

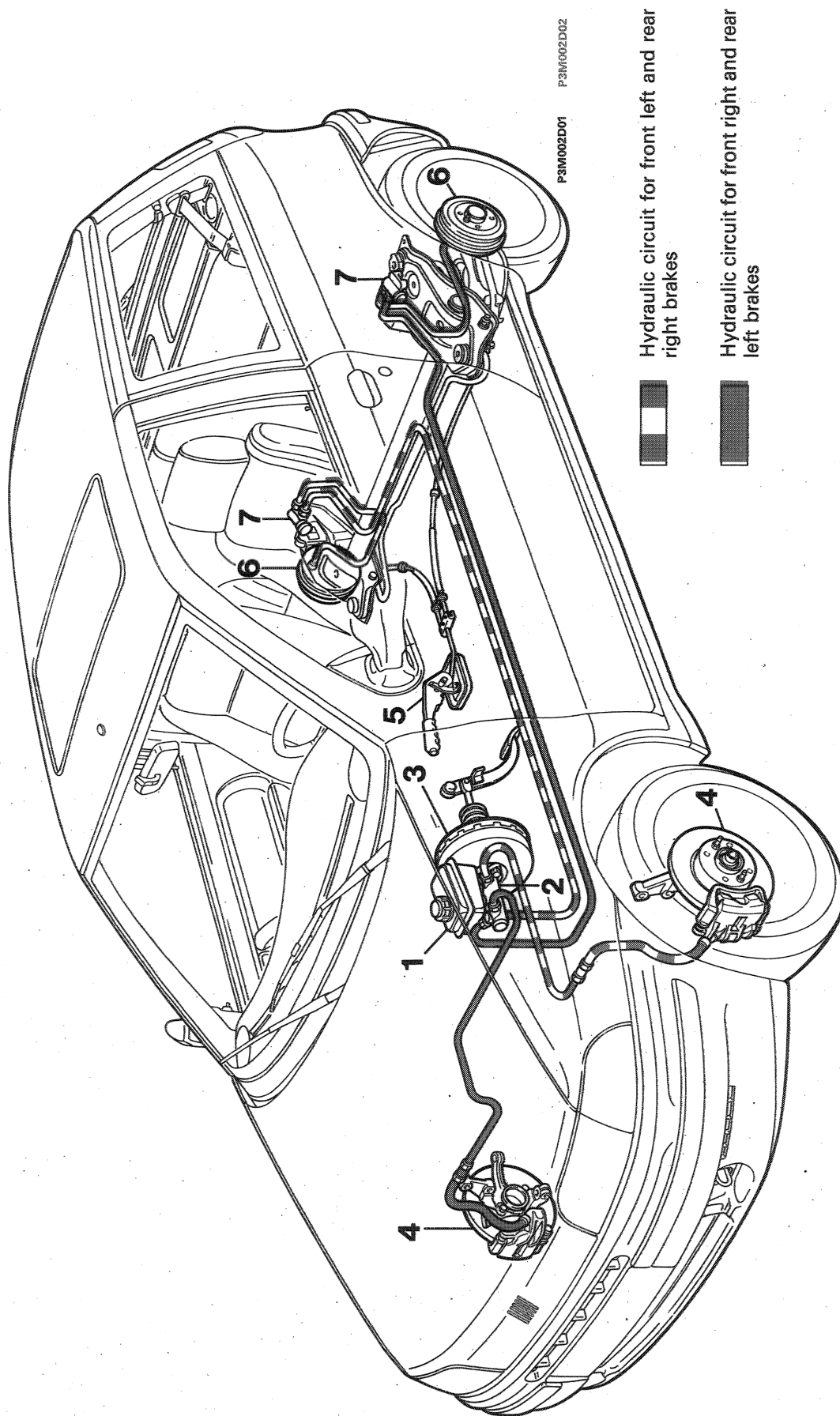
PUNTO eMANUAL

Braking System

Title	Page
Diagram	1 ➡
Disantling/refitting drums	2 ➡
Automatic adjuster	7 ➡
Wheel cylinder	8 ➡

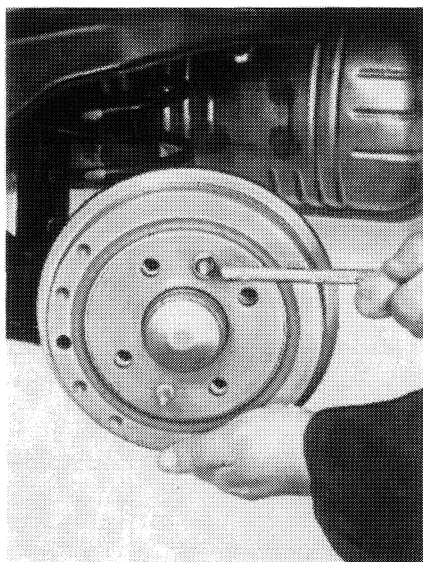
33.

