

32-530 Checking pressure oil pump and level controller

Level controller¹⁾

Adjustment of discharge valve to guarantee basic pressure	bar	Version up to 8/85 30 + 6	Version starting 9/85 30 + 6
Adjustment of pressure relief valve in bar	Min. pressure ²⁾	130	133
	Max. pressure	185	153

Pressure oil pump¹⁾

Engine speed for checking pressure oil pump 1/min	Min. delivery pressure ²⁾ ³⁾ bar
Idle speed 800-1000	130

¹⁾ The respective production code No. is punched into housing (e.g. 1279 = 12th week 1979).

²⁾ On older vehicles of model 107, 114, 115 and 116 with a level controller up to production year 1974, a minimum pressure of pressure oil pump as well as a minimum pressure of pressure relief valve of 120 bar is permitted.

³⁾ Connection of tester on level controller or distributor.

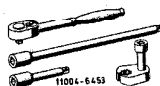
Special tools

Filling funnel with filter



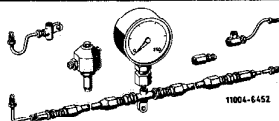
126 589 12 63 00

Box wrench insert open 11 mm 1/4" square, complete with change-over ratchet and 2 extensions for pressure oil lines



116 589 00 17 00

Tester for level control and hydropneumatic suspension



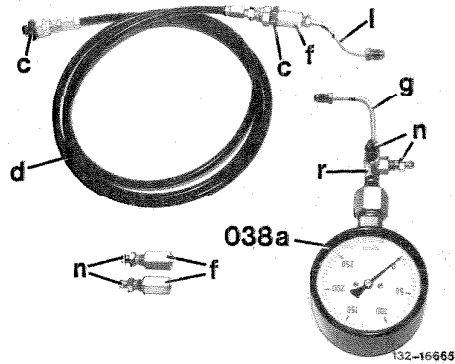
126 589 02 21 00

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Note

Test jobs require the following components of tester.

Pressure gauge (0–250 bar gauge pressure) with connection, coupling nut with sealing ring (038a), transfer connection (c), test hose (d), couplings (f), test line (g) and (l), bleed screws (n) and distributor (r).



The tests can be made on operational vehicle only.

The pressure oil pump is now tested for delivery pressure only.

In the course of test jobs, check level controller for leaks. In the event of leaks on both housing parting surfaces, mount new O-ring 006 997 69 45.

Attention!

The four screws for the housing halves of level controller must be tightened, whenever the governor is energized with oil pressure.

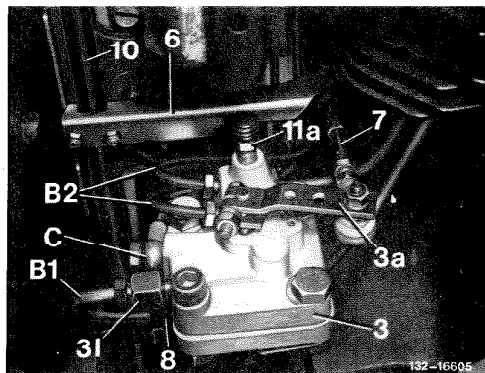
Testing

1 Disconnect connecting rod (7) on lever (3a) of level controller (3).

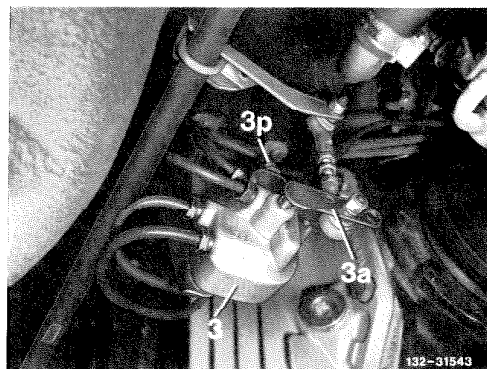
Attention!

On level controller, never release clamping screw for fastening lever on control shaft! Subsequent, correct location of lever in relation to control shaft is not possible.

Level controller
Version up to 8/85

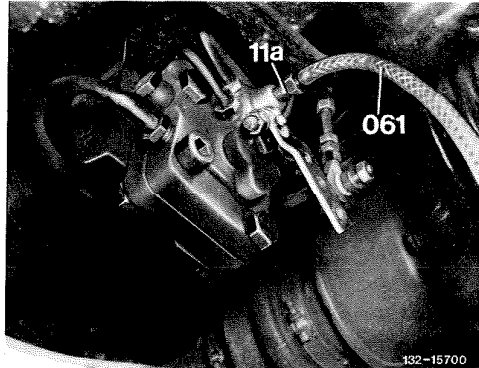


Level controller
Version starting 9/85



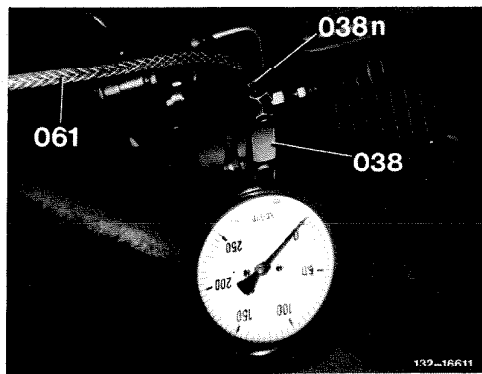
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2 Plug oil drain hose (061) to vent screw (11a) on level controller (2nd version starting March 1977) or on distributor (1st version up to February 1977). Open bleed screw slowly and discharge pressure. Catch oil in a clean vessel.



