

## 42-0160 Checking and replacing brake pads

· Preceding work:

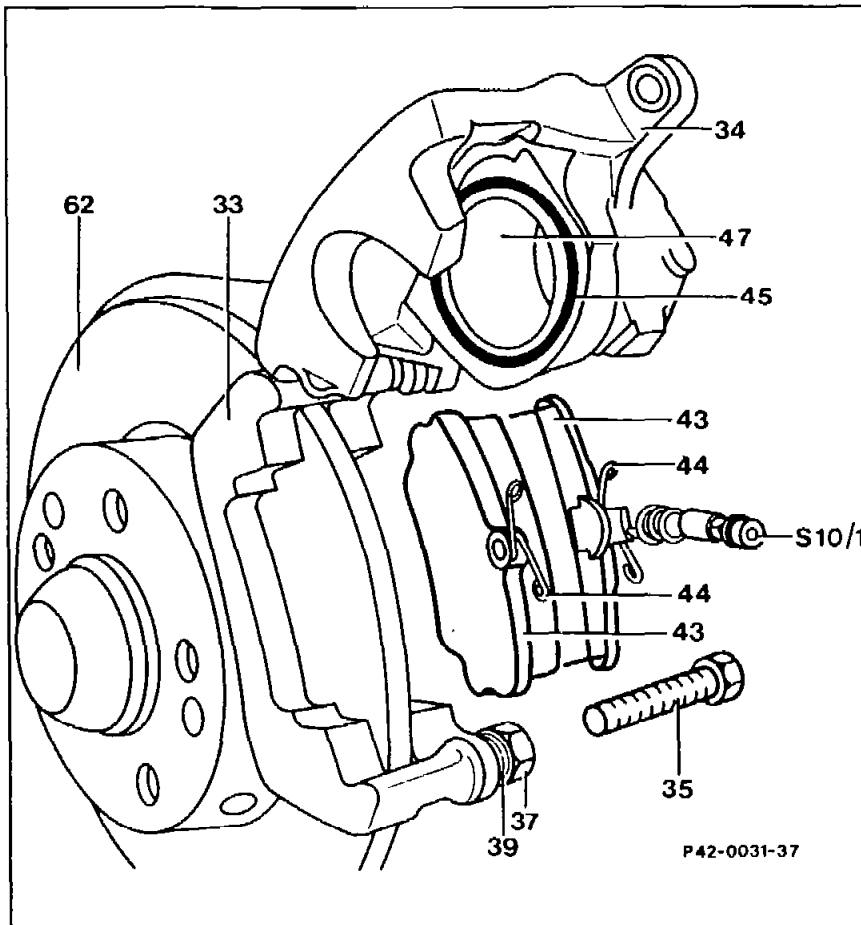
Remove rear wheels (40-0020).

Check brake pad thickness (see Maintenance Manual 4251)

Operation no. of operation texts and work units or standard texts and flat rates

42-1050, 42-2956, 42-2957, 42-2961, 42-2962, 42-2966, 42-2967

### A. Fixed caliper on front axle, models 124 and 201 (not including 124.008/029/031/032/034/036/051/052/061/066/091/092 and 201.036)




Cable on front brake pads wear sensor (S10/1) . . .

remove from connector on floating caliper, install. When installing insert surplus cable length into connector (item 1).

Self-locking bolt (35) . . . . .

unscrew top or bottom bolt depending on vehicle model and location of brake hoses. Counterhold sliding pin (37). When installing use new self-locking bolt (35), 35 Nm (item 2).

|  |   |
|--|---|
| Cylinder housing (34) .....                | swing up or down depending on vehicle model and location of brake hoses. Secure cylinder housing (34) with a suitable hook (items 3 and 4). |
|  |    |
|  | Do not change the steering angle or the sliding pin (37) may be bent.   |
| Brake pads (43) .....                      | remove from brake carrier (33), install. Observe installed position of spring clip (44) and Note on disposal (item 5).                      |
| Brake carrier (33) .....                   | clean contact surfaces for brake pads.  |
| Front brake pads wear sensor (S10/1) ..... | pull out of lining backplate of inside brake pad (43), check and install (item 6).  |
| Dust boots (39), dust cap (45) .....       | check, replace if required (42-0152) (item 7).  |
| Piston (47) .....                          | force back with resetting tool 000 589 52 43 00 (item 8).   |
| Brake discs (62) .....                     | check for wear, observe limit dimensions (42-0220). Vernier gauge 124 589 05 19 00. Clean brake discs (62) if required (42-0260) (item 9).  |
| Brake pedal .....                          | actuate, check brake fluid level. Carefully break in new brake pads (43) (items 10 and 11).   |

**Data**

| Model   | 201.01/02<br>201.1 | 124<br>201.034/035 |
|---|--------------------|--------------------|
| Maximum brake pad thickness                                       | 95                 | 110                |
| Thickness of brake pad (lining backplate and lining)              | 17.9               | 19.3               |
| Thickness of lining backplate                                     | 6.2                | 6.2                |
| Permissible brake lining wear down to lining thickness of approx. | 2                  | 2                  |
| Wear indicator should actuate at lining thickness of approx.      | 3.5                | 3.5                |

See parts microfilms for brake pad brands.



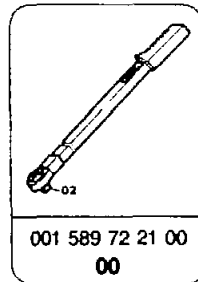
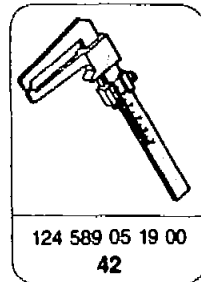
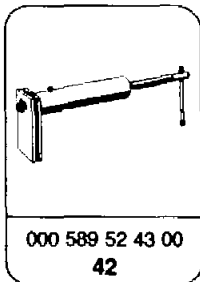
### Note

Replace brake pads when lining thickness is less than 2 mm or if oily or greasy. Install only pads approved by Mercedes-Benz as complete set.