DIAGRAM OF HYDRAULIC BRAKE CIRCUIT AND MECHANICAL HANDBRAKE LINKAGE

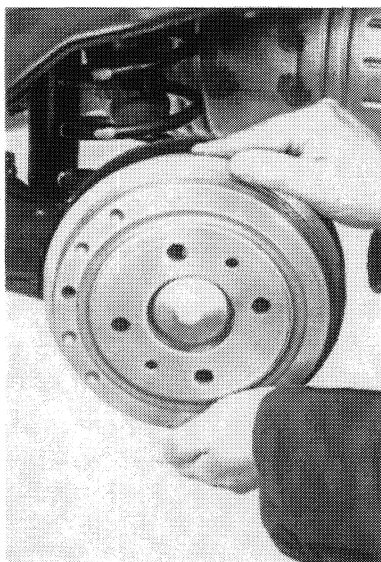


1. Brake fluid reservoir
2. Master cylinder for front and rear wheel brake circuit
3. Vacuum servo unit
4. Front disc brakes
5. Handbrake lever
6. Rear drum brakes
7. Pressure regulators for rear wheels

33.



P3M022D01



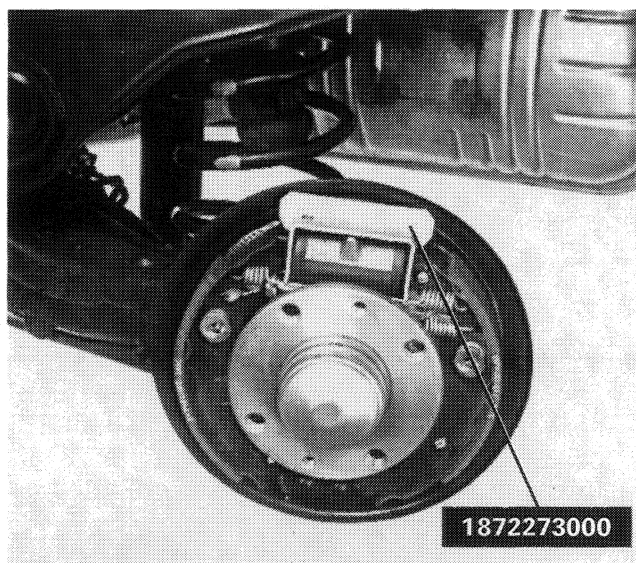
P3M022D02



DISMANTLING - REFITTING DRUM BRAKES

Dismantling - refitting brake drum

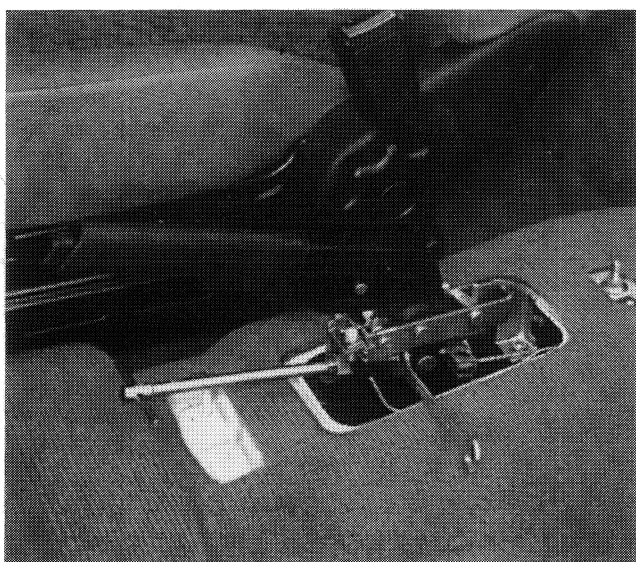
Before refitting the brake drum, remove any traces of rust on the contact surfaces.



