

42-0160 Checking, renewing brake pads

Preliminary jobs:

Remove wheels (40-0110).

Check brake lining thickness (see maintenance manual 4251).

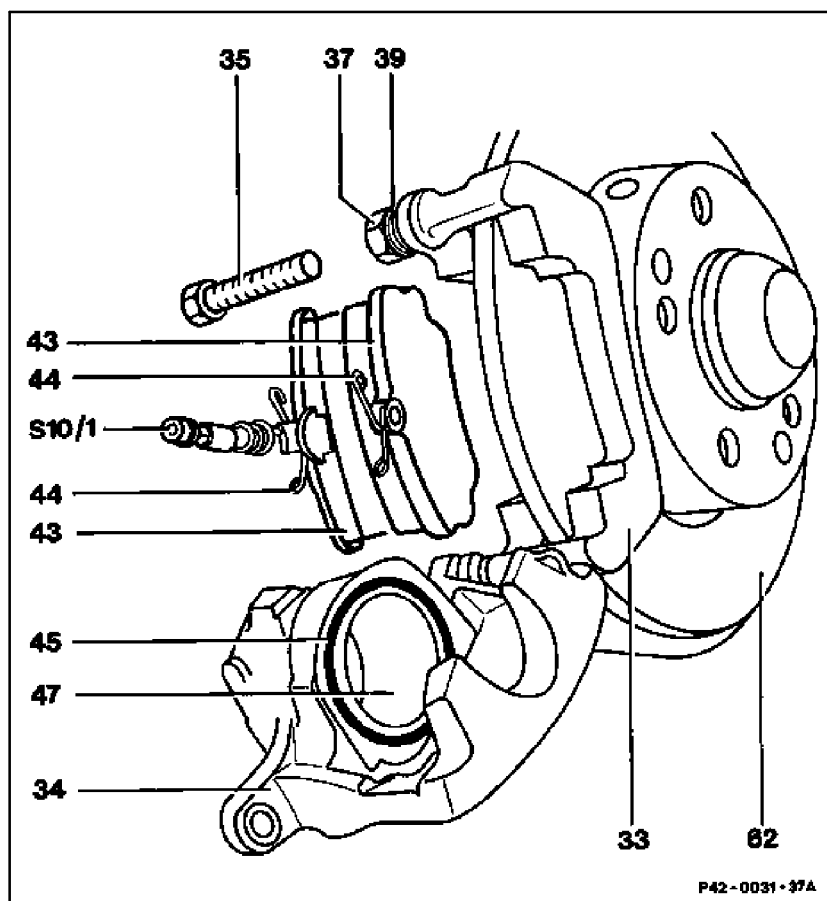
Operation no. of the operation texts and work units
or standard texts and flat rates

42-0200

42-0201

42-0205

A. Floating caliper on front axle (Model 126.04 up to 08/85)



Plug for contact sensor (S10/1) _____ pull out of plug connector on floating caliper (item 1).
Bolt (35) _____ screw out while holding sliding bolt (37). To install use new self-locking bolt (35), 35 Nm (item 2).

Cylinder housing (34) _____ swing downward (see Note) (item 3).
Brake pads (43) _____ remove from brake carrier (33) (item 4).
Brake carrier (33) _____ clean contact surfaces for brake pads.
Contact sensor (S10/1) _____ pull out of brake pad backing plate on inside brake pad (43) (item 5).
Dust sleeves (39), dust cap (45) _____ check, renew if required (42-0152) (item 6).
Piston (47) _____ push back with resetting tool 000 589 52 43 00 (item 7).

Brake discs (62) _____ check for wear, observe limit dimensions
(42-0220). Caliper gauge 124 589 05 19 00 (item 8).

Note

The brake pads should be renewed when the thickness has worn down to 3.5 mm or when they are greasy. Use pad qualities approved by Mercedes-Benz only and install **in sets** only.

If the brake pads are worn past the permissible limit down to the backing plate, the floating calipers can be damaged, because the web between the sealing groove and dust cap breaks out causing the floating caliper to leak.

In such cases perform high-pressure and low-pressure test.

It is quite possible for the brake pads to wear unevenly on one floating caliper brake. This has been taken into consideration in the attachment of the wear indicator. If the difference between the pad thickness, e.g. between the inside and outside brake pad is greater than 2 mm, check the sliding bolts for easy motion, renew if required.

Data

Max. brake pad width	115
Thickness of brake pad (pad backing plate and lining)	18.5
Thickness of pad backing plate	5.5
Wear indicator actuates at pad thickness of approx.	3.5

See current Service Information bulletins and Technical Data Manual for approved brands of brake pads.

