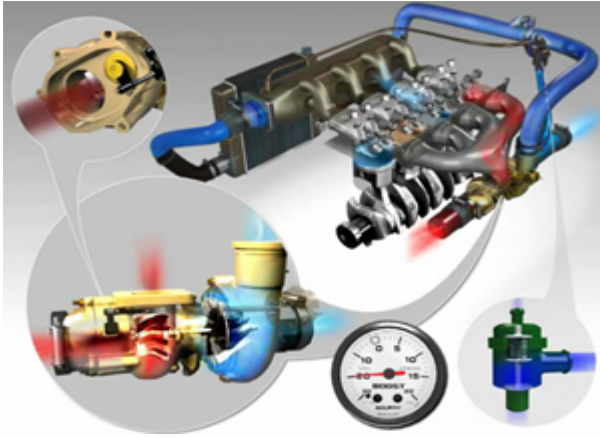
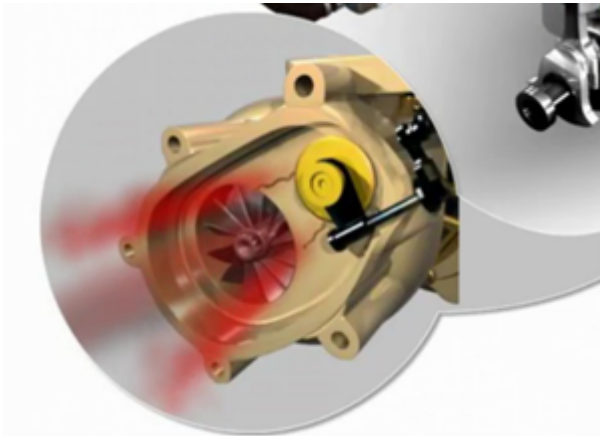


# Leaking Turbocharger Wastegate



The turbocharger uses moving exhaust gases to compress air entering the intake.



Over time, the wastegate seal can crack, allowing exhaust gases to escape and causing a loss of intake air pressure.

The turbocharger increases the density of air entering the engine. As a result, the engine management computer is able to deliver more fuel to each cylinder creating more engine power from the same amount of engine displacement.

The turbocharger consists mainly of a turbo housing, a compressor wheel, an exhaust turbine and a shaft that connects the two.

Compressing air creates a lot of heat so turbochargers normally have coolant and oil lines running to them to help cool and lubricate all the moving parts, and an intercooler that cools the air after it has been compressed by the turbocharger.

Exhaust gases from the engine pass over the exhaust turbine, causing it to spin quickly. Since the exhaust turbine is connected directly to the compressor wheel, the compressor wheel also spins at the same speed, forcing more air to enter the engine. Standard turbochargers create an intake pressure of 10-20 PSI on acceleration.

The shaft that connects the compressor and turbine wheel is surrounded by several seals to keep lubricating oil from entering the air intake system. These seals can fail, allowing oil to enter the air intake. This oil is eventually burned along with the fuel/air mixture and creates a large plume of blue smoke from the exhaust. As well as losing oil and causing additional pollution, components like the catalytic converter can be damaged by the oil passing through the exhaust.