If brake pads are worn to beyond the permissible lining thickness down to the backplate, damage may result to the floating caliper because the web between the sealing ring groove and dust cap can break out causing the floating caliper to leak. In such cases perform high and low pressure test.

Uneven brake lining wear is quite possible on floating caliper brakes. This phenomenon was taken into account in the positioning of the wear indicator. For example if the lining thickness between the inside and outside brake pad is greater than 2 mm, check the sliding pins for free motion, replace, if required.

### Special tools

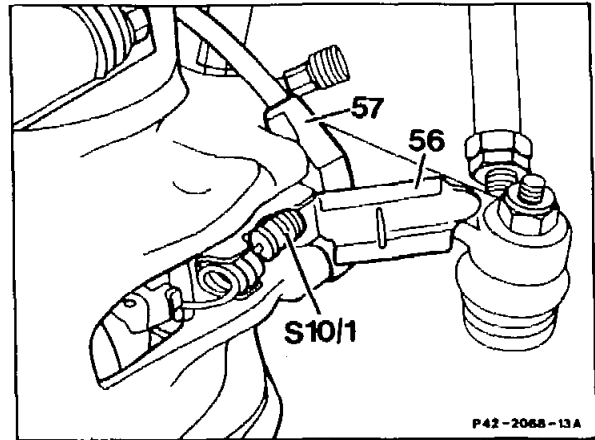


## Removal, Installation

1 Lift the two retaining lugs attached to both sides of the cover (56) for the plug connection with a screwdriver and open the cover. Do not use force. Remove cable for contact sensor (S10/1) from plug connection (57) on floating caliper. Do not pull on cable.

### Installation note

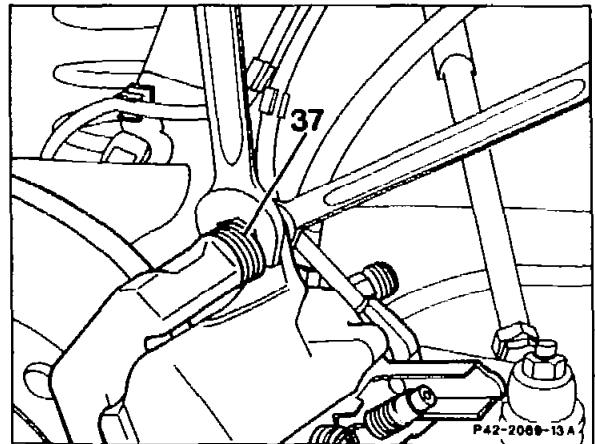
Coil up excess length of cable for contact sensor (S10/1), insert into plug connection (57) and close cover (56).



- 56 Cover
- 57 Plug connection
- S10/1 Front brake pads wear sensor

2 Unscrew self-locking bolt while counterholding sliding pin (37).

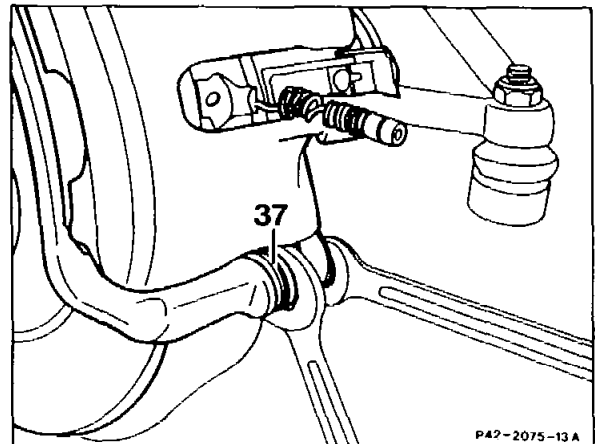
1st version up to 08/85  
37 Sliding pin



### Installation note

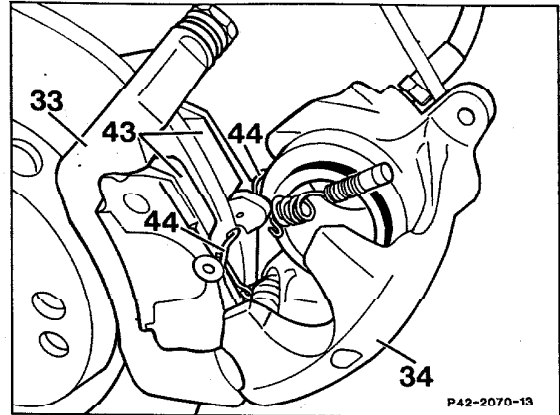
Check dust boots for damage. Replace self-locking bolt. Tightening torque 35 Nm.

2nd version as of 09/85  
37 Sliding pin



3 On 1st version up to 08/85 swing cylinder housing downward and secure with suitable hook.

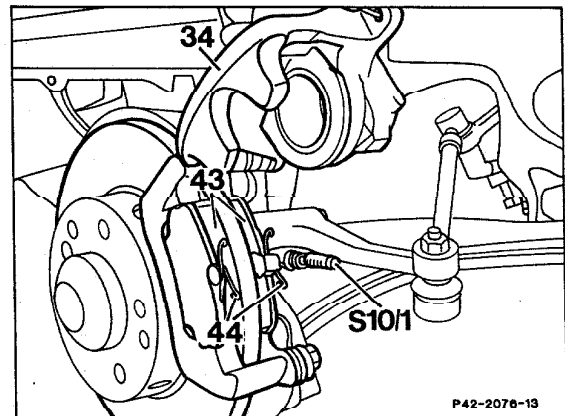
- 33 Brake carrier
- 34 Cylinder housing
- 43 Brake pads
- 44 Spring clip



4 On 2nd version as of 09/85 swing cylinder housing (34) upward and secure with suitable hook.



Do not change steering wheel position when cylinder housing (34) is pivoted up or down to prevent bending the sliding pin.