Install only brake pads approved by Mercedes-Benz!
See Maintenance Manual Volume 2 job item 4251
for test values.

Special tools

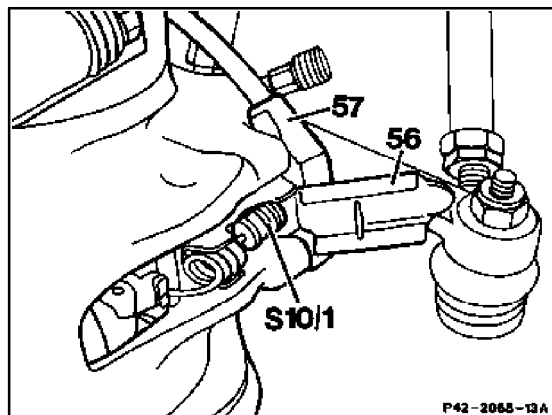


Removal, installation

1 Lift retaining lugs attached to cover (56) of plug connector at both sides with a screwdriver and open cover. Do not use force. Pull plug for contact sensor (S10/1) out of plug connector (57) on floating caliper. Do not pull on cable.

Installation note

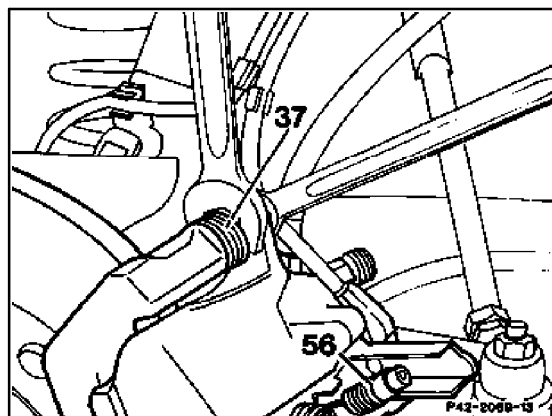
Wind up cable for contact sensor (S10/1) in spiral shape, plug into plug connector (57) and close cover (56).



2 Screw out hex. head bolt (35) while holding sliding bolt (37).

Installation note

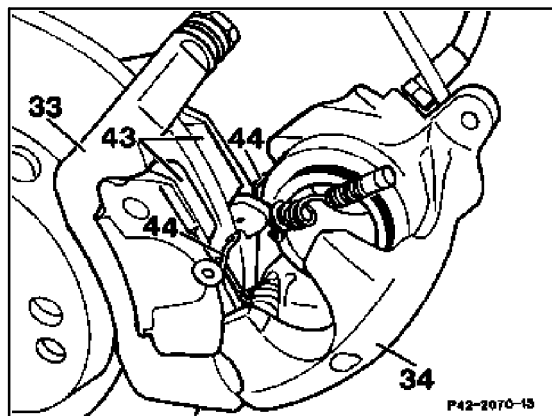
Check dust sleeve for damage.
Renew self-locking bolt.
Tightening torque 35 Nm.



3 Swing cylinder housing downward and secure with suitable hook.

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Do not change wheel position with cylinder housing (34) swung down; the sliding bolt can be bent.



- 4 Remove brake pads (43) from brake carrier.

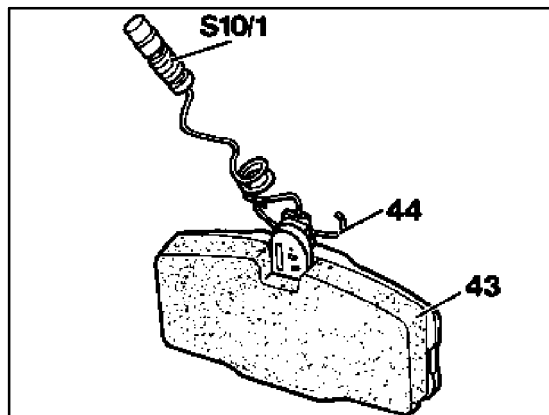
Installation note

When installing the brake pads assure that the spring shackle (44) is parallel to the path of the pads. Clean contact surfaces for brake pads in brake carrier.

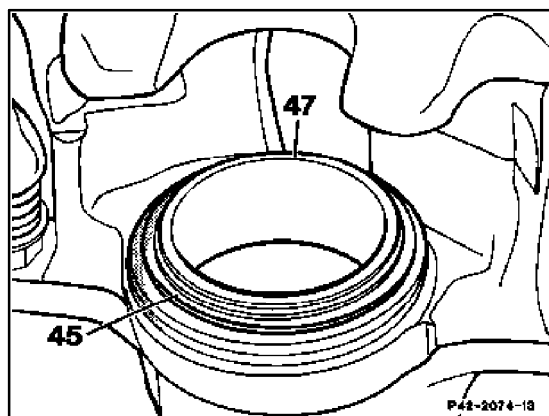
- 5 Pull contact sensor (S10/1) out of pad backing plate on inside brake pad.

