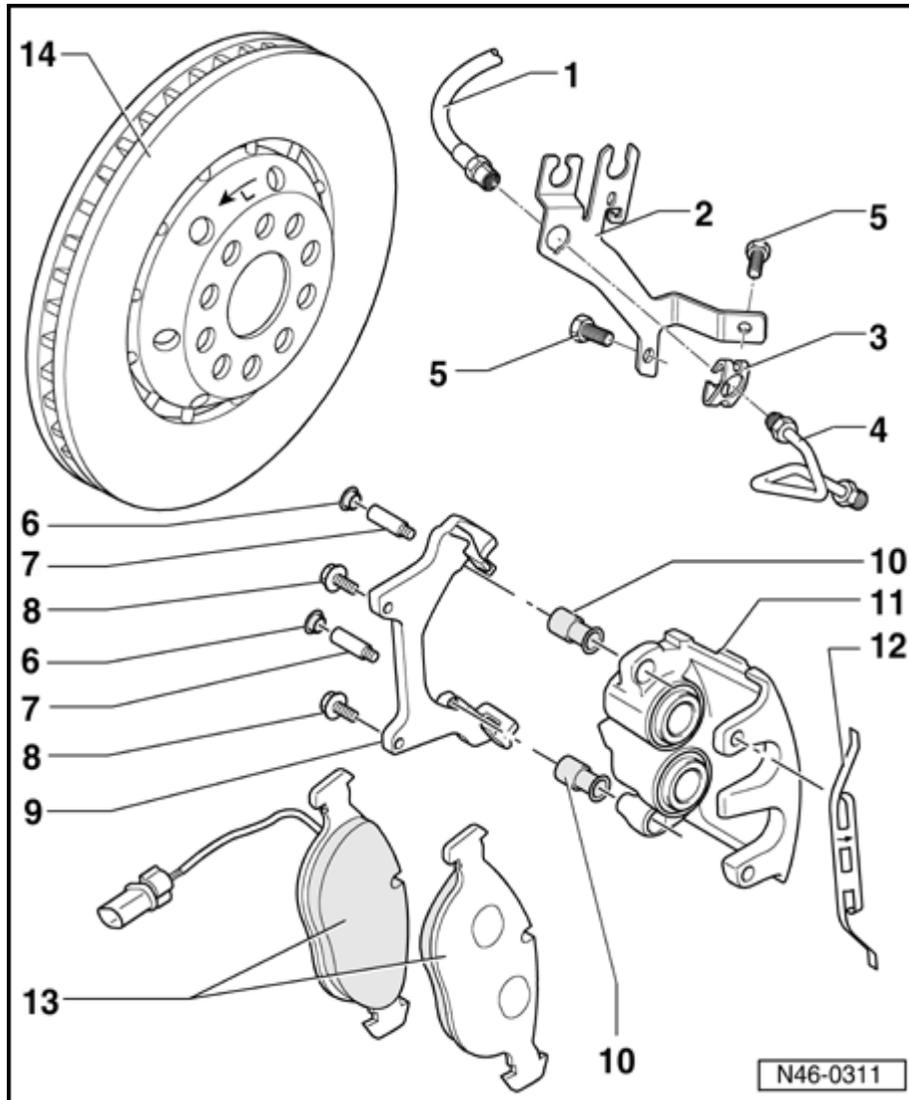


<p>V.A.G 1331</p> 	<p>V.A.G 1410</p> 
<p>V.A.G 1869/2</p> 	
	<p>W45-0003</p>

2FN brake caliper, servicing

Special tools and workshop equipment required

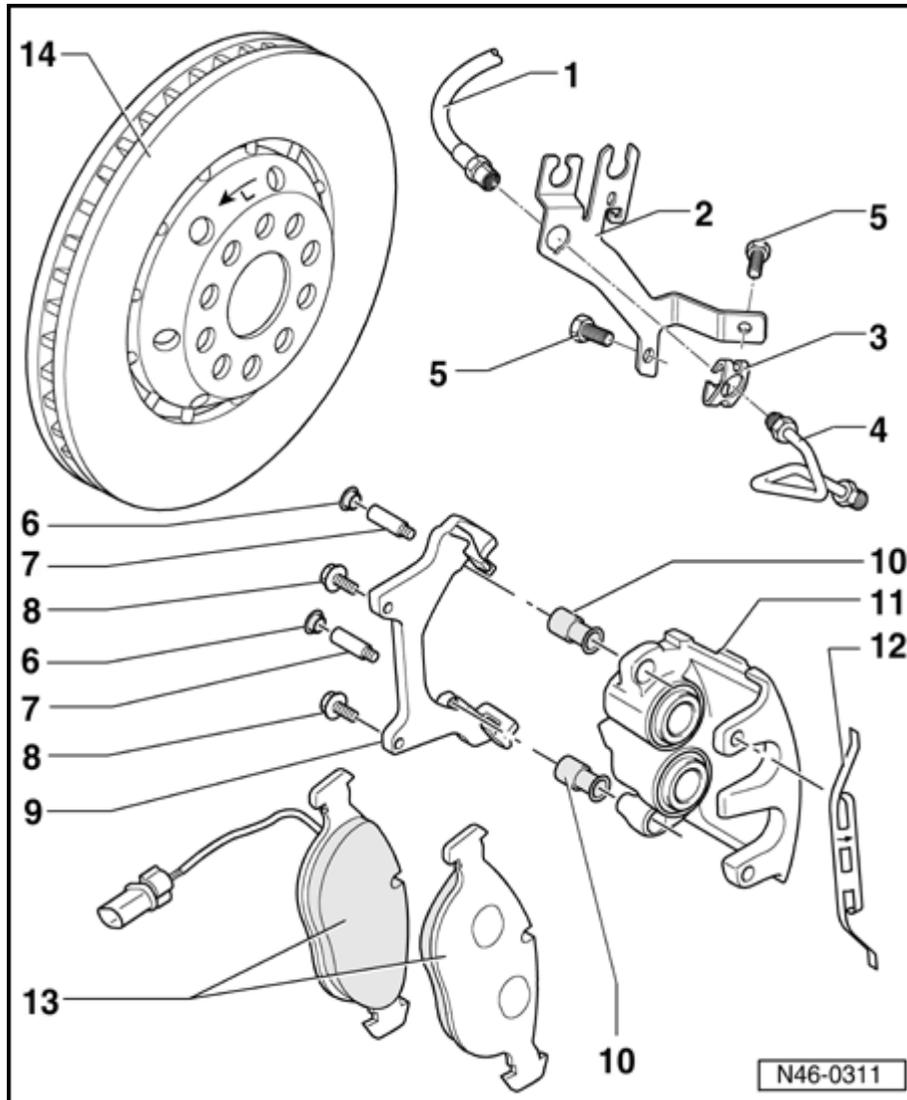
- ◆ VAG 1331 Torque wrench (or equivalent)
- ◆ VAG 1410 Torque wrench (or equivalent)
- ◆ VAG 1869/2 Brake pedal depressor



Notes:

- ◆ Install repair kit complete.
- ◆ After replacing brake pads, depress brake pedal firmly several times with vehicle stationary so that the brake pads are properly seated in their normal operating position.
- ◆ To draw off brake fluid from the reservoir, use a bleeder bottle which is used only for brake fluid. Brake fluid is poisonous, NEVER siphon brake fluid by mouth!
- ◆ Wheel bolt tightening torque

⇒ [Repair Manual Suspension, Wheels, Steering, Repair Group 44; Torque setting for wheel bolts](#)