- 34 Cylinder housing
- 43 Brake pads
- 44 Spring clip
- S10/1 Front left brake pads wear sensor

5 Remove brake pads (43) from brake carrier.

**Installation note**

When installing brake pads (43) ensure that the spring clip (44) is parallel to the top of the lining. Clean contact surfaces for brake pads (43) in brake carrier.

**Note on disposal**

Dispose of brake pads as polluting waste. Information can be obtained from local authorities whether disposal of industrial waste is permissible in the same manner as domestic waste.

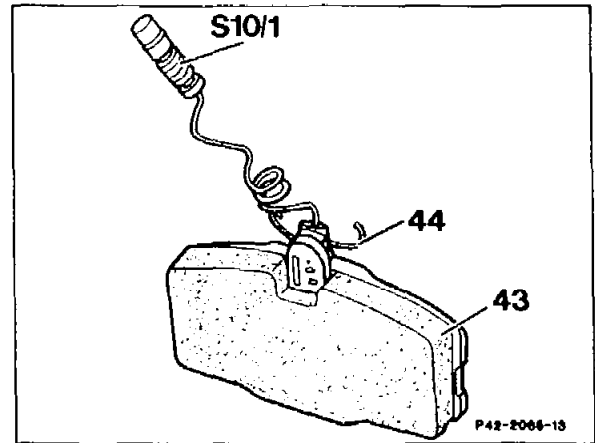
6 Pull contact sensor (S10/1) out of lining backplate of brake pad (43)

**Installation note**

Insert brake pads contact sensor (S10/1) into **inside** brake pad (43).

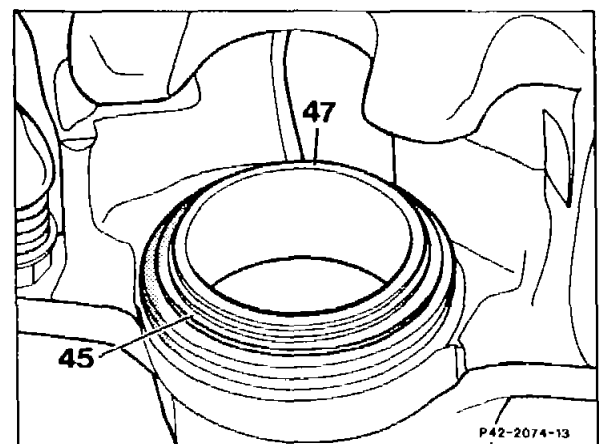


Replace contact sensor (S10/1) if the insulation layer on the contact plate is worn through or any part of the sensor including the wire insulation is damaged.



- 43 Brake pad
- 44 Spring clip
- S10/1 Front left brake pads wear sensor

7 Check dust cap (45) for cracks. If the dust cap (45) is damaged, the floating caliper must be removed and disassembled (42-0152) because contamination, which may have entered, can quickly lead to leakage of the piston (47).

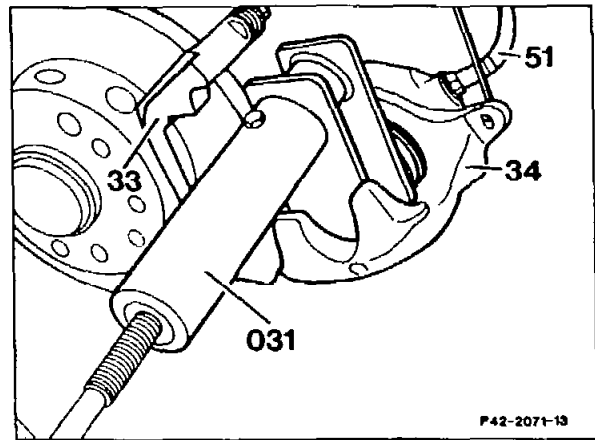


- 45 Dust caps
- 47 Piston

8 Force piston back with resetting tool (031) 000 589 52 43 00. Draw off some brake fluid to prevent the brake fluid from overflowing in the storage tank when the piston is forced back.

**Note**

If the piston is difficult to move, recondition the floating caliper (42-0152).



- 33 Brake carrier
- 34 Cylinder housing
- 51 Brake hose
- 031 Resetting tool

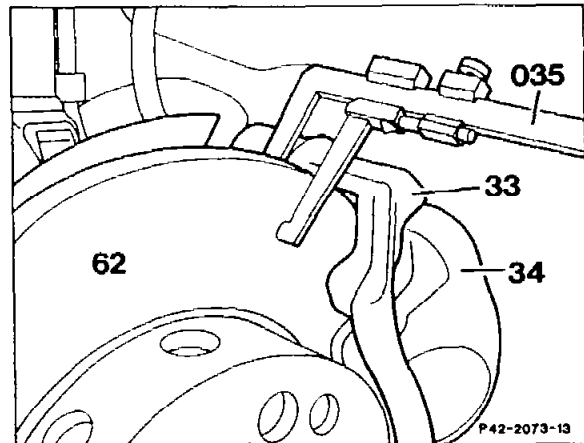
9 Check brake discs (62) for wear with vernier gauge (035) 124 589 05 19 00, replace if required (42-0220).

**Note**

Brake discs (62) with severe lining deposits on the braking surfaces (visible by grey or blue discoloration of the braking surfaces) must be cleaned before installing new pads (42-0260).

