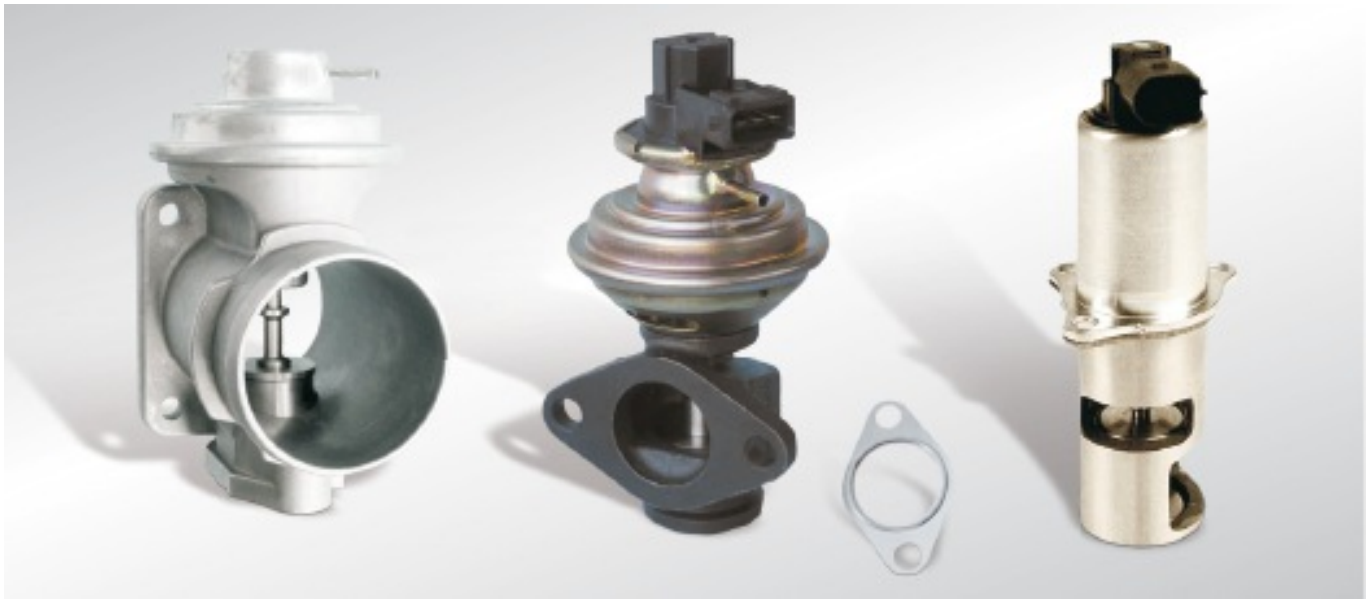
Exhaust gas recirculation

The combustion of fuel in the internal combustion engine of a hybrid vehicle produces pollutants. Exhaust gas recirculation is a method of reducing pollutant emissions from an internal combustion engine.

Safety

Faults in the exhaust gas recirculation system (EGR system for short) are shown by the malfunction indicator light. They can be noticed due to jerking, uneven idling or lack of power. Vehicles affected by this type of fault will often switch to emergency operation; this changeover manifests itself to the driver in the form of significantly reduced power. The switch to emergency operation protects the engine against damage.

Function



Exhaust gas recirculation (EGR) is a tried-and-tested method of reducing harmful substances. In this process, a defined quantity of exhaust gas is removed at the exhaust manifold and mixed back in with the intake air. This reduces the amount of oxygen in the fuel/air mixture, thereby reducing the combustion temperature in the cylinders.

As hazardous nitrogen oxides (NOx) are produced primarily at high temperatures and pressures, exhaust gas recirculation provides a means of reducing the levels of NOx concentration emitted to the environment by up to 50%. In diesel engines, exhaust gas recirculation also reduces the formation of soot particles by approx. 10%.

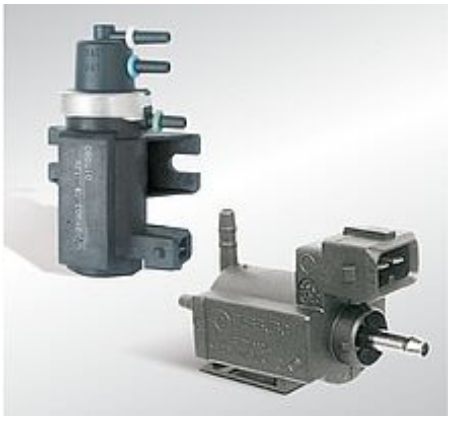
Environmental protection

Exhaust gas recirculation is one of the most important methods to reduce harmful substances. It helps to reduce the concentration of hazardous nitrogen oxides that are emitted into the environment by up to 50%. With diesel engines, exhaust gas recirculation also reduces the formation of soot particles by approx. ten percent.

Depreciation

The exhaust gas recirculation system does not require any particular care. If the oil change and maintenance intervals are not complied with, this can lead to malfunctions. An exhaust gas recirculation system that is in perfect working order is a prerequisite for passing the exhaust gas test.

Images



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