

Exhaust gas recirculation (EGR) valve prematurely defective?

## The causes for premature failure of a new EGR valve can be many and varied!

The phenomenon of a problem affecting a place other than where it actually originated is one that is especially evident in internal motor parts. EGR valves are a good example of this, as the causes for defective EGR valves must often be searched for in a completely different place.

A few possible causes are:

- A fault in the motor management system or incorrect software version
- Frequent short-distance operation
- Frequent driving in the partial load range (EGR control range)
- Unclean combustion, e.g. due to defective injectors or leaky boost pressure system
- Oily intake air due to worn-out valve stem seals, faulty engine ventilation, loss of oil in the cylinder head or turbo charger area, worn-out piston rings, overfilled oil or extreme engine wear (blow-by gases in the crankcase) resulting in a high carbon content in the exhaust (carbonisation) and soot formation.



And:

**If the actual cause of the problem is not found and rectified when exchanging the defective EGR valve (e.g. the sooting up of the exhaust manifold), the newly replaced valve will also not last long.**

### How can a defective EGR valve be identified?

A fault in the EGR valve makes itself noticeable through fluctuating engine performance and exhaust behaviour. Engine power may vary with every press of the gas pedal. Black exhaust and reduced engine performance are telltale indications for such problems. It is usually especially easy to identify in the so-called partial-load range, if the engine jerks and stutters at normal speeds in the city. A sticking, open exhaust gas recirculation valve causes a deficit of clean intake air at high loads and therefore impedes good acceleration. Other symptoms include large drops in performance and sometimes also an extreme build-up of soot.



## ATTENTION

Defective EGR valves must be replaced without delay as the fault can subsequently affect other parts as well. Often an additional problem is the amount of soot in the intake duct. Over time, this leads to a significant amount of contamination in the intake manifold and on the intake valves.

## NOTES FOR INSTALLATION

It is essential to assess the level of cleanliness of the exhaust manifold prior to installing the new EGR valve. If necessary, the manifold may need to be removed and cleaned to ensure residual deposits do not subsequently come loose and enter the new EGR valve. New seals are to be used for installation, too.