1 - Brake hose

- ◆ Do not disconnect brake hose when changing brake pads

2 - Retainer

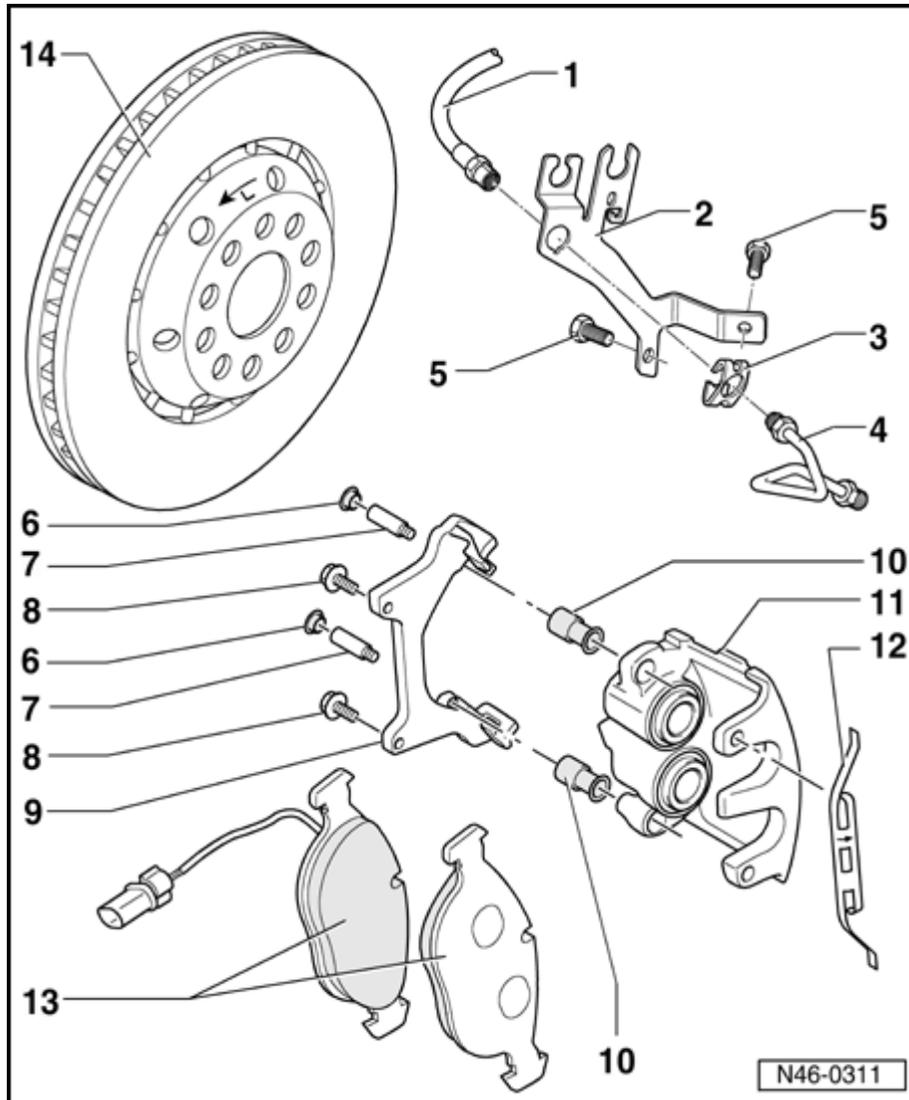
- ◆ Bolt to brake caliper housing

3 - Spring clip

4 - Brake pipe, 15 Nm

- ◆ Screw into brake caliper housing
- ◆ Screw into brake hose, counter hold on brake hose hex.
- ◆ Make sure that lugs are properly seated in retainer grooves.