M

Renew contact sensors when the insulating layer on the contact plate is worn through or when a portion of the sensor or wire insulation is damaged.



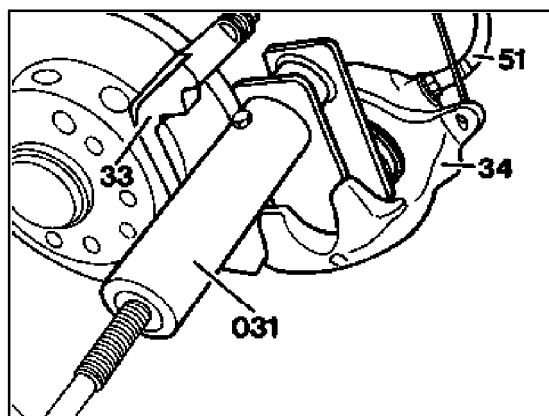
- 6 Check dust cap (45) for cracks, if the dust cap is damaged, remove the floating caliper and recondition, because dirt penetrating into the caliper can lead to leakage quickly.



- 7 Press piston back with resetting tool (031) 000 589 52 43 00. Evacuate a small quantity of brake fluid to prevent the compensation reservoir from overflowing when the piston is pressed back.

Note

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

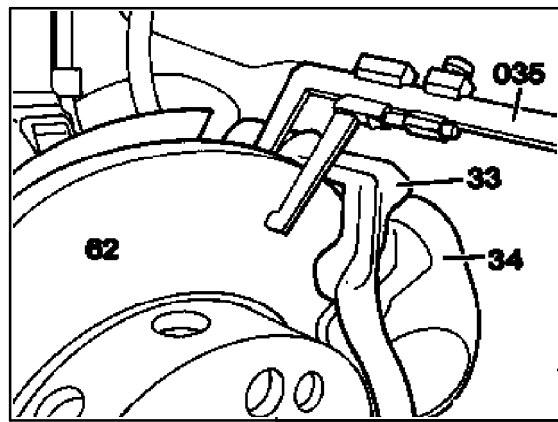


8 Check brake discs for wear with caliper gauge (035) 124 589 05 19 00, renew if required (42-0220). If the brake discs are heavily contaminated with coatings from the pads on the braking surfaces (visible grey or blue discoloration on the braking surfaces), clean before installing new brake pads (42-0260).

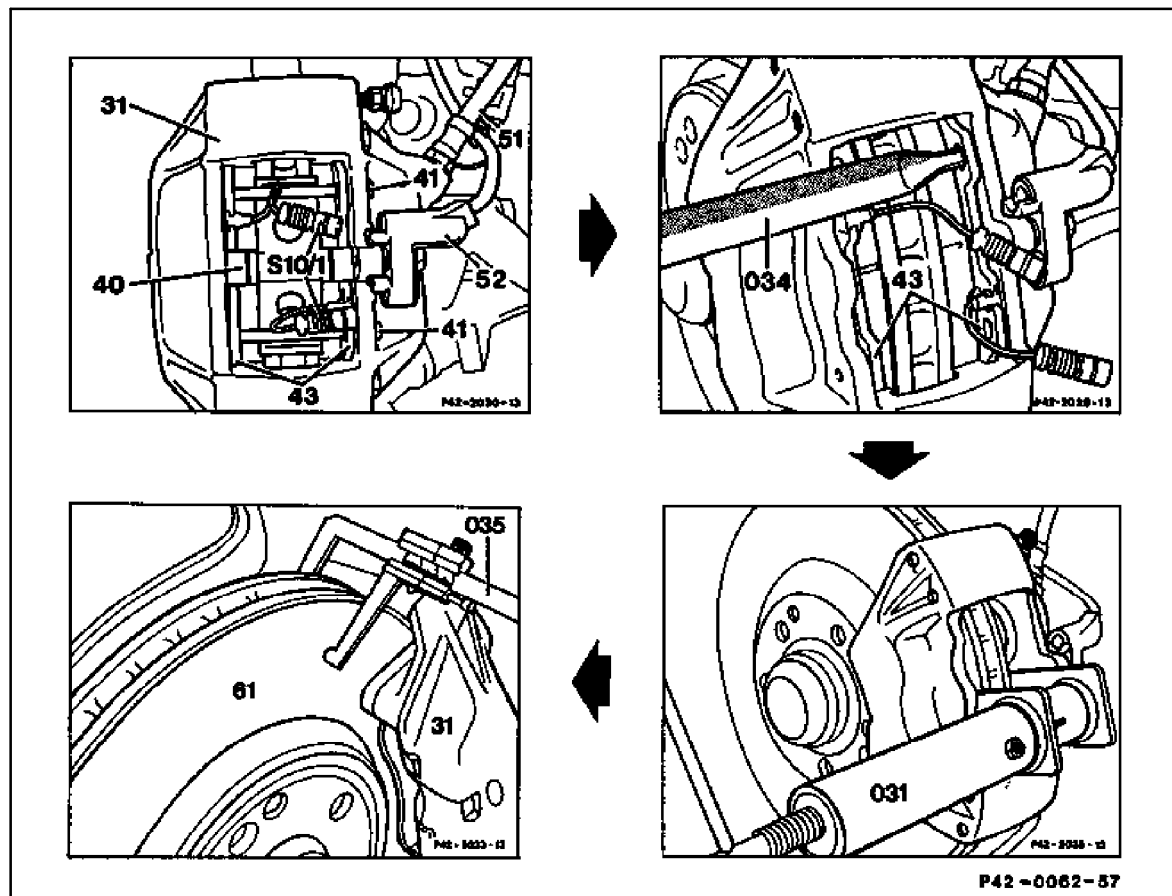
9 Install in opposite order.

