

Workshop 3

EGR Valve 2.7Td Models (Exhaust Gas Recirculation)

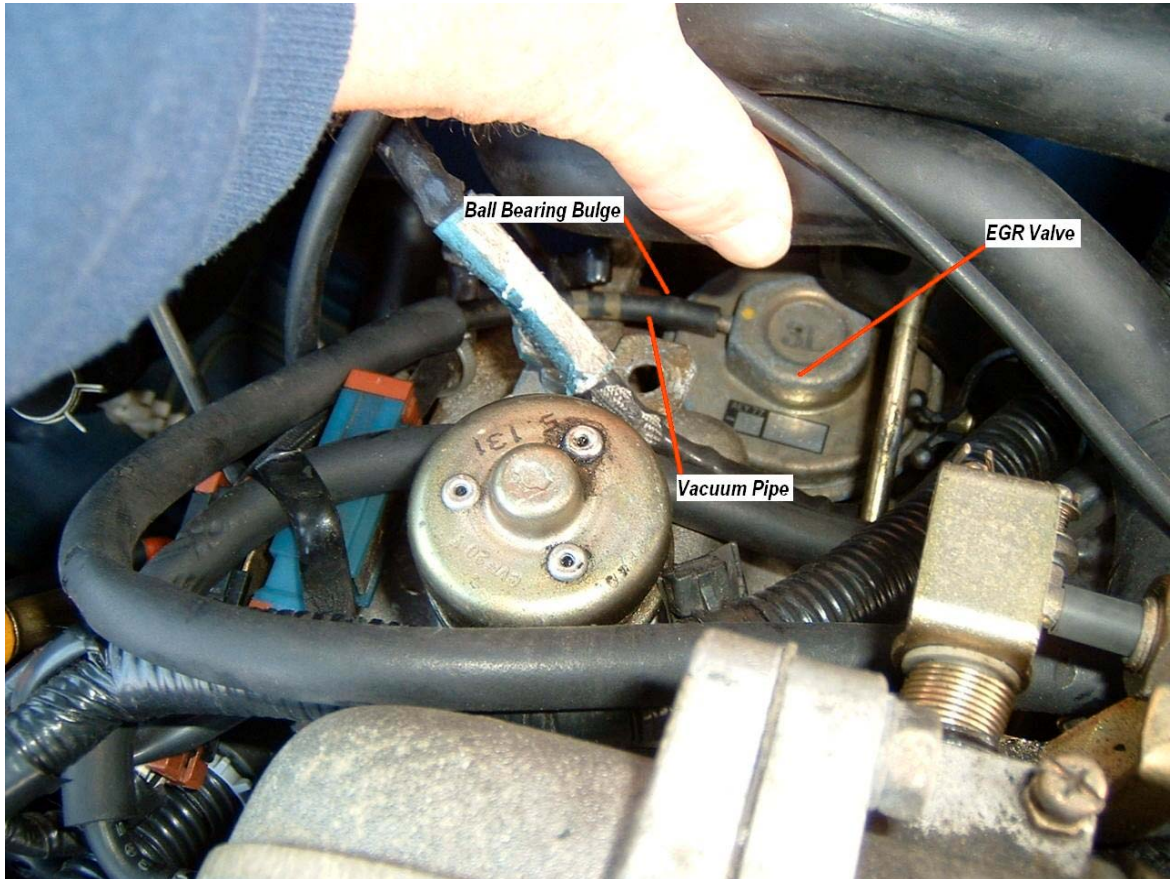
**Fault: Black Smoke, Rough Cold Starting,
High Fuel Consumption, Some Loss of Power.**