5 - Hex bolt, 8 Nm



6 - Protective cap

- ◆ Take off
- ◆ Upper protective cap with cable holder for brake pad wear indicator

7 - Guide pins, 25 Nm

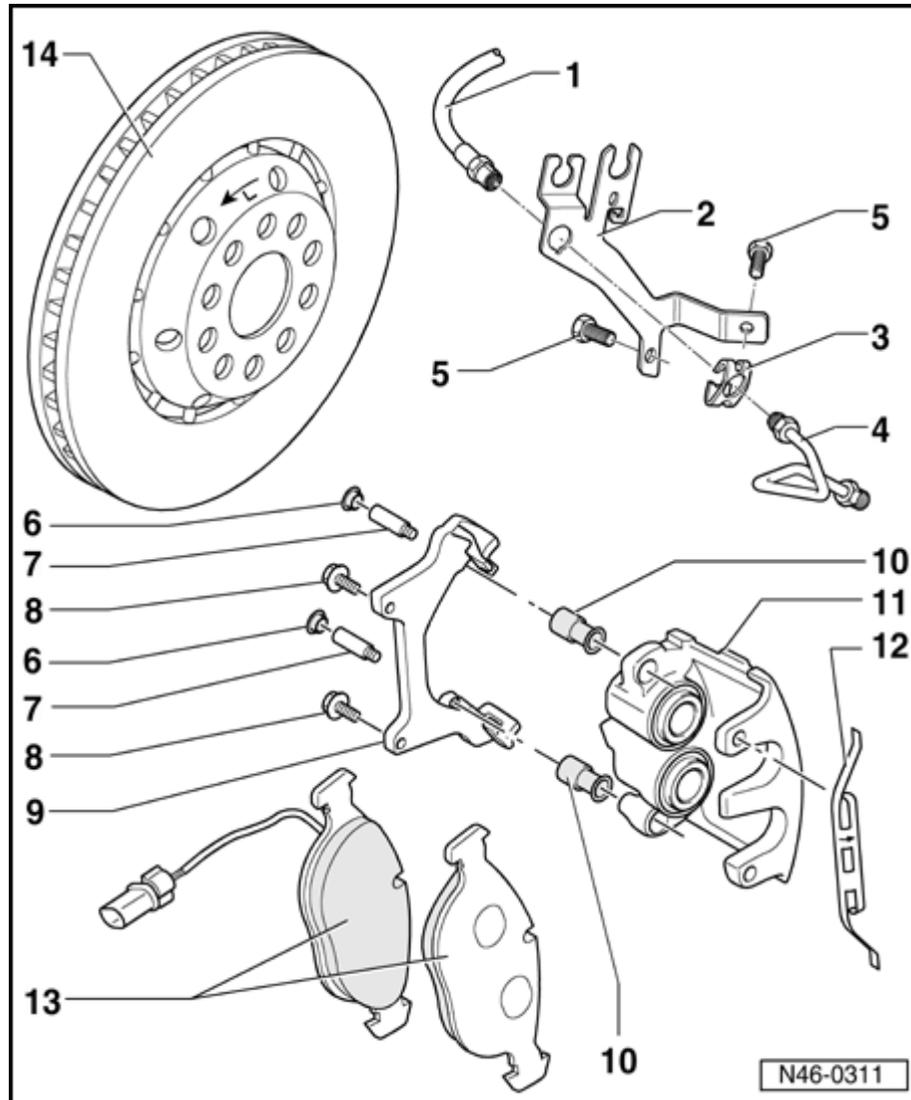
8 - Ribbed combi bolt, 190 Nm

- ◆ Clean ribs if using again

9 - Brake carrier

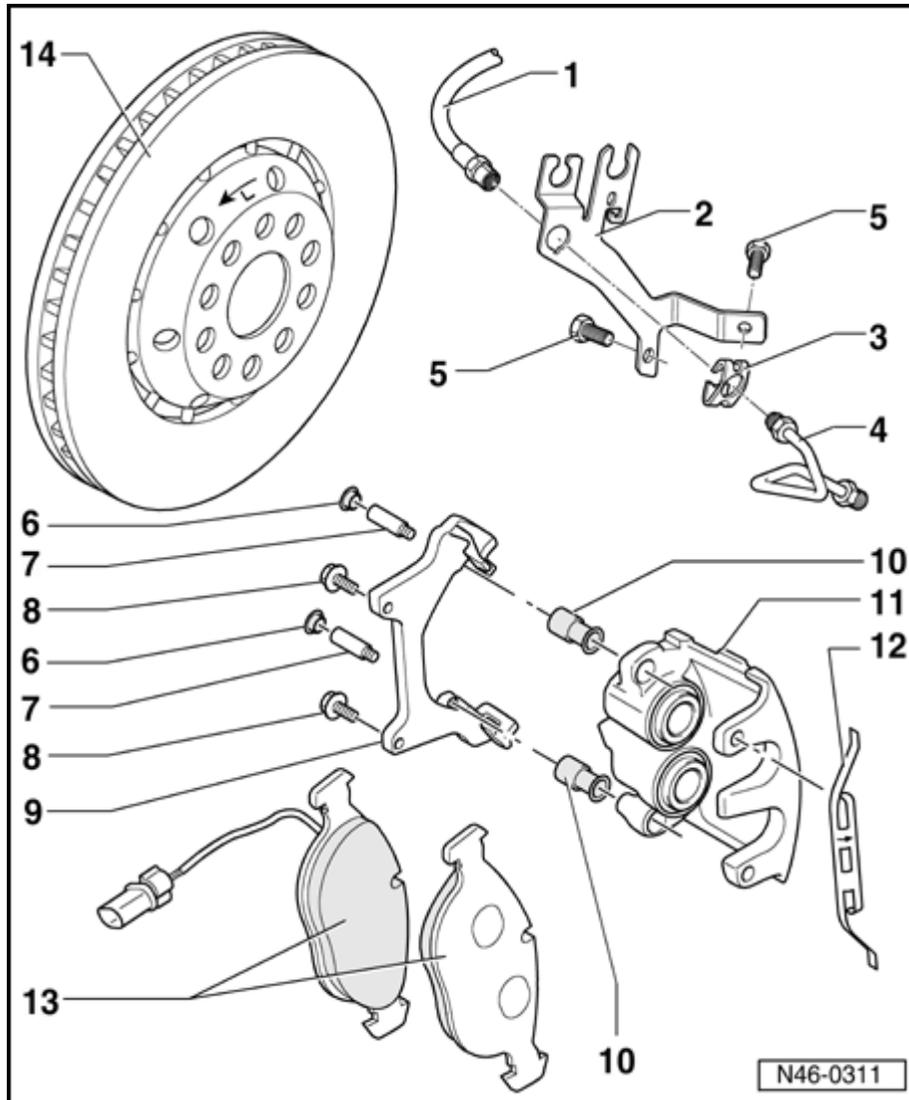
- ◆ Bolt to wheel bearing housing

10 - Bearing bushing



11 - Brake caliper

- ◆ Do not disconnect brake hose when changing brake pads
- ◆ Removing:
 - Remove brake pads -item 13 - ⇒ [Page 46-45](#)
 - Install brake pedal depressor VAG 1869/2
 - Remove brake hose -item 1 - from brake caliper
- ◆ Installing:
 - Install brake pads -item 13 - ⇒ [Page 46-45](#)
 - Install brake hose -item 1 - onto brake caliper
 - Remove brake pedal depressor VAG 1869/2
 - Bleed brake system ⇒ [Page 47-35](#)
- ◆ Servicing ⇒ [Page 47-19](#)