P3M022D03



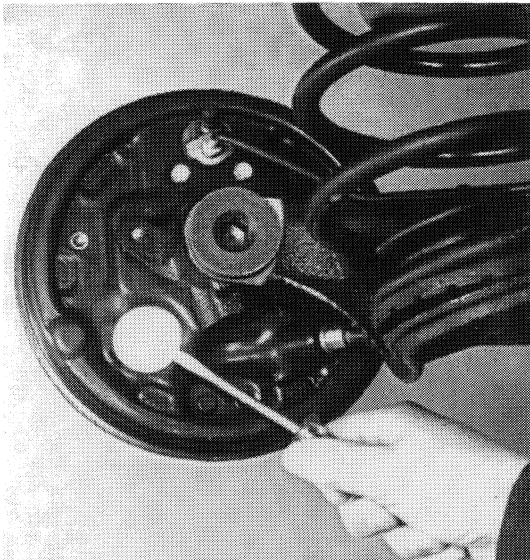
Fitting tool 1872273000 for retaining the wheel cylinder piston during dismantling and refitting of shoes



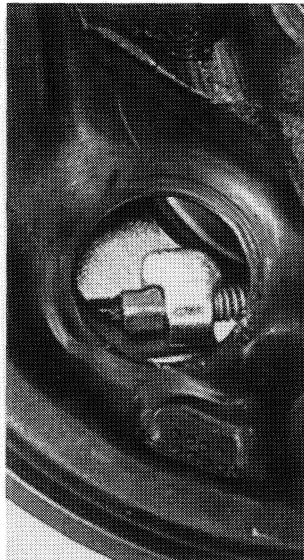
P3M022D04



Slackening the handbrake cable



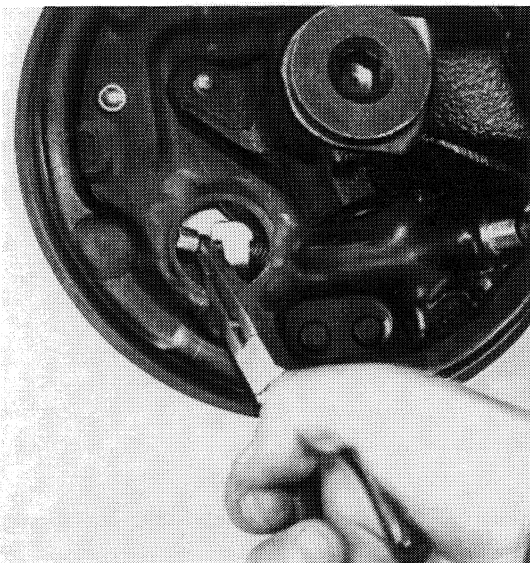
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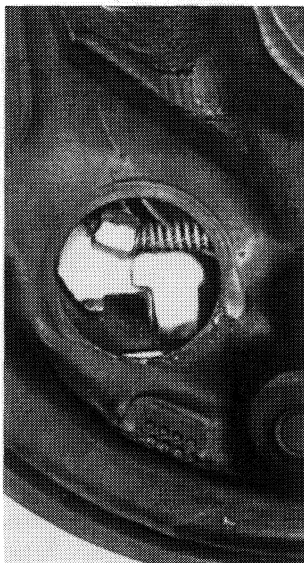
P3M023D02



Dismantling handbrake cable mounting cover



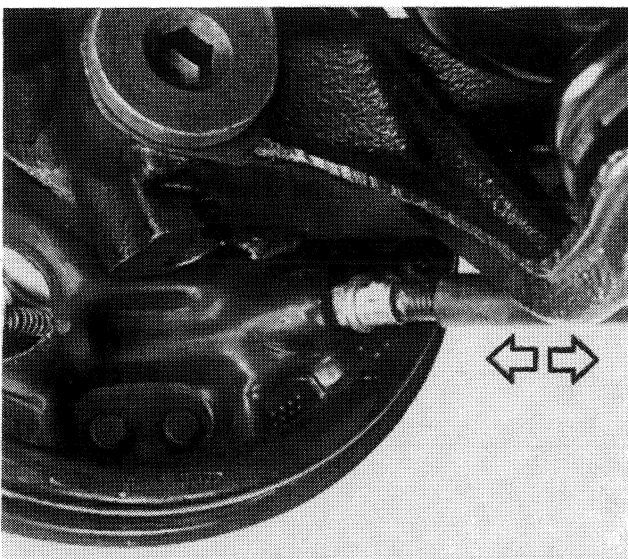
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P3M023D04