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

11 Carefully run in new brake pads by braking the vehicle a number of times from 80 to 40 km/h with only slight pressure on the pedal. Allow brakes to cool slightly before each braking maneuver. Perform braking maneuvers to full stop at high deceleration rates only after pads are run in.



B. Fixed caliper on front axle



Contact sensor (S10/1) _____ pull out of plug connector (52) (item 1).

Retaining pins (41)	knock out with a drift punch. When installing knock retaining pins in against stop with aid of drift punch. Remove pad retaining spring (item 2, observe Note).
Brake pads (43)	remove, install. Use removal lever (34) 123 589 13 33 00. Before installing coat lateral contact surfaces of brake backing plate with brake pad paste 001 989 10 51 (item 3).
Contact sensor (S10/1)	pull out of brake pads, check (item 4).
Guide for brake pad	clean with brake caliper brush (030) 000 589 26 68 00 (item 5).
Piston	press back with resetting tool (031) 000 589 52 43 00. Check dust cap for damage (items 6 and 8).
Brake disc wear	check with caliper gauge (035) 124 589 05 19 00, observe wear limit. See 42-0220 for data.

Note

If the brake pad wear is excessively high or one-sided, assure that pistons move easily. If pistons are hard to move, recondition fixed caliper (42-0150). Replace brake pads when they have worn down to a thickness of 2 mm or are greasy. Use only pad qualities approved by Mercedes-Benz and install in sets only.

If the brake pads are worn past the permissible limit down to the backing plate, the fixed calipers can be damaged, because the web between the sealing groove and dust cap breaks out causing the fixed caliper to leak.

If brake pads are worn down past wear limit, perform high-pressure and low-pressure test (42-015).

Data	mm
Thickness of brake pad with pad backing plate	17.5
Thickness of pad backing plate	4.5
Permissible wear of brake pad down to lining thickness of	2
Max. brake pad width	89.75

See current Service Information bulletins or Technical Data Manual for approved brands of brake pads.

Use only brake pads approved by Mercedes-Benz.

Lubricant

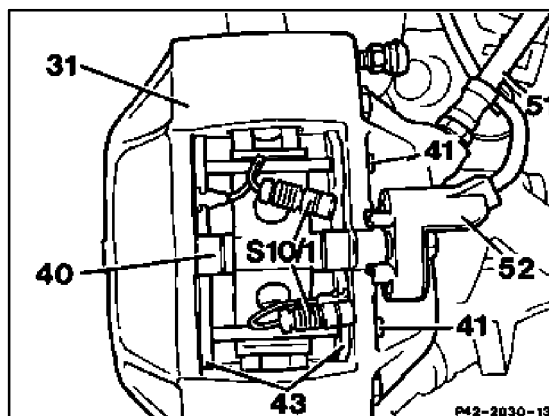
MB brake pad paste	001 989 10 51
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Special tools