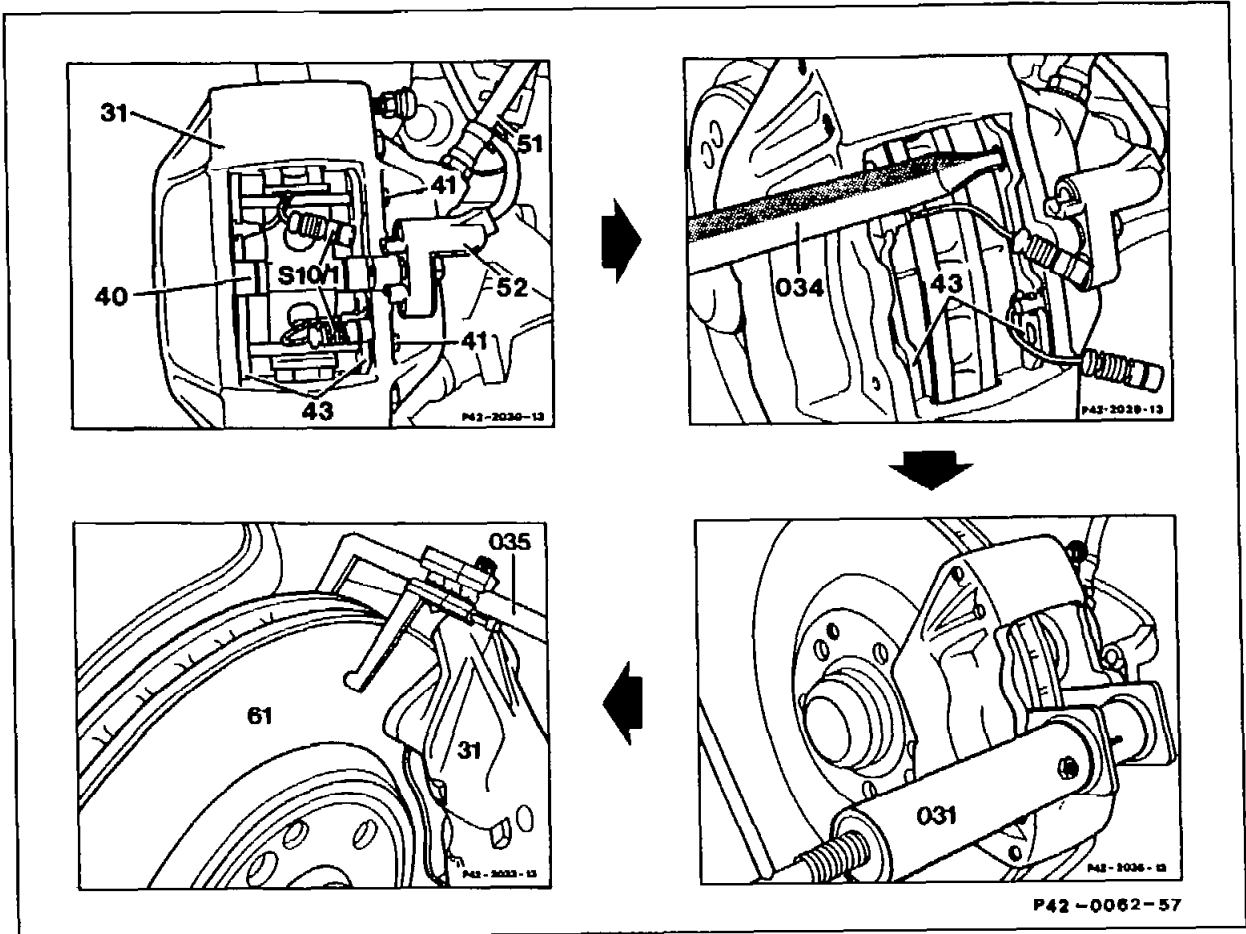
10 Actuate brake pedal several times vigorously, then check and correct brake fluid level in brake fluid supply reservoir.

11 Carefully break in new brake pads, i.e. brake vehicle several times from 80 to 40 km/h using only slight pedal pressure. Allow brakes to cool slightly before each braking maneuver. Brake vehicle to complete stop at high deceleration rates only after linings have been broken in.



- 33 Brake carrier
- 34 Cylinder housing
- 62 Brake disc
- 035 Vernier gauge

**B. Fixed caliper on front axle (models 124.008/029/031/032/034/036/051/052/061/066/091/092, 201.036)**



- |                                    |  |
|------------------------------------|--|
| Front brake pads wear sensor ..... | pull out of connector (52), push in (item 1). Pay attention to spring lining clip (40) on models 124.031/034/051/091.  |
| Retaining pins (41) .....          | knock out of fixed caliper (31) with punch. To install knock retaining pins <b>against stop</b> with punch. Remove spring lining clips (item 2).   |
| Brake pads (43) .....              | remove, install. Use removing lever (034) 123 589 13 33 00. Before installing coat specified area of lining backplate with brake pad paste 001 989 10 51. Observe Note on disposal (item 3). |



|  |  |
|--|--|
| Front brake pads wear sensor (S10/1) ..... | pull out of lining backplate of inside brake pad (43), check and install (item 4).   |
| Guide for brake pads (43) .....            | clean with brake caliper brush (030) 000 589 26 68 00 (item 5).  |
| Piston .....                               | force back with resetting tool (031) 000 589 52 43 00. Check dust cap for damage (items 6 and 7).<br>Use additional plastic wedges 601 589 07 63 00 on four-piston fixed calipers. |
| Brake discs (61) .....                     | check for wear, observe limit dimensions (42-0220). Vernier gauge 124 589 05 19 00. Clean brake discs (62) if required (42-0260) (item 8).   |
| Brake pedal .....                          | actuate, check brake fluid level. Carefully break in new brake pads (43) (items 9 and 10).   |

