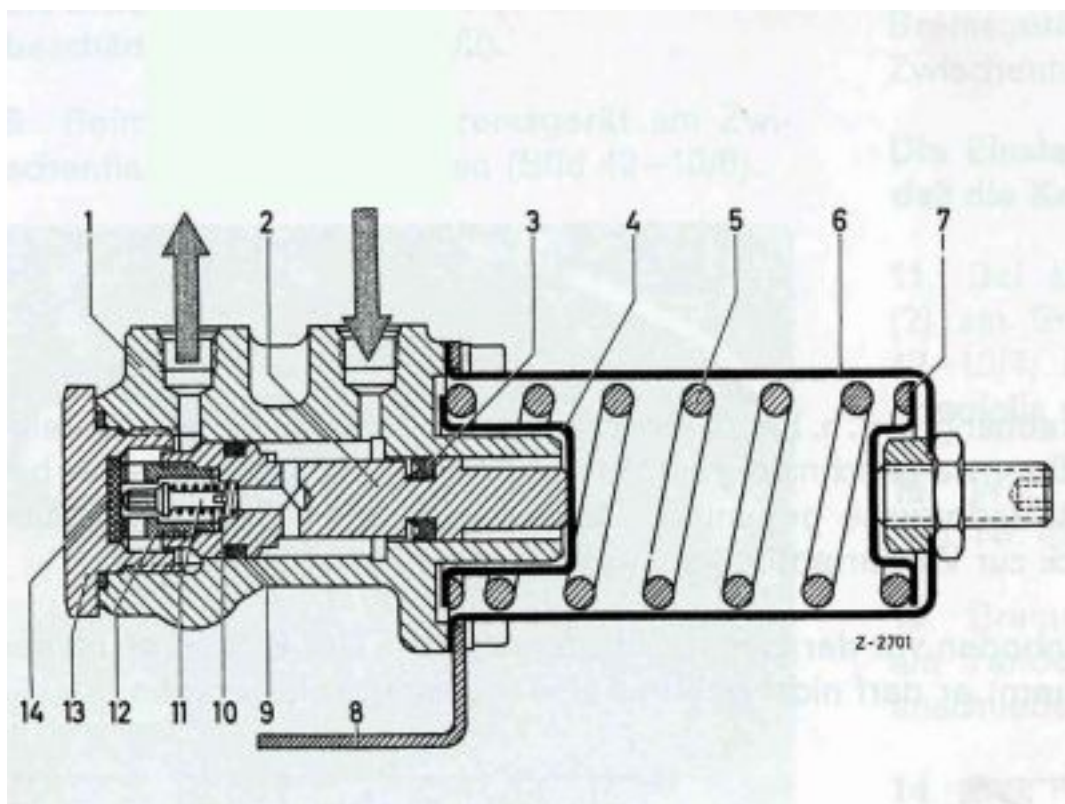


The brake pressure regulator works based on pressure. When braking, the pressure of the brake oil increases evenly by up to about 40 bars in both the front brakes and in the rear brakes. However, after reaching the 'switch point', which is set at about 40 bars, the pressure applied to the rear wheel brakes increases somewhat slower than the pressure applied to the front wheel brakes. Taking apart and repairing the brake pressure regulator was forbidden in 1968, but applying this rule was not such a big problem, as at that time it wasn't difficult for car repair workshops to order new brake pressure regulators. Today, however, this is not the case.

As with other parts, we have no choice but to renovate the brake pressure regulator. Since it is a piece of safety equipment, once complete, we have to test it carefully. Here you can see the testing process being carried out.



The drawing is a cross section of this ingenious and complex piece of

presentation. Naturally, we are happy to provide a personal explanation to anyone who is interested in finding out more.



In the photo you can see the renewed parts of the disassembled brake pressure regulator of a Type 250SL. Since repairing this component was forbidden, it has never been possible to purchase parts for it. Believe it or not, the smaller rubber sleeve that can be seen on the piston is today produced by a little Hungarian

a replacement part for IFA trucks, which were manufactured in the former East Germany! It is interesting that the IFA truck uses exactly the same non-standard part as can be found in a Mercedes.



The number '40' punched into the plug screw means that the previously mentioned switch point of the brake pressure regulator is around 40 bars. The assembled brake pressure regulator will be tested on a test bench that was manufactured by us.