Removal, installation

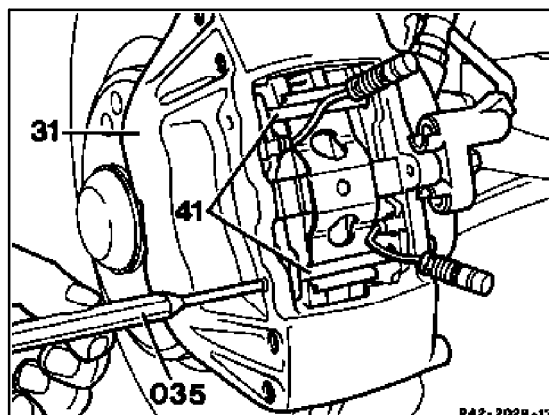
1 On fixed calipers with brake pad wear indicator pull cable for contact sensor (S10/1) out of plug connector (52) on fixed caliper.



2 On Teves fixed calipers drive retaining pins (41) out of fixed caliper with drift punch (035). Remove pad retaining spring.

Installation note

Position pad retaining spring, then drive in retaining pins with aid of punch **up to stop**.

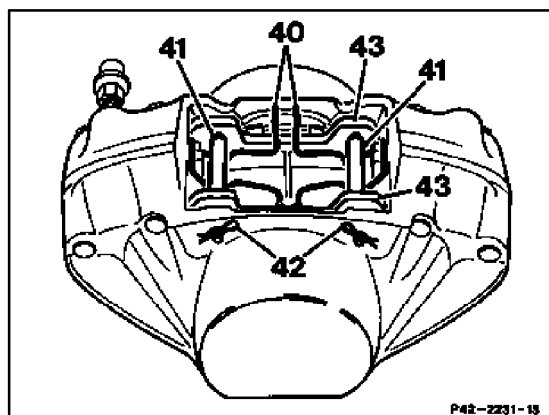


Note

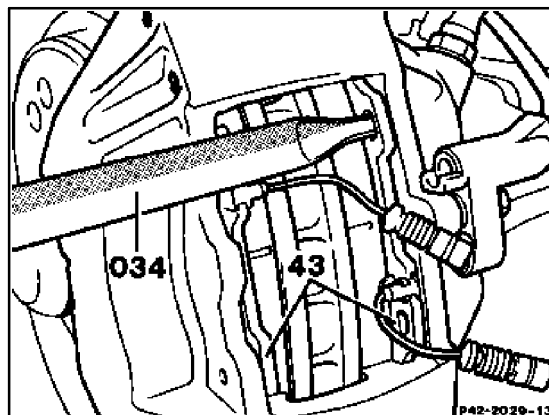
On Bendix and Girling fixed calipers first pull the two retaining eyes (42) out of the retaining pins. Remove pad retaining springs (40).

Installation note

Position pad retaining springs (40), insert retaining pins (41) into fixed caliper and install retaining eyes (42) in retaining pins.

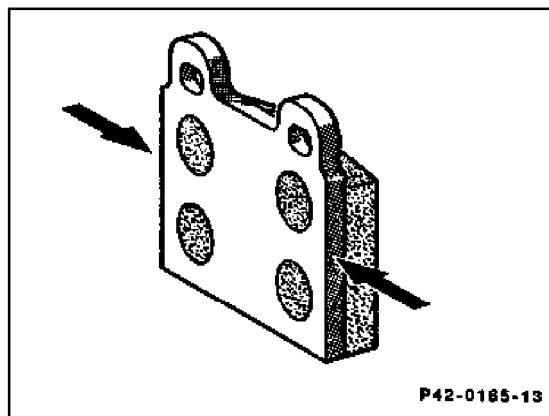


3 Press brake pads (43) back slightly and press out of fixed caliper with removal lever (034) 123 589 13 33 00.



Installation note

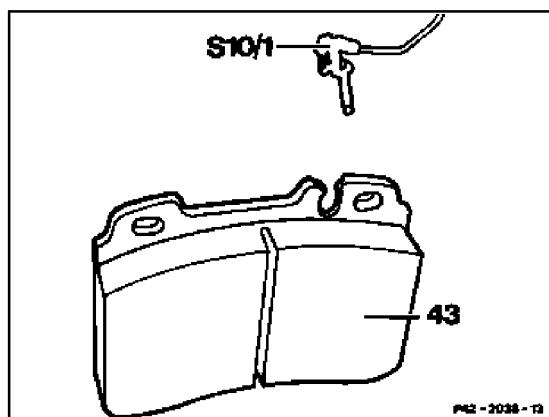
Coat brake pads at points indicated with arrows in figure with specified brake pad paste 001 989 10 51.



