#

Clean the cooling system

Deposits in the cooling system over time caused the cooling water on the highway to become slightly warmer than usual. In tough city traffic it was even worse. Since the radiator could not deliver the heat quickly enough to the air flowing through, the viscous fan always ran only on a small scale, so that the cooling water temperature reached 105 ° Celsius in extreme cases (prolonged torment caused by clogged roads), resulting in the connection of the electric fan would have. Something like that can not be healthy in the long run, and since summer is just around the corner, I have decided to carry out the cleaning procedure described in the Workshop Information System (called WIS for short).

Here are the required "ingredients":

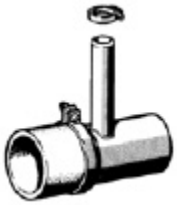
3x A0009891025 (je 0,5 kg citric acid powder) – much cheaper in wine cellars markets

W000589746300 (forced openend thermostat) – not necessary, just remove the original thermostat

#

A1162000315 (new thermostat with seal ring, not necessary)

A1192010180 (new gaskets for water pump – not necessary)



Unfortunately, the rinsing/flushing adapter was out of print. Alternatively, I ordered the short piece of tubing, in the place of the adapter would be used to build its own adapter. Unfortunately, the piece of hose was not delivered in time, so I have the procedure a little modified: to feed the fresh water now had to serve the expansion tank.

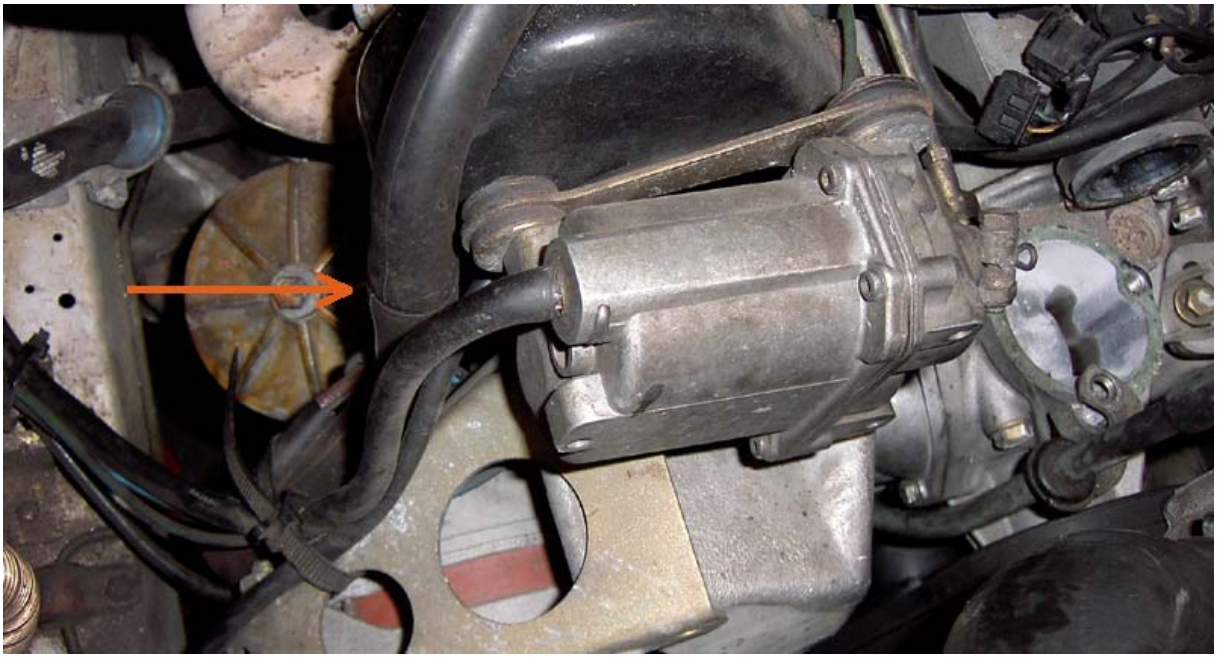
And this is how it's done:

First drain the old cooling water according to the instructions. Since the plastic screw in the cooler did not want, I have unceremoniously solved the thick hose. So the emptying is also much faster .. Is the water out, the thermostat dummy is installed. Unfortunately, the thing is not, as I first thought, under

#

the top lid, where the official flush adapter would be connected, but to the side of it (the arrow marks the top of three screws):

Now it gets sneaky: the upper screw can be moved only with a spanner, but only has a range of motion of just 1/6 turn. The front screw, here covered by the handle of the dipstick, can be solved with a small ratchet without extension. It gets really bad with the rear screw. You can not get there with your fingers. It took me a while to discover I could get over the oil filter by putting together all the 1/4-inch extensions I could find:



Once everything has been reassembled, the cooling system is filled with tap water and vented as usual. Since I could not get the rinsing adapter, as mentioned above, I came up with another solution. The upper hose from the radiator to the expansion tank I used as a drain. The free end was inserted into a thicker hose, so that the water could be specifically discharged. On the free connection to the

#

expansion tank I put a piece of thin hose on which I could put the garden hose. The lid must now be on it, so that the fresh water can not overflow through the filling opening. In the replacement solution, the fresh water is indeed fed elsewhere in the cycle, but on the way to the process, there is still ample opportunity to mix with the old cooling water, so that in principle the same effect is achieved as when using the rinsing/flushing adapter,

Now follows the first rinse (according to the instructions, the engine is running at about 2500 1 / min) to remove the remains of antifreeze. After about 5 min. only clear water comes out Now the water is drained from the cooler again and filled in 5 liters of tap water dissolved citric acid powder. The small hose can now be reconnected to the expansion tank. After the obligatory bleeding (bringing the fill level to the target level with tap water), the engine should be left for approx. 15 min. with increased speed (2500 1 / min) run. The cooling water reached about 82 °, and you could hear occasionally, as the viscous fan switched to full power. After the flushing time, the now dirty water is drained off. After that takes place for 10 min. Another flushing process (as usual fill with water and bleed), the engine should run again at about 2500 1 / min. You can observe how the escaping water slowly becomes clearer. I occasionally caught the running water in a white bowl and could see as well as it was brownish in color and became clearer over time.
After switching off the engine, I let the fresh water run for a moment, until the leaving water was only lukewarm. This allowed me to continue with the next step without burning my fingers.

After rinsing the dummy thermostat must go out, so again the water is drained. I installed a new thermostat as a precaution, so I do not need to screw it in place again. Afterwards, I only filled the cooling system with water, because I did not want to waste antifreeze in the event of an inaccuracy. After I had convinced myself that everything is tight, I have drained water again (only cooler) and refilled with antifreeze. That suited, although it looked pretty close at first. During venting I was able to tip some frost protection several times. At the end there were about 6 liters in it, so that the recommended mixing ratio of 50% was narrowly missed. After a day of driving I was able to refill something, so that the mixing ratio should now be exactly right.

In the end, I do not want to withhold the result: it actually worked. During the first test drive in city traffic, the temperature remained fairly constant at about 82 °. After a long drive on the motorway, she climbed to almost 90 ° over urban streets with several traffic-light stops in the last few kilometers, but then dropped slightly after parking. A few days later it got really hot, so that the air conditioning was used. Neither in city traffic nor after leaving the motorway with a wait at the exit, the temperature rose higher than just under 90 °. So the rinse action was a complete success.