Dismantling - refitting handbrake cable from mounting on handbrake lever



P3M023D05



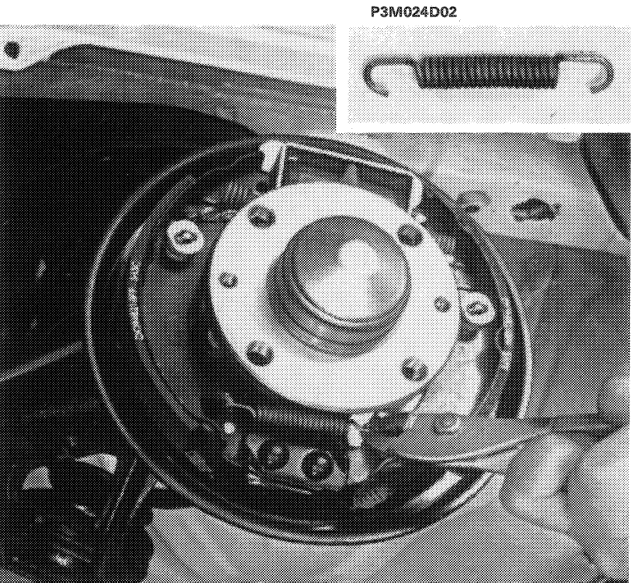
Removing-refitting handbrake sheath with cable from brake backplate

Braking system

Rear brakes

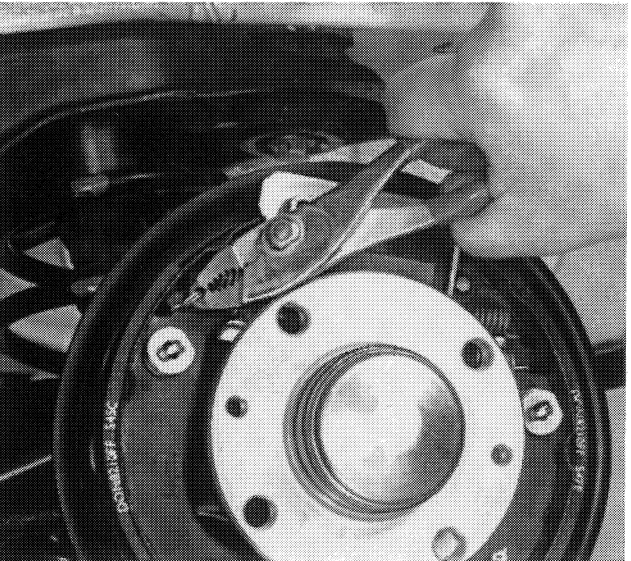
Punto 1108 1242 SPI 1242 MPI 1697 TD

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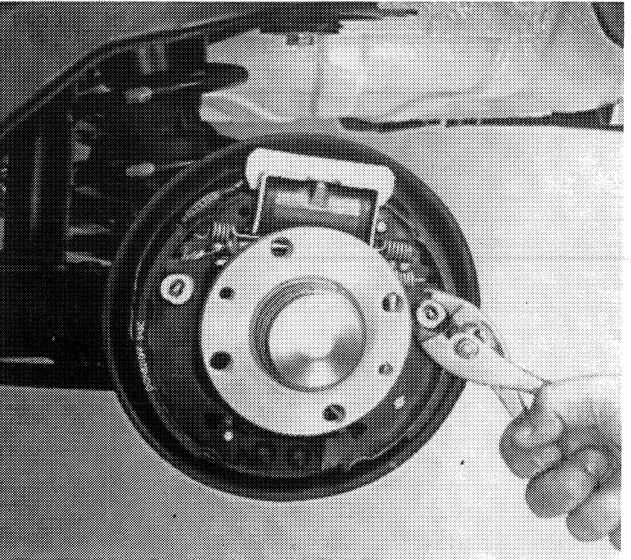
P3M024D01