4 Pull contact sensor (S10/1) out of pad backing plate or out of brake pad.

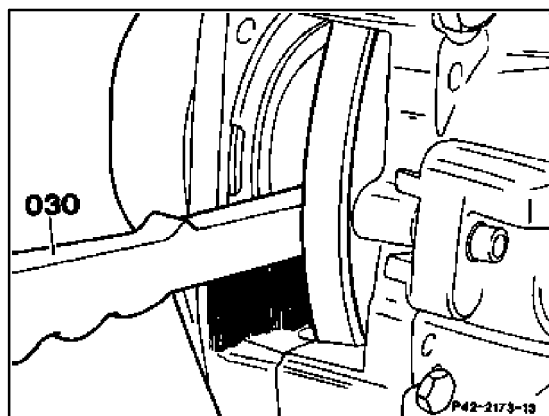
Installation note

Renew contact sensors when insulating layer on contact pin is worn through or when any part of the sensor or wire insulation is damaged.



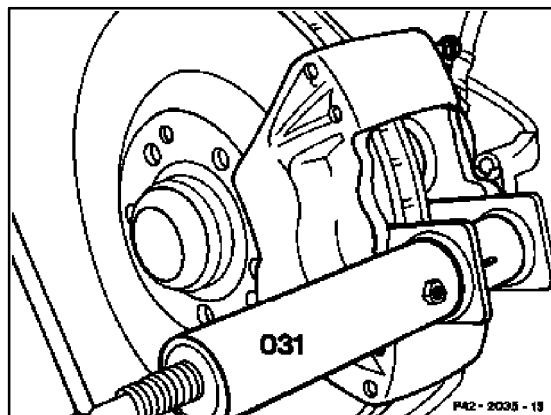
5 Clean guide for brake pad in fixed caliper with brake caliper brush (030) 000 589 26 68 00.

6 Check dust cap for cracks. If dust cap is damaged, remove fixed caliper and disassemble, because dirt which has penetrated into the caliper can lead quickly to leakage and seizing of the caliper.



7 Evacuate a small quantity of brake fluid to prevent brake fluid reservoir from overflowing when pistons are pressed back.

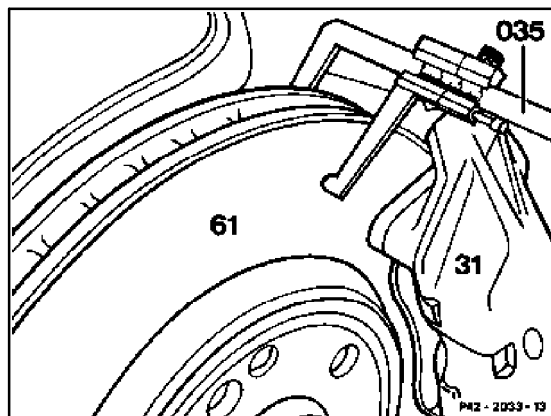
8 Press pistons back to end position with resetting tool (031) 000 589 52 43 00 only to prevent piston from canting.



9 Measure brake disc wear with caliper gauge (035) 124 589 00 15 00. Observe limit dimension to assure that wear limit is not exceeded before next brake pad change (see data 42-0220). Renew brake discs if test dimension is exceeded.

Note

If the brake discs are heavily contaminated with coatings from the pads on the braking surfaces (visible grey or blue discoloration on the braking surfaces), clean before installing new brake pads (42-0260).