**Repair: Inspect/ Replace/ Clean or Block Vacuum Pipe
with Ball Bearing.**

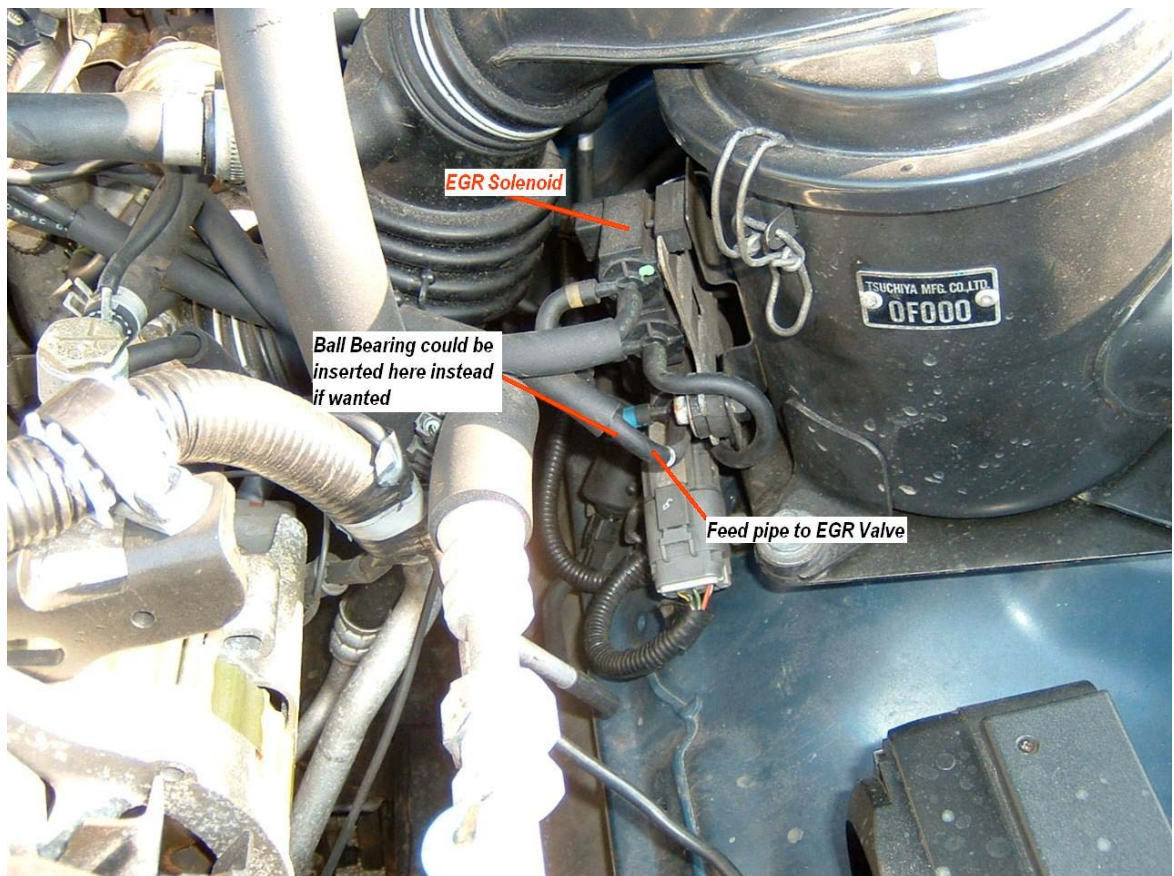
The EGR Valve basically re-circulates the un-burnt gases back through the combustion system via the EGR Valve, which should only open on most EGR Valves during the idling of the engine, but it seems to go faulty and has never seemed to be a very good idea to me, the main problem is that it will stay open or stick slightly open causing the gases to re-circulate when you are accelerating,

This then acts very similar to an Exhaust Brake Retarder as fitted to most Lorries, which when pressed allows Exhaust gases to be re-circulated through the combustion system and allows the pressure to build up which slows the engine down, thus not using the normal braking system on the lorry which then cuts down on brake replacement cost's. (If you press the retarder whilst accelerating, you get thick black smoke trailing behind and loss of power)

Here we can see the EGR Valve and the black rubber vacuum pipe running back to the EGR Solenoid under the Air Filter canister.



And below you will see the EGR Valve Solenoid.



It is quite difficult to get to the Vacuum pipe at the EGR Valve side and I would recommend fitting it at the solenoid end as above, make sure you trace the Pipe back to the EGR Valve firstly so you get the correct one.

Simply pull the pipe off the Solenoid and force a Small Ball Bearing into the end of the Vacuum Pipe approximately one inch, this will then cut off the Vacuum supply to the EGR Valve rendering it inoperative, thus curing most if not all of the faults listed at the start of this Workshop chapter,

It May be nessecary to Remove EGR Valve if this does not work due to being stuck open, it should be soaked in fuel or cleaner, or it may be necessary to replace it

Tools needed to complete the job are:

- 1: small Ball bearing but big enough to be a very tight fit.
- 2: Five minutes of your time to complete the job.

Written and Produced
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