Dismantling-fitting lower shoe return spring



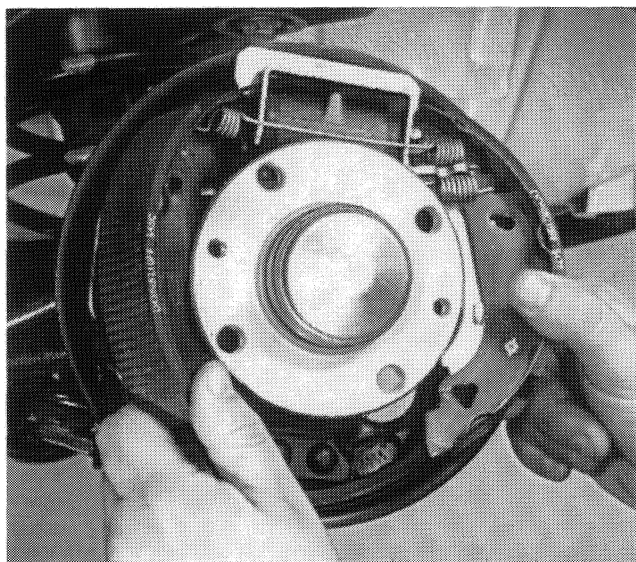
P3M024D03

Dismantling-fitting self-adjuster left return spring



P3M024D04

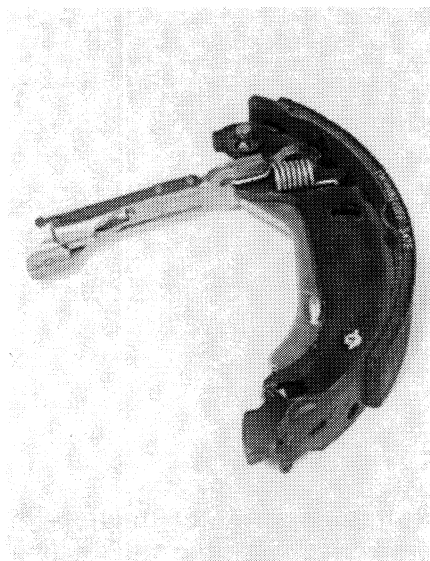
Dismantling-fitting shoe steady pins



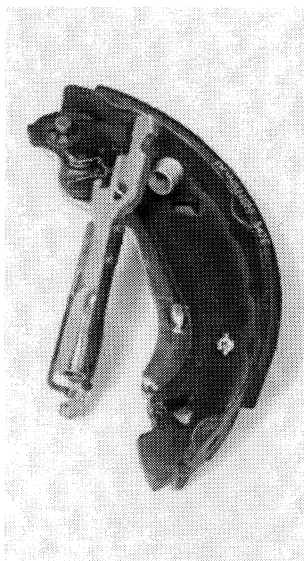
P3M025D01



Dismantling-fitting shoes



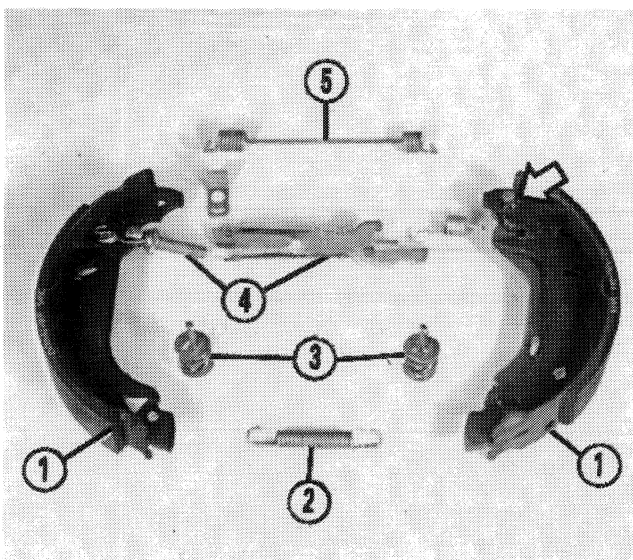
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P3M025D03



Dismantling-fitting automatic adjuster assembly on right shoe



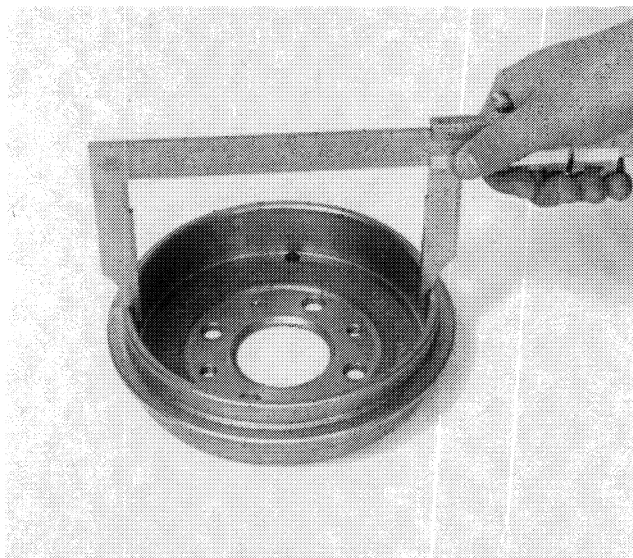
P3M025D04



Rear brake components

1. Shoes
2. Lower shoe return spring
3. Shoe steady pin
4. Automatic adjuster assembly
5. Upper shoe return spring

The arrows shows the washer-clip which must be renewed whenever the shoes are renewed.