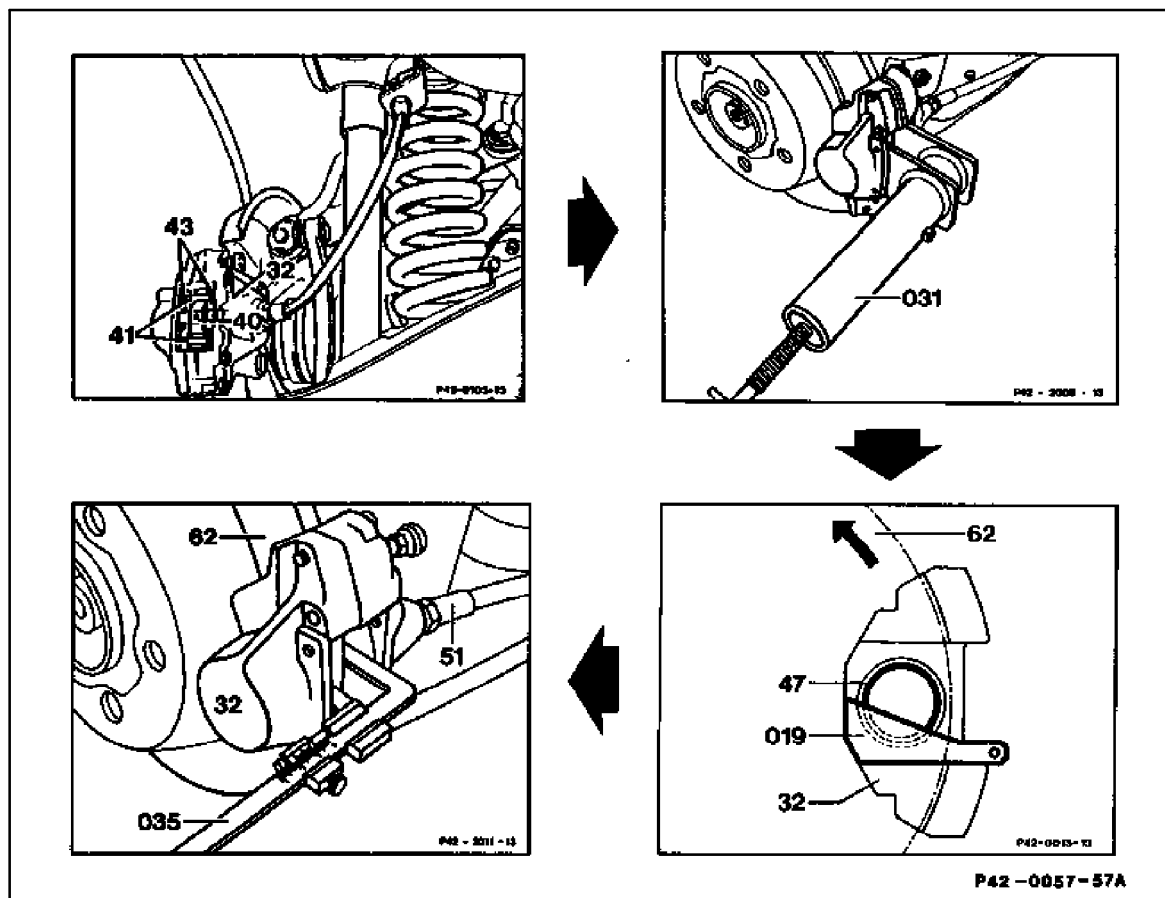


10 After installing the brake pads, actuate the brake pedal forcefully several times until solid resistance is felt. Then check level of brake fluid in brake fluid reservoir and add brake fluid if required.

Note

Carefully run in new brake pads by braking the vehicle a number of times from 80 to 40 km/h with only slight pressure on the pedal. Allow brakes to cool slightly before each braking maneuver. Perform braking maneuvers to full stop at high deceleration rates only after pads are run in.

C. Fixed caliper on rear axle



Retaining pins (41)_____	knock out of fixed caliper (32) with drift punch.
Brake pads (43)_____	Remove pad retaining spring (40) (observe notes). press out of fixed caliper (32) with removal lever 123 589 13 33 00. Before installing coat lateral contact surfaces of pad backing plate with brake pad paste 001 989 10 51.
Piston_____	press back with resetting tool (031) 000 589 52 43 00.
Guide_____	for brake pad in fixed caliper (32) - clean with brake caliper brush 000 589 26 68 00.
Dust caps_____	check for cracks. If dust cap is damaged, remove fixed caliper and disassemble (42-0120, 42-0150). Dirt penetrating into the caliper leads to leakage quickly.
Piston position_____	check with gauge (019) 000 589 35 23 00 and correct with piston pliers 000 589 50 37 00, if required.
Brake discs (62)_____	measure wear with caliper gauge (035) 124 589 05 19 00, see Data 42-0228. If the limit dimension is exceeded, renew brake discs.
Brake pedal_____	after installation of brake pads actuate forcefully a number of times until firm resistance is felt. Then check brake fluid level in brake fluid reservoir and add brake fluid, if required.

Data

mm

Max. brake pad width	61.75
Thickness of brake pad (pad backing plate and lining)	15.5
Thickness of pad backing plate	5
Permissible wear to brake pad down to lining thickness of	2

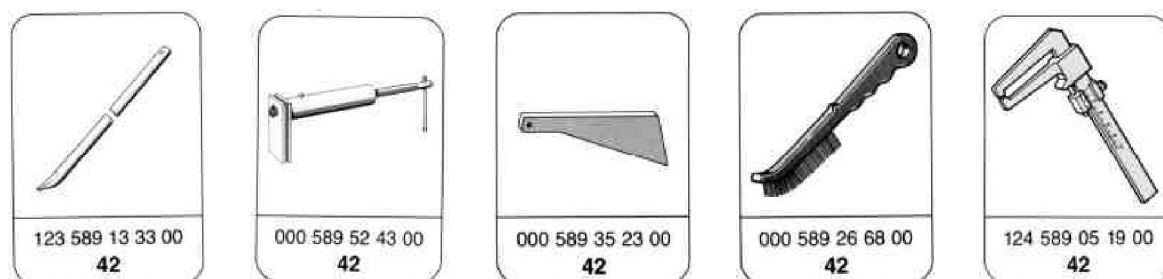
See current Service Information bulletins or Technical Data Manual for approved brands of brake pads.