3 Remove bleed screw (11a) on level controller or on distributor.

4 Connect pressure tester (038) to level controller or to distributor. Plug oil drain hose (061) on bleed screw (038n).

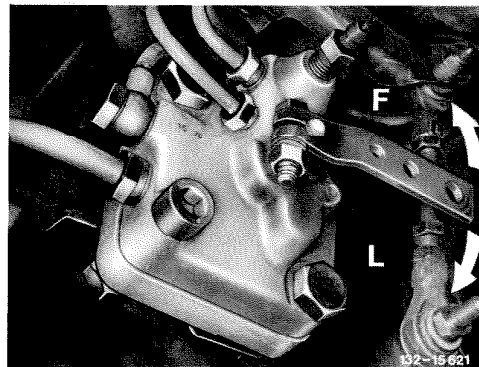


5 To check pressure oil pump and pressure relief valve in level controller, push lever of level controller into position „F“ (filling). Keep engine running and watch pressure gauge.

Note

If on vehicles with ASD the minimum pressure of 130 or 133 bar is not attained, check pressure oil pump (as of item 11). On vehicles without ASD, renew pressure oil pump.

F = Filling position
L = Emptying position



Attention!

To evaluate pressure oil pump as well as pressure relief valve in level controller, attaining minimum values will be sufficient.

Due to the high pressures and to protect the pressure oil pump as well as the spring struts and their deflection stops, testing should take a short time only.

The pressure relief valve in level controller is designed for max. permissible rear axle load. If the vehicle is overloaded, opening of the pressure relief valve during operation of vehicle may be noticed by hissing and knocking noises.

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6 Stop engine.

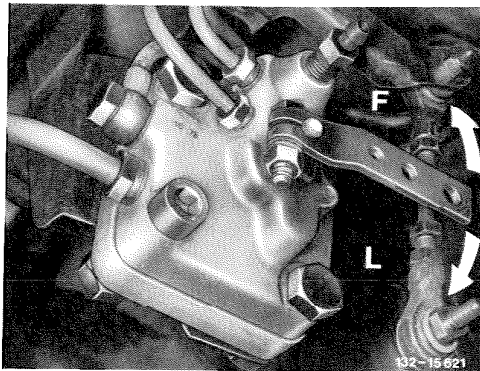
7 To check basic pressure following tests made according to item 4, set lever of level controller to „L” (emptying).

8 Read basic pressure on pressure gauge.

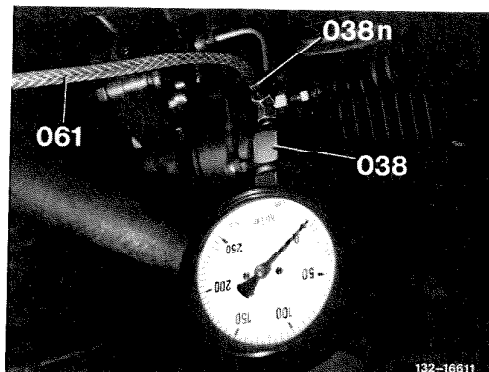
9 After a stabilization period of approx. 5 minutes, read basic pressure again and leave pressure tester connected for about 4 hours. Following the stabilization period or following the second reading, the basic pressure should not drop. This applies also for a longer test period, e.g. overnight.

With the basic pressure dropped, operation of vehicle may lead to rattling noises on rear axle.

Note: To eliminate measuring errors by possible cooling down of hydraulic oil, the hydraulic oil should **not be hot** prior to test. Slight heating, e.g. after a short test drive, is of no significance.

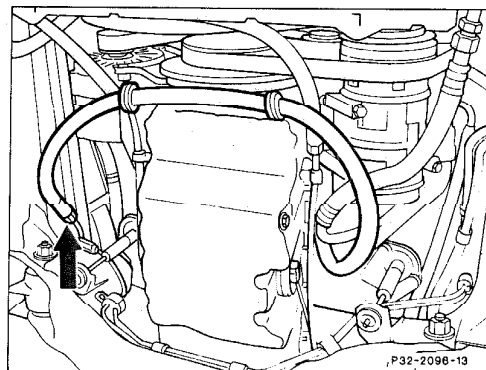


10 Evacuate basic pressure via bleed screw (038n) and oil drain hose (061). Unscrew pressure tester (038), screw bleed screw into level controller.



