How to Clean a VNT Turbo.

After removing the turbo from the car, first remove the oil inlet union from the turbo, along with the oil return flexible pipe. Unscrew the five 6mm screws (arrowed) holding the exhaust casting using a 10mm ring spanner or socket only. Over a wooden bench or similar, carefully tap the exhaust casting with a rawhide hammer, working around the casting. The two should separate fairly easily but do so close to the surface of the bench. Take care not to damage the turbine.

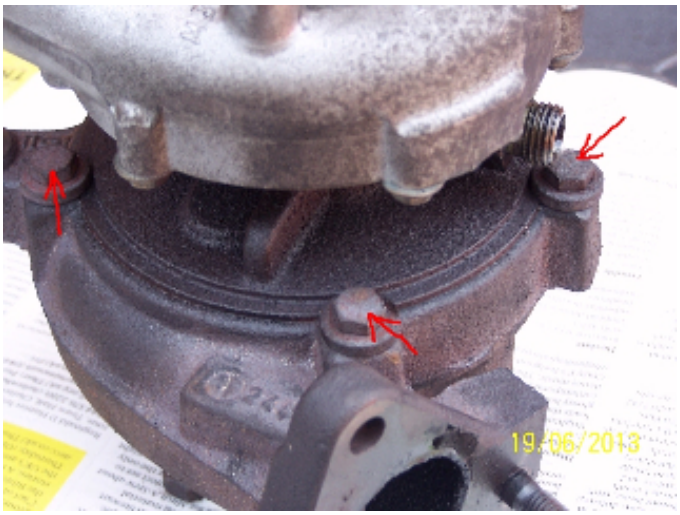

Fig. 1

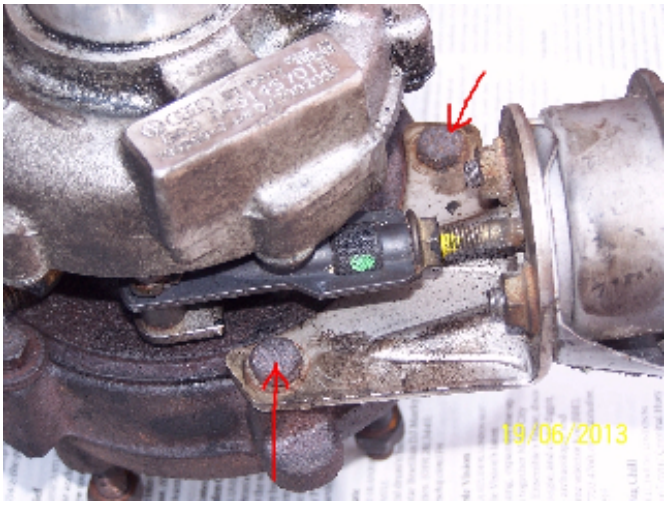

Fig. 2

This exposes the VNT mechanism:

Fig. 3

Remove the large actuating ring along with the three grooved rollers and their locating pins (arrowed). It may at this stage be an idea to put on some rubber gloves. Clean off most of the coke with a blunt screwdriver or similar and then spray with oven cleaner:

Fig. 4

Spray cleaner into the radial slot containing the vanes. After half an hour wash off with water and check that each element moves freely. Note that when assembled each element only moves through about 50deg. Repeat the treatment if necessary.

Don’t be tempted to remove the VNT mechanism from the casing. Even if you can remove the Torx screws, there is no easy way of extracting the mechanism.

Reassemble the mechanism with the internal notch for the actuating mechanism located adjacent to the position of the locating roll pin. Clean up the mating face of

the turbo with a scraper. Don’t be tempted to use oven cleaner for fear of it reaching the bearings. Note the locating roll pin (arrowed).

Fig. 5

Mark a line at right angles to each face of the exhaust casting and the turbo body at the location of the hole for the locating roll pin and the roll pin. Line up the two marks and press the assembly back together, holding the actuator rod so that it points towards the centre of the assembly. Coat the five screws with VAG G 052 112 A3 hot bolt paste or similar to make disassembly easier next time. Tighten each screw a little at a time making sure that the actuating mechanism is located correctly and is not clamped. I don’t have any torque figures but 15Nm would appear to be about right.