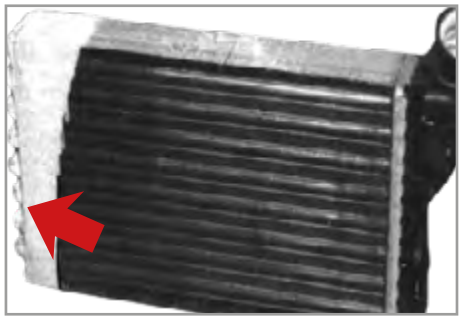
cooling is our passion

Early failure from heater and radiator by contaiminated cooling system after a exchange

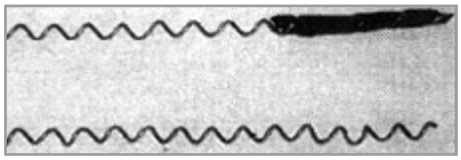
By cars with integrated turbolator heaters the rate of failure by leakage after an exchange increases.

The leakage accumulates mostly in the near of U-arches. Different manufactures researched and find out if the cooling was not cleaned or flashed before the exchange; contaminants will stick on the turbolator and causes an early failure.



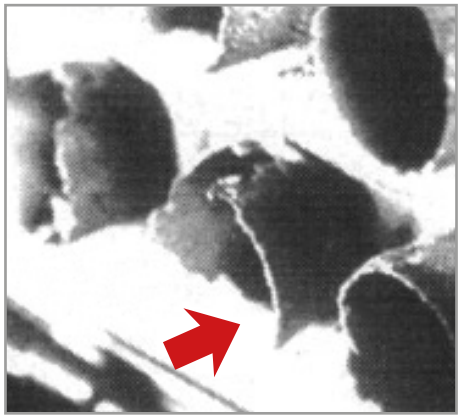
Picture 1 shows an absolute permeable heater installed since 9month in a car.

Turbolator are little coils which are built in boiler tubes. They swirl the refrigerant in the heater so that by low … reaches a maximal heat transmission.

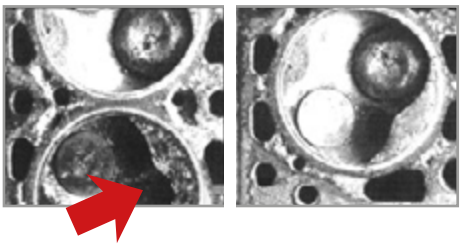


Picture 2 shows a coil of the turbolator. On the upper spiral solid parts accumulate.

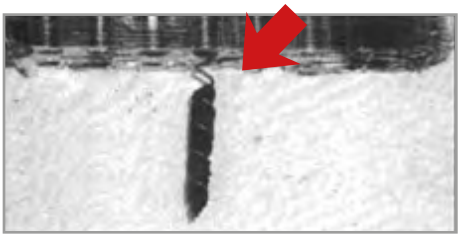
If contaminants accumulate on the turbolator, the corrosion process will interrupt for a short time and the blockage build up higher pressure, which causes a really fine stream of refrigerant under high pressure and creates holes in the U-arches.



Picture 3 shows how the corrosion corrodes aluminium tubes in the cooling block when the cooling system was not efficient cleaned or flashed, or used to less or wrong frost protection.



Picture 4 + 5 (top) shows the cylinder head top with the affected by using to less or wrong frost protection. The released metallic contaminant circulates in the cooling system and blocks the little openings as the U-arches in the heater.
Picture 6 (bottom) shows contaminant accumulates to the turbolator which accelerate the corrosion process.
Picture 7 (bottom) shows any cut open U-arches. Inside the U-arches are visible traces from contaminant.



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