**Data**

|  |                       |                       |
|--|-----------------------|-----------------------|
| Model  | 124.008 <sup>2)</sup> | 124.008 <sup>3)</sup> |
|  | 124.029 <sup>2)</sup> | 124.029 <sup>3)</sup> |
|  | 124.031               | 124.032 <sup>3)</sup> |
|  | 124.032 <sup>2)</sup> | 124.034 <sup>5)</sup> |
|  | 124.034 <sup>4)</sup> | 124.052 <sup>3)</sup> |
|  | 124.036               | 124.066               |
|  | 124.051               | 124.092 <sup>3)</sup> |
|  | 124.052 <sup>2)</sup> |                       |
|  | 124.061               |                       |
|  | 124.091               |                       |
|  | 124.092 <sup>2)</sup> |                       |
| 201  |                       |                       |
| Fixed caliper piston dia.                                      | 38-42                 | 38-42                 |
| Thickness of brake pad with lining backplate                   | 17.5                  | 16                    |
| Thickness of lining backplate                                  | 5.3 <sup>1)</sup>     | 5.3                   |
| Wear indicator should actuate at lining thickness of approx.   | 2.5                   | 2.5                   |
| Permissible brake pad wear down to lining thickness of approx. | 2                     | 2                     |
| Maximum brake pad width  | 99.75                 | 99.75                 |

- 1) With 0.7 mm stainless steel plate
- 2) Fitted up to 10/92
- 3) Fitted as of 11/92
- 4) Fitted as of 03/93, (J) (USA) MY 92
- 5) Fitted up to 02/93, (J) (USA) as of MY 93

**Note**

See parts microfilms for brake pad brands.

The brake pads should be replaced when the lining thickness has worn down to less than 2 mm or when they are greasy or oily. Use only linings approved by Mercedes-Benz and install only as **complete sets**.

If the brake pads are worn to beyond the permissible lining thickness down to the backplate, damage may result to the fixed caliper because the web between the sealing ring groove and dust cap can break out causing the fixed caliper to leak. In this case, carry out a high and low pressure test (42-0015).

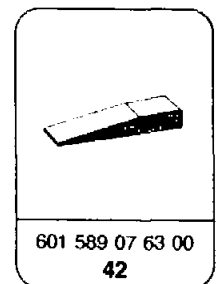
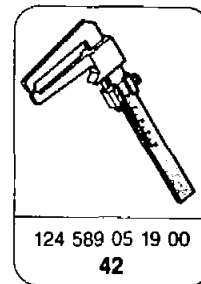
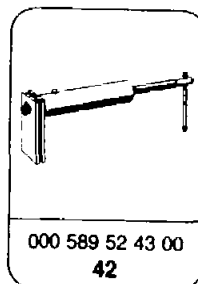
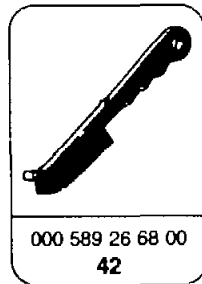
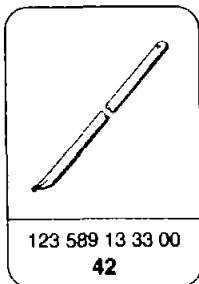
**Lubricant**

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MB brake pad paste

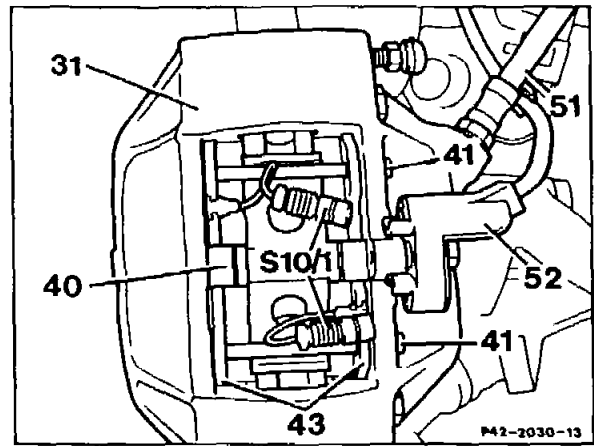
001 989 10 51

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**Special tools**

## Removal, installation

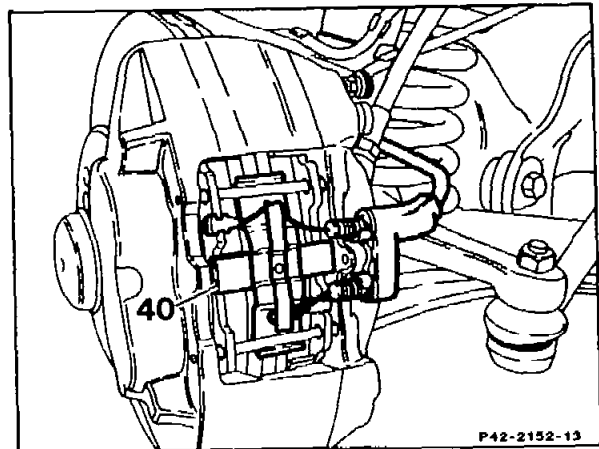
1 On fixed calipers with brake lining wear indicator pull cable for contact sensor (S10/1) out of plug connection (52) on fixed caliper.



- 31 Fixed caliper
- 40 Spring lining clip
- 41 Retaining pins
- 43 Brake pads
- 51 Brake hose
- 52 Plug connection
- S10/1 Front left brake pads wear sensor

### Note on spring lining clip

Due to the limited clearance between the brake caliper and wheel rim on model 124.031/034/051/091 it is necessary to install a spring lining clip with retaining lugs for the contact sensor. See figure for cable routing.



- 40 Spring lining clip

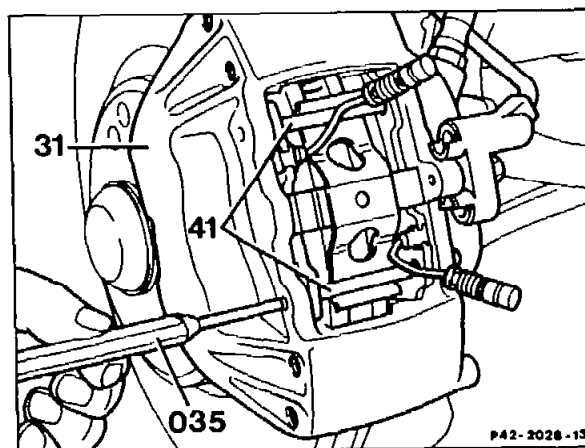
2 Knock retaining pins (41) out of fixed caliper with punch (035). Remove spring lining clip.