P3M026D01

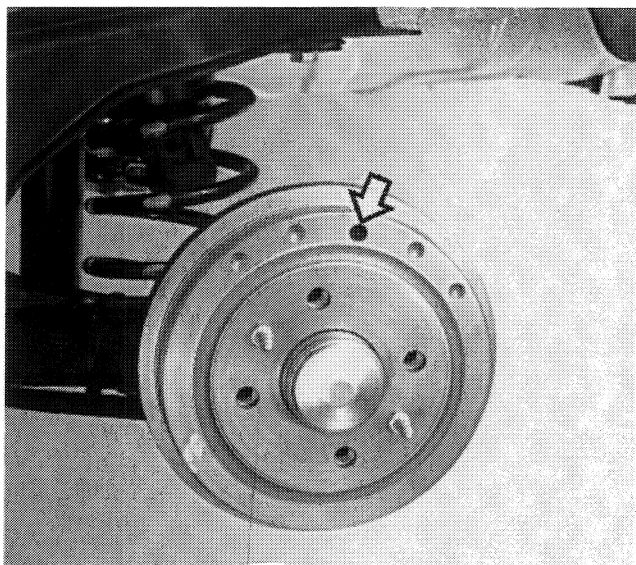


BRAKE DRUMS



Checking and measuring brake drum

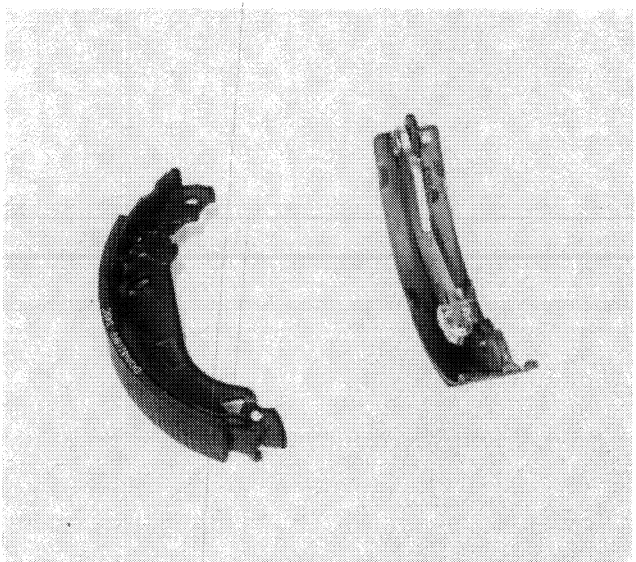
If the brake drums are deeply scored or worn eccentrically, they must be reground. The maximum permitted increase in diameter of the drums is 0.8 mm.



P3M026D02



Location on the brake drum of the hole for inspecting shoe friction lining thickness



P3M026D03

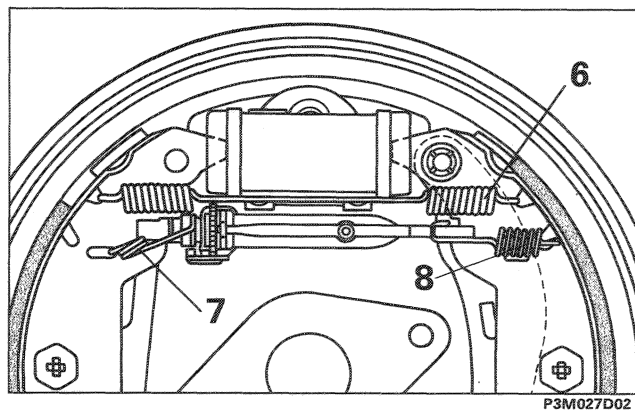
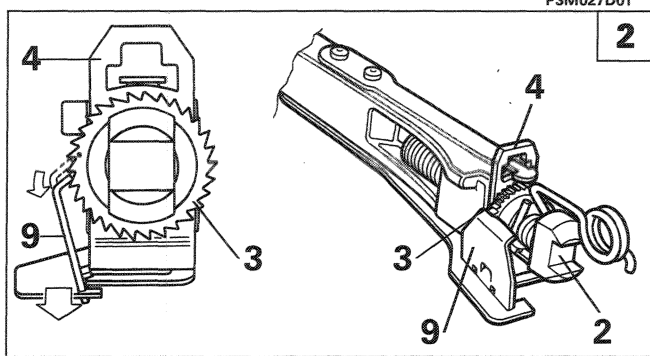
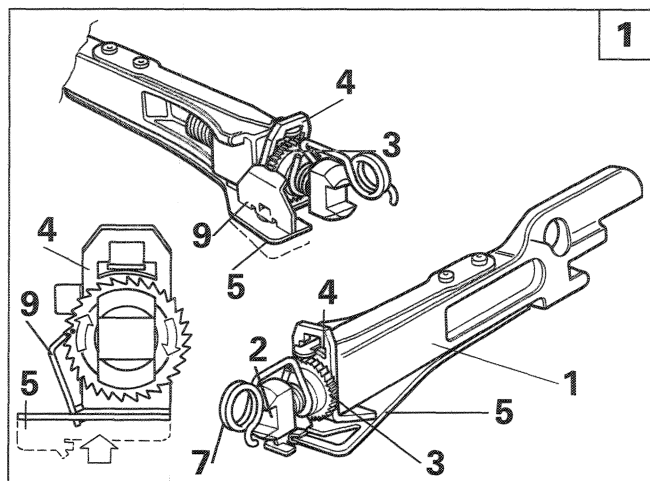