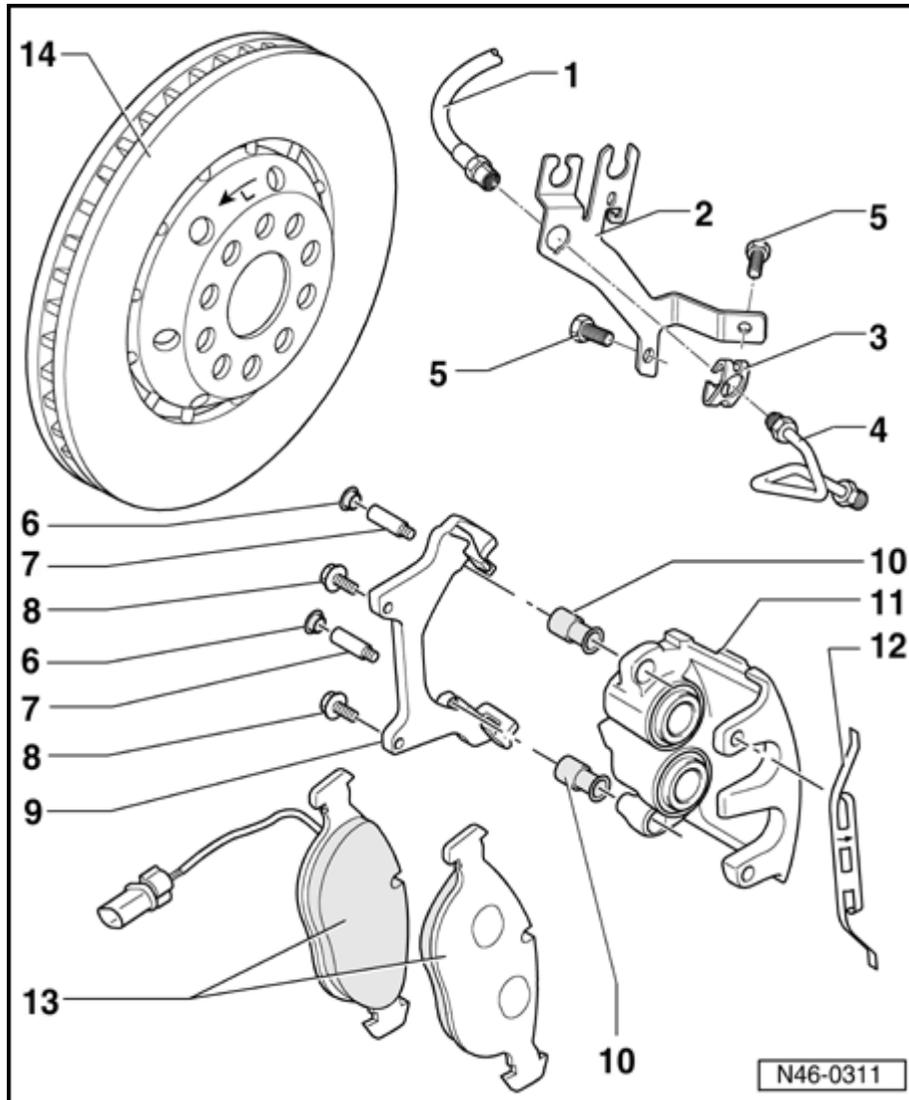


12 - Retaining spring

- ◆ Insert in both brake caliper housing drillings

Note:

Inserting into both holes the retaining spring must be pushed under the brake carrier. Faulty installation will not allow compensation of outer pad wear and therefore the pedal travel increases.



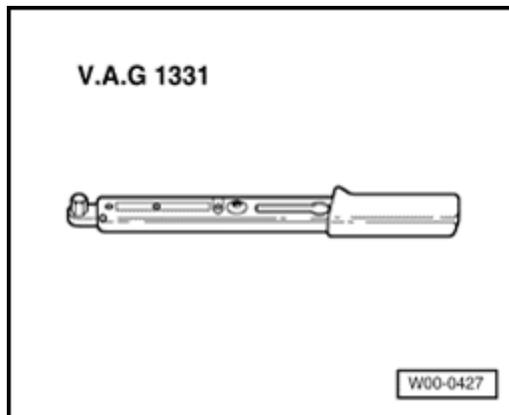
14 - Brake disc

- ◆ Ventilated brake disc: diameter 334 mm
- ◆ Brake disc thickness: 32 mm
- ◆ Wear limit: 30 mm
- ◆ Always replace both sides
- ◆ Left differs from right. Arrow points in direction of normal travel
- ◆ Remove brake caliper prior to removing