**Installation note**

Position spring lining clip, then knock in retaining pins **against stop** with punch.

**Note**

Pay attention to spring lining clip 124.031/032/034/051/052/061/066/091/092.

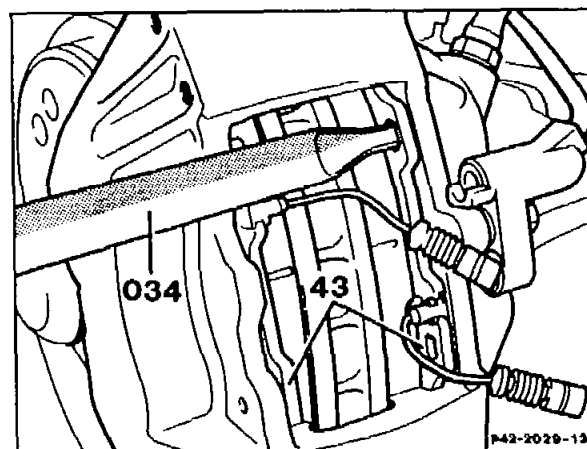


31 Fixed caliper  
41 Retaining pins  
035 Punch

3 Push brake pads (43) back slightly and press out of fixed caliper with removing lever (034) 123 589 13 33 00.

**Note**

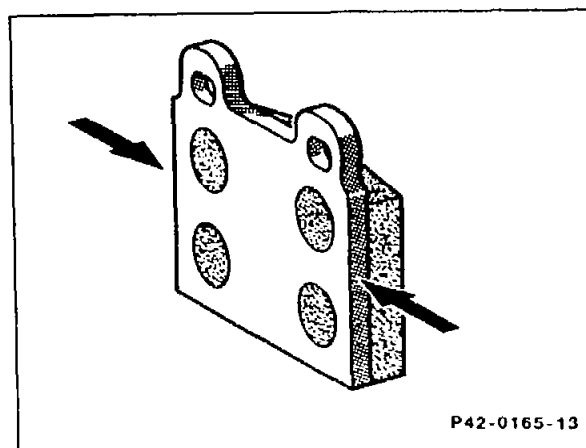
If the wear to the brake pads is excessively high or one-sided, check the pistons for easy motion. If the pistons are hard to move, recondition the fixed caliper (42-0150).



43 Brake pads  
034 Removing lever

**Installation note**

Lightly coat brake pads **without circumferential damping** at points indicated by arrows in the figure with specified brake pad paste 001 989 10 51.

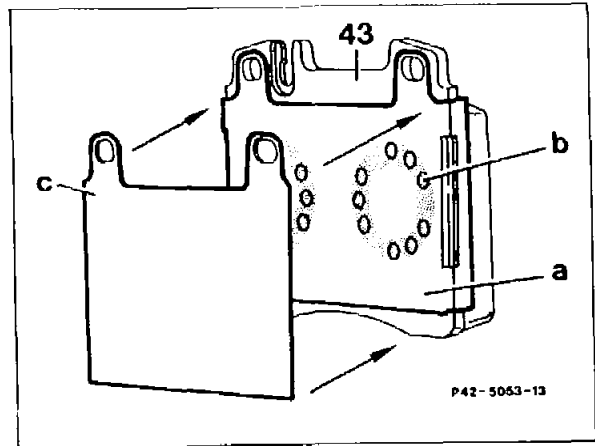


Install brake pads **with circumferential damping dry**. The brake pad kit is supplied complete by the parts division.



Do not grease side surfaces of lining backplate.

- 43 Brake pad
- a Circumferential damping
- b Grease packing
- c Stainless steel plate



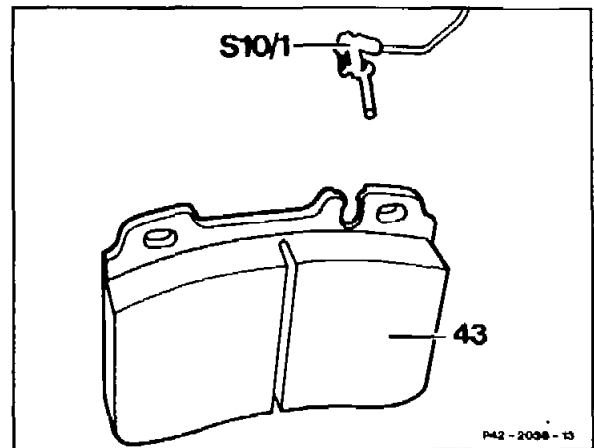
**Note on disposal.**

Dispose of brake pads as polluting waste. Information can be obtained from local authorities whether disposal of industrial wastes is permissible in the same manner as domestic wastes.

4 Pull contact sensor (S10/1) out of lining backplate or out of brake pad (43).



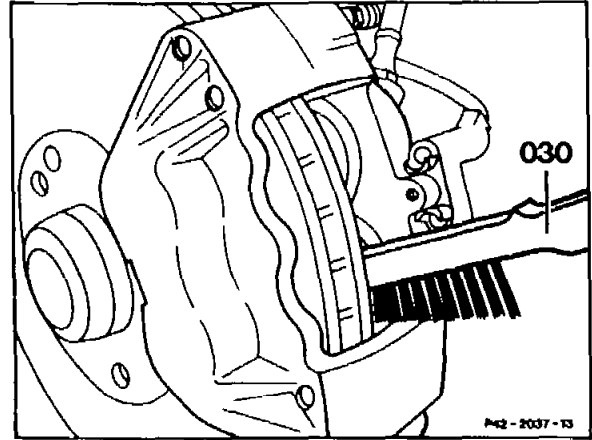
Replace front brake pads wear sensor (S10/1) if the insulation layer on the contact plate is worn through or any part of the sensor including the wire insulation is damaged.