Use brake pads approved by Mercedes-Benz only.

Lubricant

MB brake pad paste	001 989 10 51
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Special tools

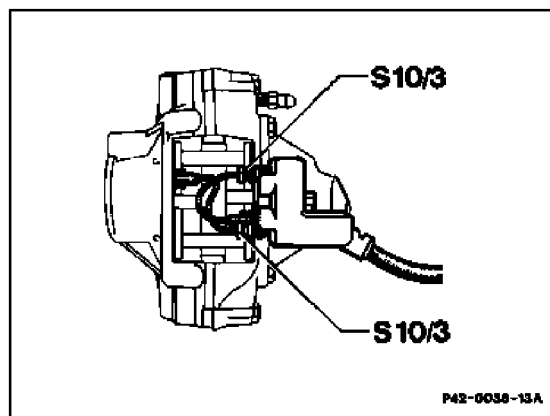


Notes

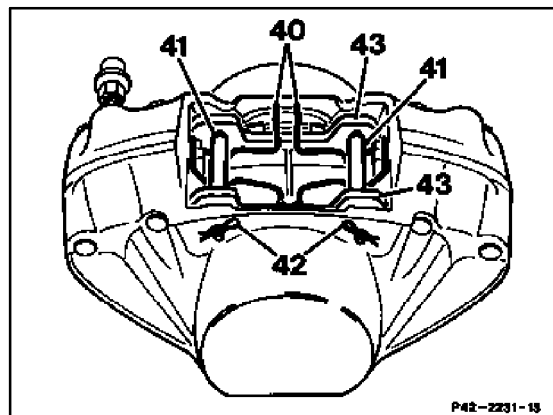
- Vehicles with ASR also have a wear indicator on the rear axle. The wires for the contact sensors must be laid as shown in the figure.

The pad quality and dimensions are the same as on vehicles without ASR. However they differ in that they have recesses for fastening the wear sensors.

- Use only transparent type contact sensors (higher temperature resistance).

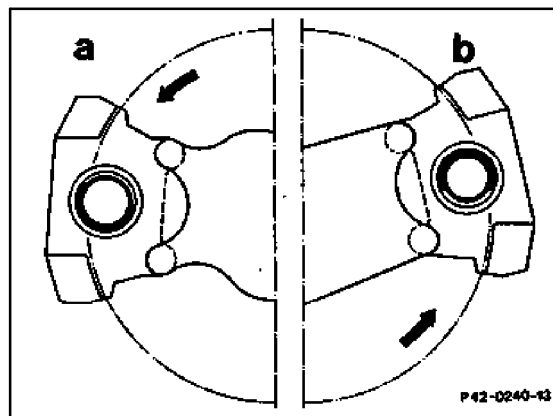


On Bendix and Girling fixed calipers the retaining pins (41) are secured with retaining eyes (42).



On fixed calipers (b) located behind the center of the axle on diagonal swing axles the high spot on the fixed caliper piston (to prevent squealing) must point upward.

On fixed calipers (a) located in front of the center of the axle on diagonal swing axles with anti-squat control the high spot must point downward.



Location, rear wheel, left

If the brake pad wear is excessively high, assure that pistons move easily. If pistons are hard to move, recondition fixed caliper (42-0150). Replace brake pads when they have worn down to a thickness of 2 mm or are greasy. Use only pad qualities approved by Mercedes-Benz and install **in sets** only.

If the brake pads are worn past the permissible limit down to the backing plate, the fixed calipers can be damaged, because the web between the sealing groove and dust cap breaks out causing the fixed caliper to leak. If brake pads are worn down past wear limit, perform high-pressure and low-pressure test (42-015).

If the brake discs are heavily contaminated with coatings from the pads on the braking surfaces (visible grey or blue discoloration on the braking surfaces), clean before installing new brake pads (42-0260).

Carefully run in new brake pads by braking the vehicle a number of times from 80 to 40 km/h with only slight pressure on the pedal. Allow brakes to cool slightly before each braking maneuver. Perform braking maneuvers to full stop at high deceleration rates only after pads are run in.