SHOES

Checking shoe

The minimum permitted thickness of the brake lining is 1.5 mm.

AUTOMATIC ADJUSTER ASSEMBLY



The distance between the shoes and drum is adjusted automatically by the self-adjuster assembly each time the brakes are operated, should any adjustment be necessary at that moment.

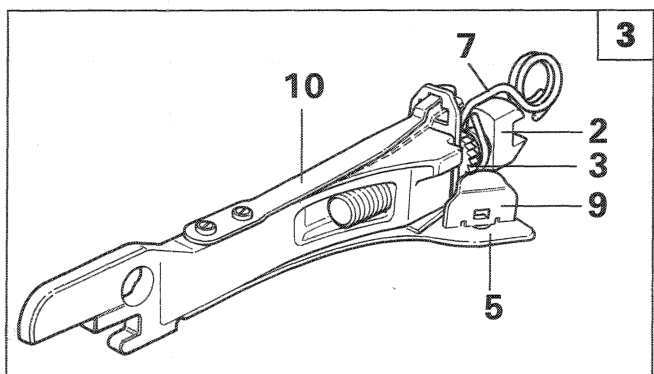
The device consists of a link rod (1) inside which an adjustment screw (2) freely slides. A ratchet wheel (3) is screwed onto this screw. In the rest position, the front shoe return spring (6) compresses the automatic adjuster assembly, so the ratchet wheel (3) pushes the frame (4) into contact with the end of the link rod (1).

The frame (4) is also subjected to a pushing force from the flexible blade (5). During the braking action the two shoes move apart and come into contact with the drum; the two ends of the adjuster assembly are held in contact with the shoes by means of the springs (7) and (8).

The frame (4) is pushed by the flexible blade (5) against the ratchet wheel (3), and by means of the pawl (9) (permanently in contact with the ratchet wheel), causes it to rotate [1].

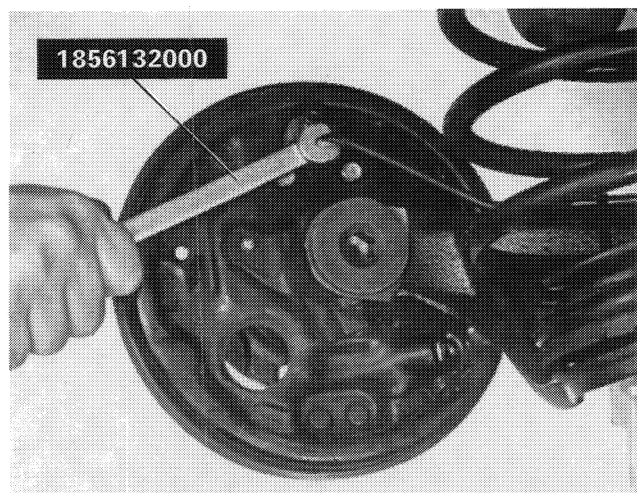
During brake release, the automatic adjuster assembly is again compressed by the action of the upper shoe return spring (6); the ratchet wheel (3) stops at the angle assumed during braking. This stop during rotation is caused by the friction between the frame (4) and the ratchet wheel (3). With the ratchet wheel (3) locked during rotation, if the brake linings are sufficiently worn from previous use of the brakes, the pawl (9) slips onto and engages with the next tooth [2]. The maximum travel of the ratchet wheel (3) on the adjustment screw (2) is one tooth (0.020 - 0.025 mm). An exception to this is when the brakes bed in after dismantling, when the travel is two teeth (0.04 - 0.05 mm).