- 43 Brake pad
- S10/1 Brake pads wear sensor

5 Clean guide for brake pad in fixed caliper with brake caliper brush (030) 000 589 26 68 00.

6 Check dust cap for cracks. If the dust cap is damaged, the fixed caliper must be removed and disassembled (42-0150), because contamination, which may have entered, can quickly lead to leakage of the fixed caliper.



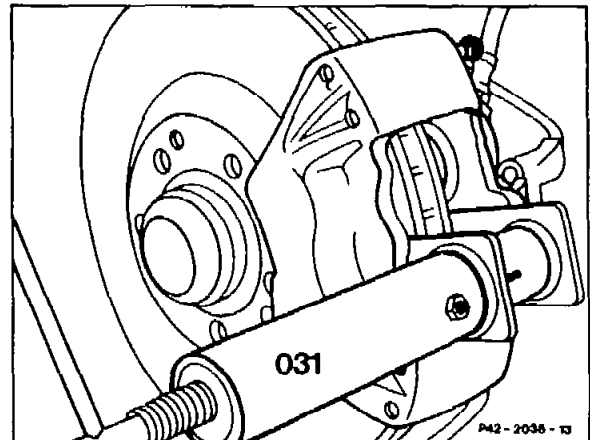
030 Brake caliper brush

7 Force pistons back to end position with resetting tool (031) 000 589 52 43 00. Draw off some brake fluid to prevent the brake fluid from overflowing in the storage tank when the piston is forced back.

**Note, four-piston calipers**

Press back one opposing piston pair with the resetting tool (031) 000 589 52 43 00 during each operation.

Secure the other pistons from falling out with 2 plastic wedges 601 589 07 63 00.



031 Resetting tool

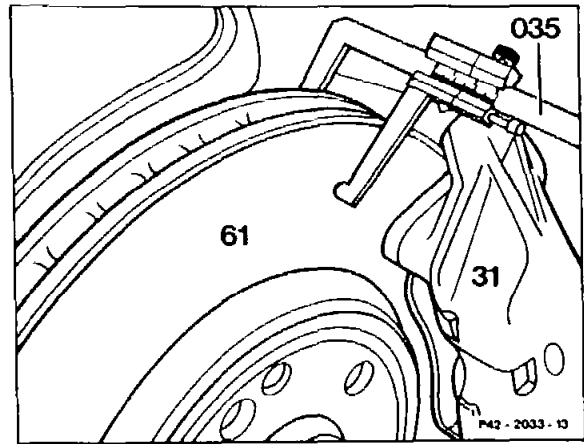
8 Check brake discs (61) for wear with vernier gauge (035) 124 589 05 19 00, replace if required (42-0220).

**Note**

Brake discs (61) with severe lining deposits on the braking surfaces (visible by grey or blue discoloration of the braking surfaces) must be cleaned before installing new pads (42-0260).

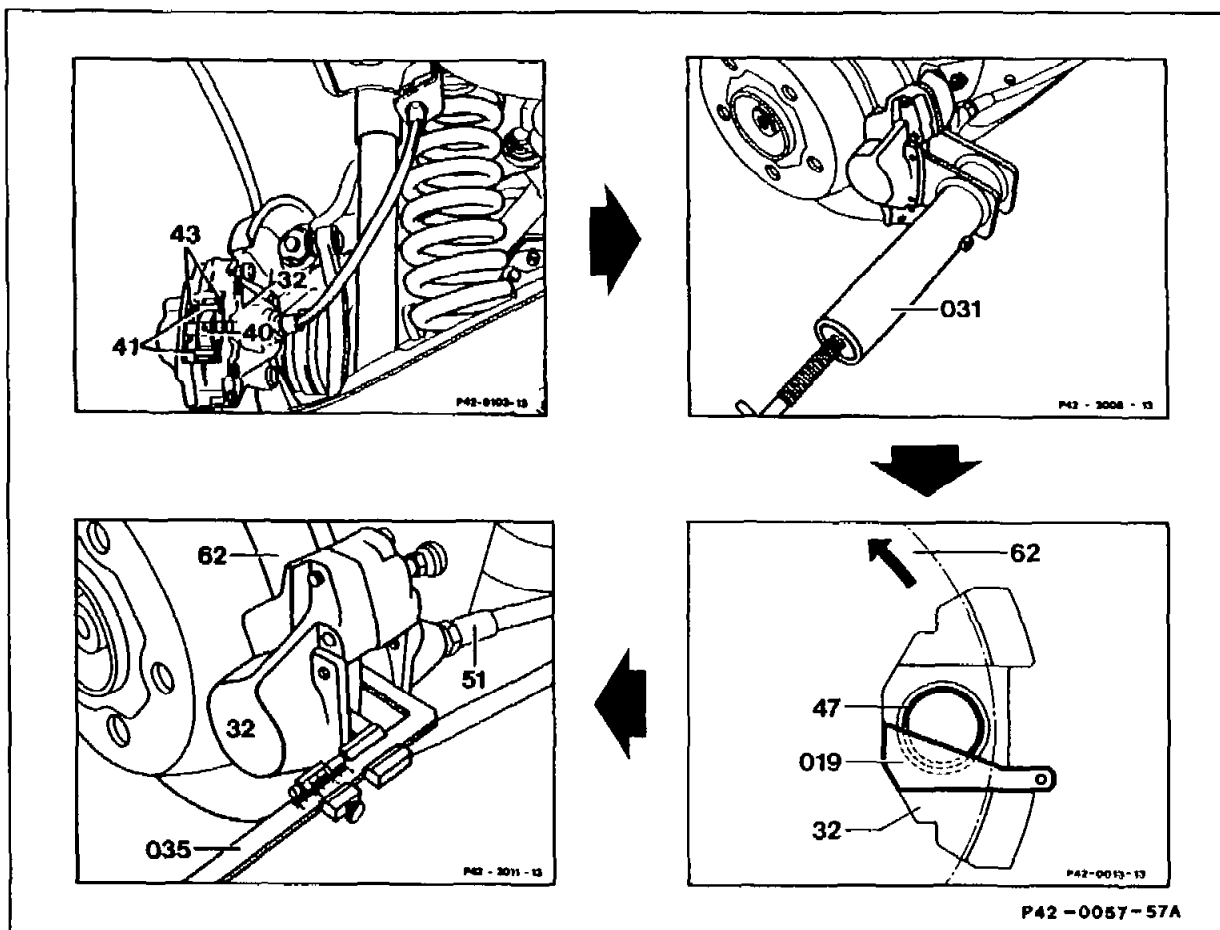
9 Actuate brake pedal several times vigorously, then check and correct brake fluid level in brake fluid supply reservoir.