Additional jobs on vehicles with ASD

11 Disconnect high-pressure expanding hose (arrow) on connection to pressure line.



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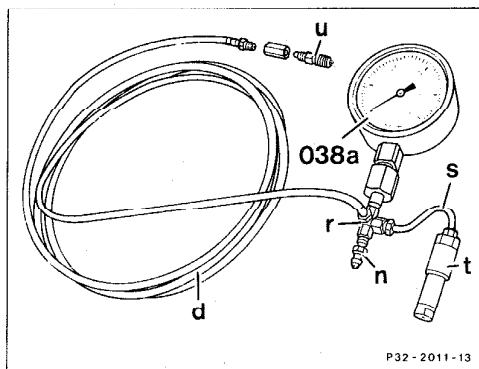
12 Pull oil dipstick out of fluid reservoir.

13 Connect pressure tester (038a) with pressure hose (d) and test pressure valve (t) to high-pressure expanding hose.

14 Hold test pressure valve into opening of a clean fluid reservoir.

Attention!

Be sure to hold pressure tester tightly with engine running, since a pressure of above 133 bar will be established.

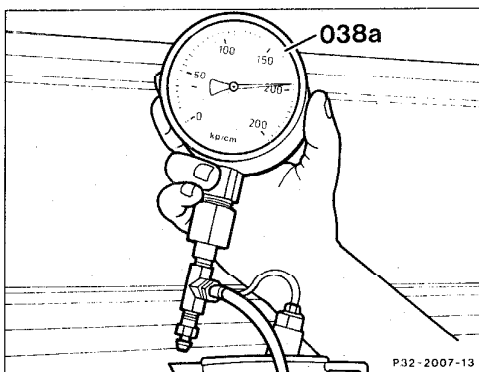


15 Start engine and observe pressure gauge of pressure tester. Renew pressure oil pump if a minimum pressure of 133 bar is not attained.

Attention!

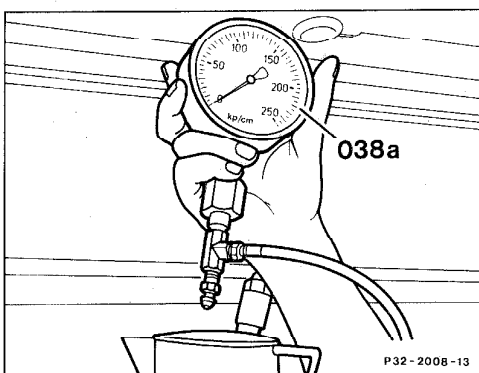
Owing to the high pressures and to protect the pressure oil pump and the high-pressure expanding hose, the pressure should take little time only.

16 Stop engine.

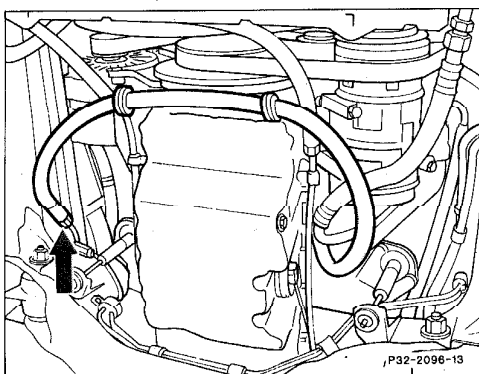


17 Hold pressure tester with opening of drain valve into opening of fluid reservoir and drain pressure.

18 Disconnect pressure line on high-pressure expanding hose (B1).



19 Connect high-pressure expanding hose (arrow) to pressure line.



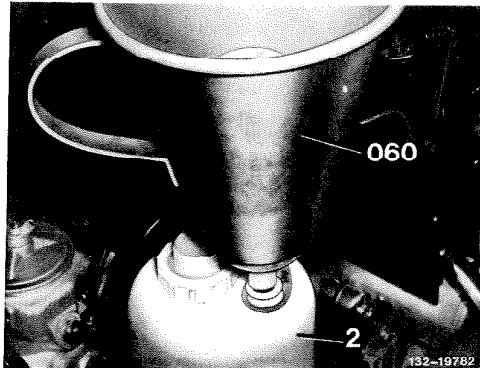
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All models

20 Fill caught oil through filling funnel with filter (60) into fluid reservoir (2) in engine compartment.

Attention!

Reuse only clean oil.



21 Fill pressure oil system. Run engine at medium speed while setting lever of level controller for 30 seconds into position „F“ (filling).

22 Mount connecting rod for level controller.

23 Check oil level in fluid reservoir (2) with engine stopped and correct, if required. With system in operational condition, the oil level in ready-for-driving condition should be between the „max.“ (a) and „min.“ (b) marks. On the **fully loaded** vehicle, the oil level will therefore be at „min.“ mark.