Brake pads, removing and installing

Special tools and workshop equipment required



A

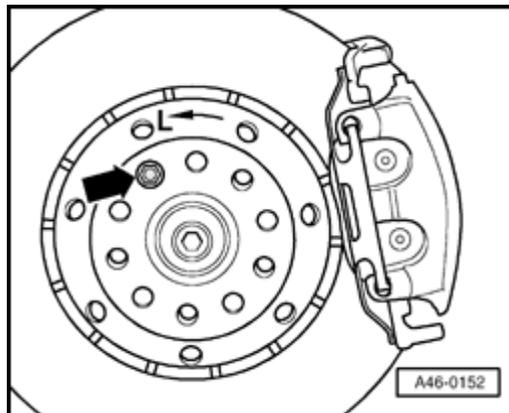
- ◆ VAG 1331 Torque wrench (or equivalent)
- ◆ Piston resetting tool

Removing

Note:

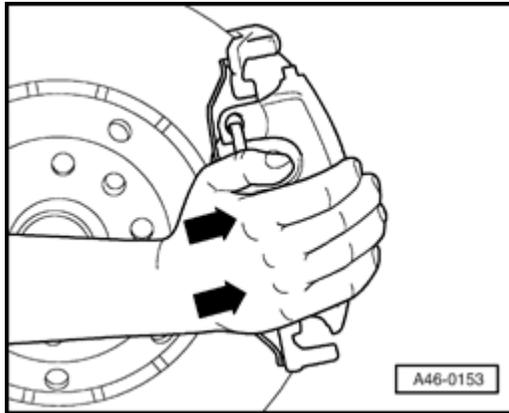
When reusing brake pads mark location, install in same position otherwise uneven braking!

- Remove wheels.

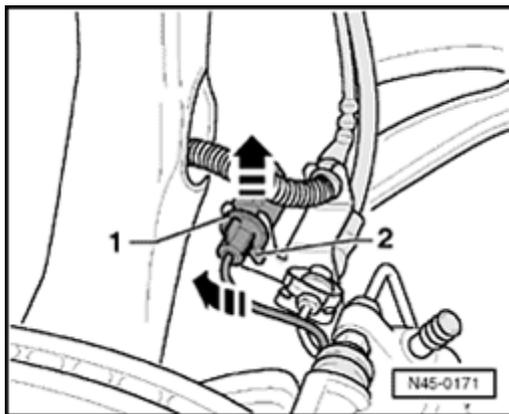


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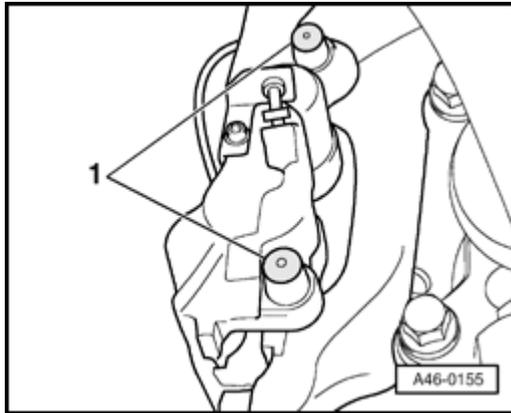
- Secure brake disc using a wheel bolt.



- A
- Push retaining spring in direction of arrow and remove from brake caliper sideways.