If after excessive braking the brakes overheat and the temperature reaches 100° - 110°C, the flexible blade (10) in the adjuster assembly comes into action by bending and locking the frame (4) in neutral position [3].

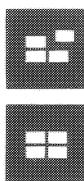


During braking the ratchet wheel (3) is no longer subjected to the pushing action of the flexible blade (5), so the pawl (9) assumes the same angle as the ratchet wheel tooth, which will be free to slide with the adjustment screw (2) on the pawl (9) without compensating for the distance created by the expansion of the drum.

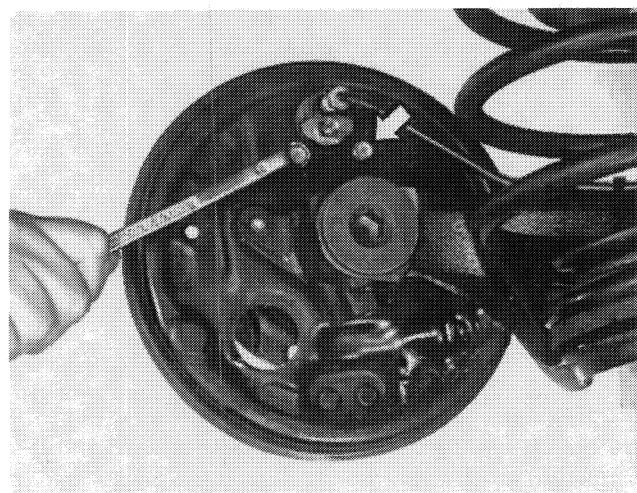
During overhaul, before fitting the brake linings, the ratchet wheel (3) of the adjuster assembly must be brought into contact with the spring (7) and then unscrewed half a turn.



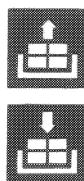
P3M028D01



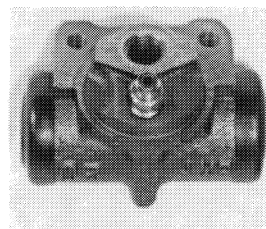
WHEEL CYLINDER



P3M028D02



Dismantling-fitting brake pipe

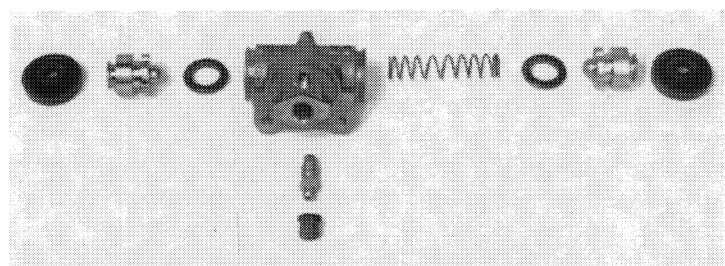


P3M028D03

Removing-refitting wheel cylinder



Bleed the hydraulic system



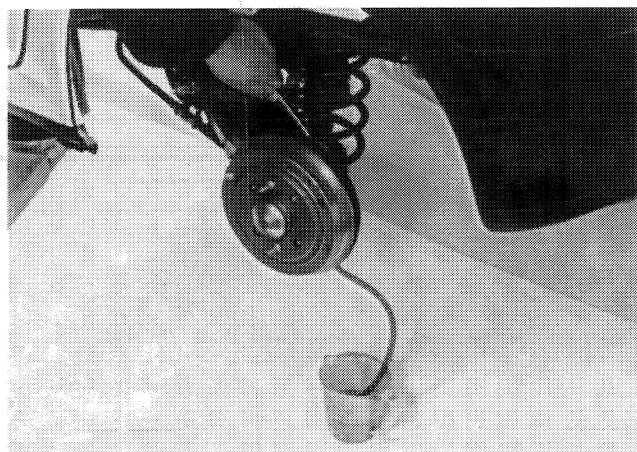
P3M028D04



Checking the components of the wheel cylinder

During overhaul, always renew the seals and dust excluders; if the cylinder barrel or piston are found to be faulty, renew the entire assembly.

Ensure that the bleed screw is not blocked.



P3M028D05



BLEEDING

The old fluid should not be reused. Top up the level with fresh brake fluid.



To bleed the brakes when a load proportioning valve is present, the suspension must be compressed so that the valve comes into operation.