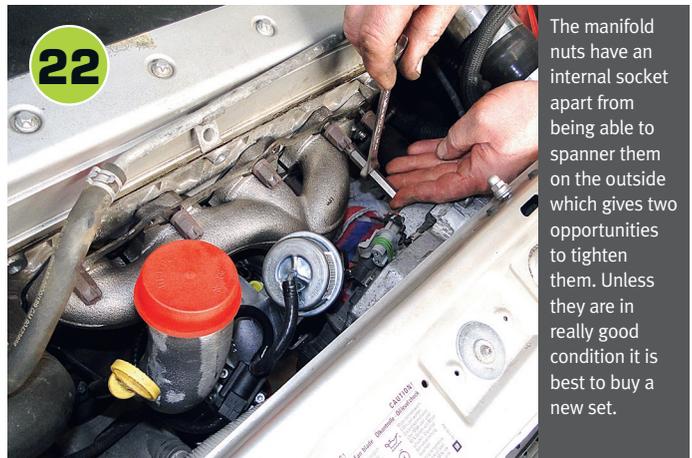




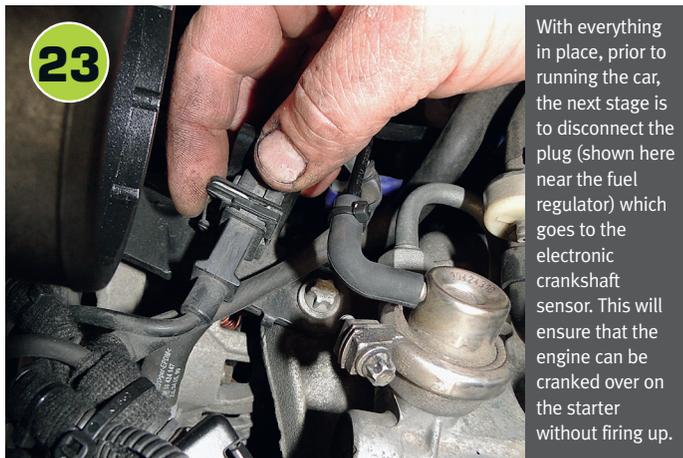
21

Refitting the new unit is basically a reversal apart from fitting hoses to the turbo where needed. They include the oil drain pipe and the coolant return union on the back of the turbo.



22

The manifold nuts have an internal socket apart from being able to spanner them on the outside which gives two opportunities to tighten them. Unless they are in really good condition it is best to buy a new set.



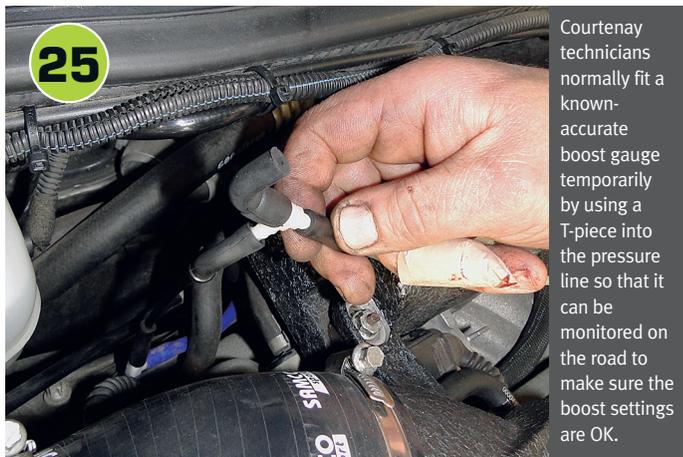
23

With everything in place, prior to running the car, the next stage is to disconnect the plug (shown here near the fuel regulator) which goes to the electronic crankshaft sensor. This will ensure that the engine can be cranked over on the starter without firing up.



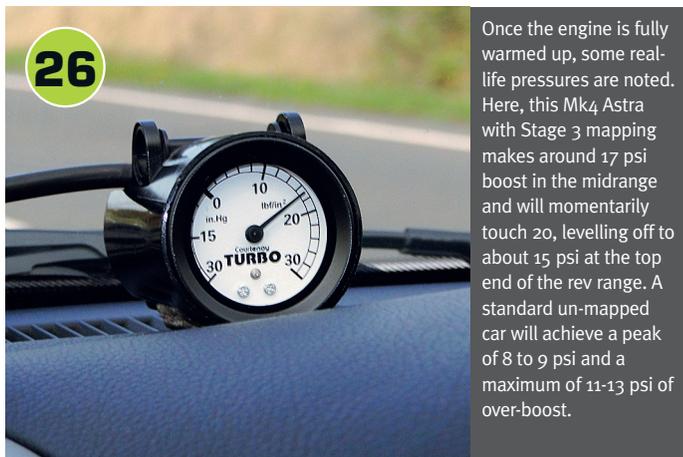
24

After fitting the new oil filter and topping up with fresh oil, remove the oil feed banjo bolt and slowly pump in plenty of oil to pre-charge the turbo, making sure that it doesn't start dry. Once topped up with plugs and caps in place, the engine can be turned until the oil light goes out and then the crank sensor is ready to be plugged back in to fire it back into life.



25

Courtesy technicians normally fit a known-accurate boost gauge temporarily by using a T-piece into the pressure line so that it can be monitored on the road to make sure the boost settings are OK.



26

Once the engine is fully warmed up, some real-life pressures are noted. Here, this Mk4 Astra with Stage 3 mapping makes around 17 psi boost in the midrange and will momentarily touch 20, levelling off to about 15 psi at the top end of the rev range. A standard un-mapped car will achieve a peak of 8 to 9 psi and a maximum of 11-13 psi of over-boost.