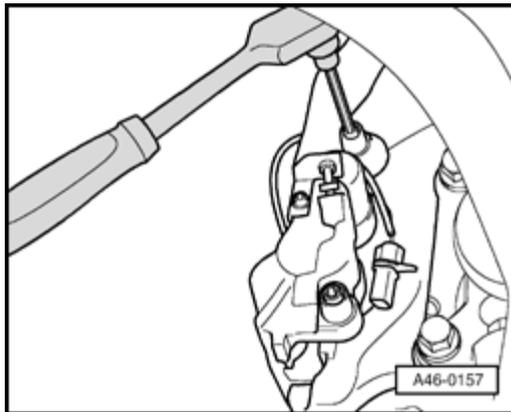


- A
- Separate the connector -1- for brake pad wear indicator.
 - Lift locking tab slightly on connector lower part -2- and then turn 90°.
 - Pull connector lower part out of bracket.

**A**

- Remove protective caps -1-.

Upper protective cover with cable holder for brake pad wear indicator

**A**

- Remove both guide pins from brake caliper.
- Remove brake caliper housing and lay to one side so that the weight of the brake caliper does not stress or damage the brake hose.
- Remove brake pads out of brake caliper housing or brake carrier.

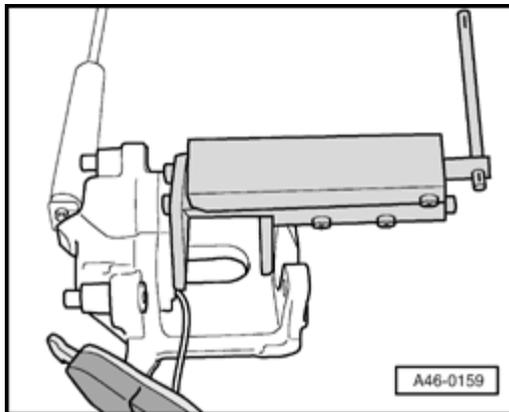
Use only appropriate solvent for cleaning the brake caliper housing.



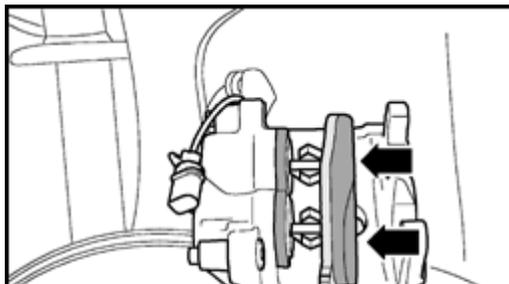
Installing

Note:

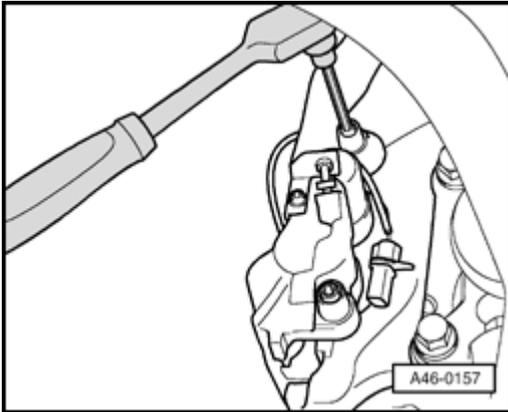
Before installing new brake pads, press piston back into the cylinder with resetting tool. Draw off brake fluid from the reservoir with a bleeder bottle. Before pressing the piston back, make sure reservoir has not been topped off, otherwise fluid will overflow and cause damage.

**A**

- Press piston back into brake caliper.

**A**

- Insert brake pad with retaining spring in brake caliper housing (piston).
- Install outer brake pad to brake carrier.

**A**

- Bolt brake caliper housing to brake carrier with both guide pins.
- Install both protective caps.

The brake wear indicator wiring must be routed beneath the bracket on the brake caliper.

- Install brake pad wear indicator connector under dust cap of bleed valve, in upper protective cap and in bracket on brake caliper.
- Install brake wear indicator connector into bracket on brake caliper.
- Install retaining spring into brake caliper housing and then press under brake carrier.

Note:

- ◆ *After each brake pad change with vehicle stationary, firmly depress brake pedal several times so that the brake pads are properly seated in their normal operating position.*
- ◆ *Check brake fluid level, after changing brake pads.*