



Garage

Tech Bits with Tim Stock

Technical **AUTOBIZ**
Helpline

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Tim Stock

Silicate beads in coolant reservoir can clog a heater matrix

It is that time of year when we are getting calls about poor heating systems and how to solve the customers issues. Over the past year, the number of cases involving VAG, Audi and Skoda vehicles with heating issues have increased steadily. Symptoms have included low heat output to one side of the vehicle, cold or cooler than the opposite side or no heat at all on either side.

In a large amount of these cases, we have found the heater matrix to be partially or totally blocked. We have known about this issue for some time now, and it still comes as a surprise to the Helpline how little is known by a vast number of garages about the silicate problem on these vehicles.

For many years now, silicates have been added to antifreeze to protect the aluminium components of the cooling



The silicate beads, (at arrow), can migrate to the heater matrix and cause blockages

system. Over time, these silicates deplete and lose their effectiveness in corrosion protection. This would not be a problem if the coolant was replaced in a planned service schedule.

But with manufacturers trying to stretch the life of these coolants, VW have tried a solution that has proven to be a problem in other ways.

The manufacturers installed a silicate bag inside the coolant expansion tank. Over time, the silicate beads are there to leach into the coolant to keep the corrosion protection at an acceptable level.

The heating problem occurs when these silicate beads migrate from the coolant tank and end up blocking the heater matrix,

resulting in loss of heating. This requires a great deal of repair time to replace the

matrix and clear the cooling and heating system of the contamination. Any beads left in the system could cause the replacement heater matrix to become blocked, resulting in the same problem.