10 Carefully break in new brake pads, i.e. brake vehicle several times from 80 to 40 km/h using only slight pedal pressure. Allow brakes to cool slightly before each braking maneuver. Brake vehicle to complete stop at high deceleration rates only after linings have been broken in.



- 31 Brake caliper
- 61 Brake disc
- 035 Vernier gauge

### C. Fixed callipers on rear axle



- |  |  |
|--|--|
| Retaining pins (41) .....                        | knock out of fixed caliper (32) with punch.  |
| Brake pads (43) .....                            | Remove spring lining clip (40).  |
| Pistons(47) .....                                | press out of fixed caliper (32) with removing lever 123 589 13 33 00. Before installation coat side contact surfaces of lining backplate with brake pad paste 001 989 10 51. |
| Guide for brake pads in fixed caliper (32) ..... | force back with resetting tool (031) 000 589 52 43 00.   |
|  | clean with brake caliper brush 000 589 26 68 00.   |



|                        |  |
|------------------------|--|
| Dust caps .....        | remove fixed caliper (32) and disassemble (42-0120, 42-0150).  |
| Piston position .....  | Check with gauge (019) 000 589 35 23 00 and correct with piston tongs 000 589 50 37 00, if required.                               |
| Brake discs (62) ..... | measure wear with vernier gauge (035) 140 589 00 19 00, see Data 42-0228, if worn beyond the limit dimension, replace brake discs. |
| Brake pedal .....      | actuate, check brake fluid level. Carefully break in new brake pads (43).  |

**Data**

|  |                            |  |                       |
|--|----------------------------|--|-----------------------|
| Model  | 201.018<br>201.02<br>201.1 | 124 except<br>124.036 <sup>2)</sup><br>124.036 (USA) (J)<br>201.03 | 124.036 <sup>3)</sup> |
| Maximum brake pad width  | 61.75                      | 61.75  | 61.75                 |
| Thickness of brake pad (lining backplate and lining)                       | 13.5                       | 15.5   | 16                    |
| Thickness of lining backplate  | 4.5                        | 4.5  | 4.5                   |
| Permissible brake pad wear down to lining thickness of approx.             | 2                          | 2  | 2                     |
| Wear indicator should actuate at lining thickness of approx. <sup>1)</sup> | 2.5                        | 2.5  | 2.5                   |

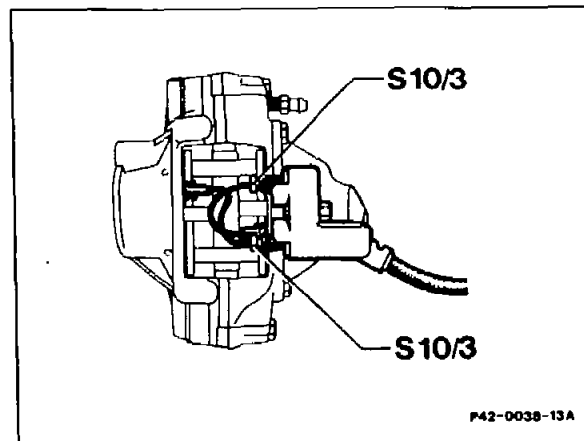
1) Vehicles with ASR only.

2) Fitted up to 01/93, (J) (USA).

3) Fitted as of 02/93 except (J) (USA).

**Note**

Vehicles with ASR have a wear indicator on the rear axle as well. The contact sensor wires must be positioned as illustrated in the figure. Install transparent-type temperature-resistant contact sensors.



S10/3 Brake pads wear sensor

The lining quality and dimensions of the pads are the same as on vehicles without ASR. The only difference is that they have recesses for fastening the wear sensors.

**Note**

See parts microfilms for brake pad brands.

If the wear to the brake pads is excessively high or one-sided, check the pistons for easy motion. If the pistons are hard to move, recondition the fixed caliper (42-0150).

The brake pads should be replaced when the lining thickness has worn down to less than 2 mm or when they are greasy or oily. Use only linings approved by Mercedes-Benz and install only as **complete sets**.



If the brake pads are worn to beyond the permissible lining thickness down to the backplate, damage may result to the fixed caliper because the web between the sealing ring groove and dust cap can break out causing the fixed caliper to leak. In this case, carry out a high and low pressure test (42-0015).

Brake discs with severe lining deposits on the braking surfaces (visible by grey or blue discoloration of the braking surfaces) must be cleaned before installing new pads (42-0260).

Actuate brake pedal several times vigorously, then check and correct brake fluid level in brake fluid supply reservoir.

Carefully break in new brake pads, i.e. brake vehicle several times from 80 to 40 km/h using only slight pedal pressure. Allow brakes to cool slightly before each braking maneuver. Brake vehicle to complete stop at high deceleration rates only after linings have been broken in.

### Lubricant

MB brake pad paste

001 989 10 51

### Special tools