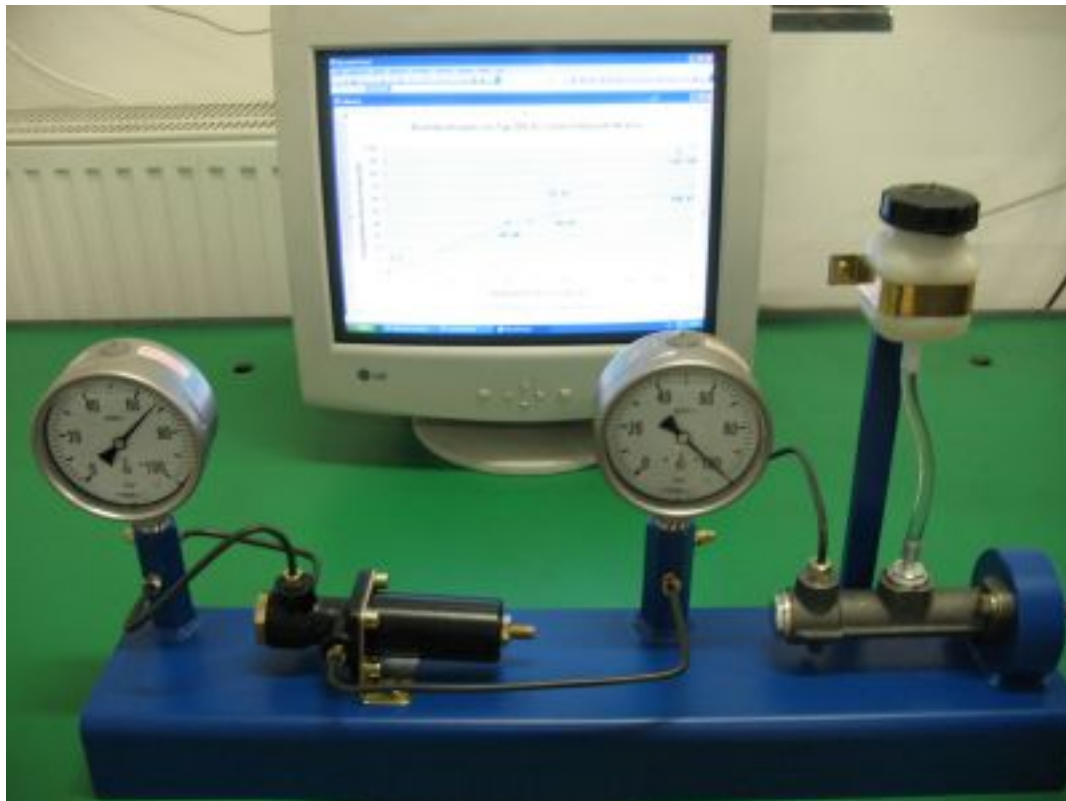
Here we are generating the hydraulic brake line pressure (the pressure entering the brake pressure regulator) in a simple main brake cylinder in a 'continuous' way, by turning a screw. The value of this pressure – which is identical to the pressure that enters the front-wheel brakes – can be read on the pressure gauge on the right. The value of the pressure that leaves the brake pressure regulator - which is identical with the pressure that enters the rear-wheel brakes - is displayed on the pressure gauge on the left. At the start of the test, both pressure gauges must display



It can be seen that the pressure entering the front- and the rear-wheel brakes increases at the same rate up to 40 bars. We enter the measurements into a little program (that we developed) which displays the performance graph of the brake pressure regulator.

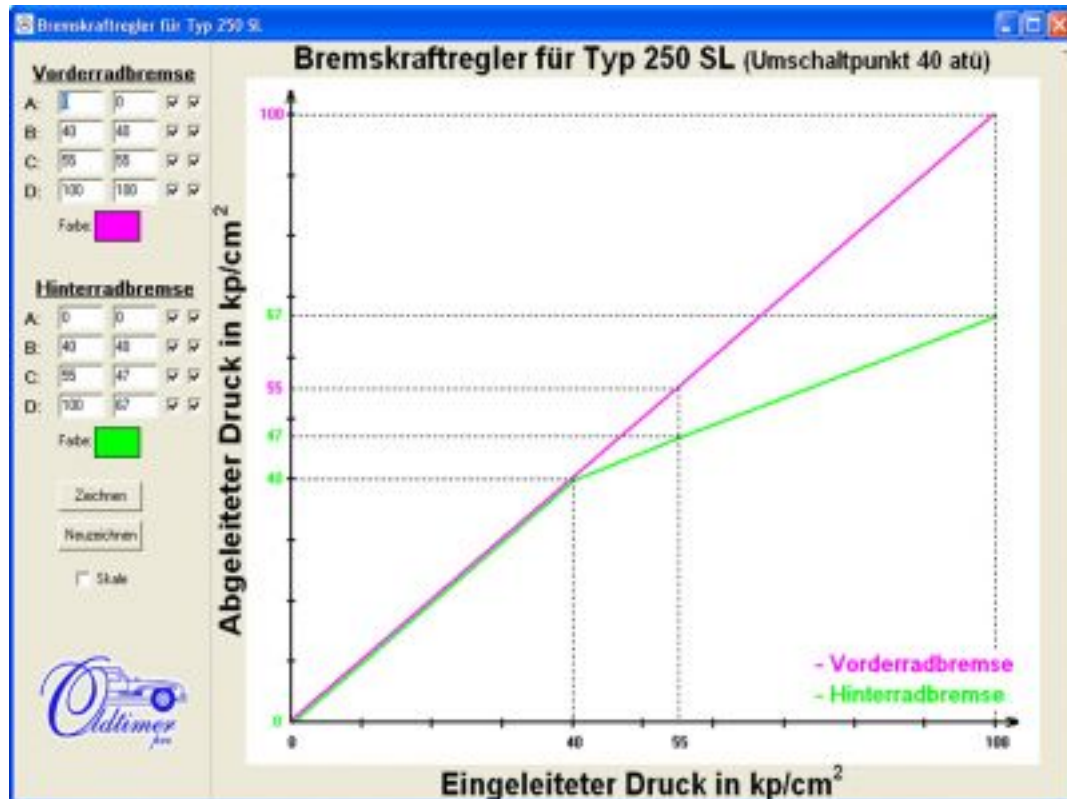


The data needed for testing is included in the Chart Manual issued by Mercedes-Benz. In the photo you can see that the brake pressure regulator switched over (The pressure in the rear brakes increases at a slower rate.) If the entry pressure is 55 bars, then the exit pressure has to be 47 ± 2 bars. The pressure gauges show these values.



The test must also be done at an entry pressure of 100 bars. In this case the value of the exit pressure should be 67 ± 3 bars, which is

Thus, the brake pressure regulator is functioning properly.



Here is the graph which the computer generated. As a matter of courtesy to the manufacturer, the program's interface is in German. For those who do not speak German, the purple line shows the pressure entering the front-wheel brakes, while the green line displays the pressure entering the rear-wheel brakes.

