

EGR Valve 7518065

This analysis is focused in the tightness of the valve. The valve is subjected to pressure around 0.5/0.7 bar. Several tests, straight to the engine, prove that when the EGR valve operates within the limits (0.5/0.7 bar) has a linear output.

In many cases, by testing the engine it has been found that the pressure was way above the limit of 0.7 bar. This is due to abnormal behavior from the swirl flaps of the manifold, which is probably due to a malfunction of the brake servo or the vacuum, that increases the pressure by 0.2/0.3 bar.

In some cases engineers do modifications and remove the vacuum that regulates the operation of the swirl flaps. This way the swirl flaps remain open and results in the pressure increase. The increase of the pressure leads to extreme strain in the film inside the EGR valve, resulting in premature rupture of the valve.

