

Quick: Exhaust Gas Analysis Facts

CO₂ (Carbon Dioxide) Levels at 13% to 14% indicate of a good running balanced engine

O₂ (Oxygen) at 0% level s is a quick indicator of a good running balanced engine. The catalytic converter is a O₂ absorber, it stores O₂ for more complete combustion. High O₂ levels in discharge gases could indicate a bad cat converter.

CO (Carbon Monoxide) High levels are almost always a function of unbalanced air to fuel ratios, usually indicating injector irregularities and/or vacuum leaks.

HC (Hydro Carbon) High levels almost always indicate motor mechanical problems

NOX (Oxides of Nitrogen) Excess are a function of a superheated combustion process which can be corrected by applied EGR, timing corrections and proper engine cooling.

O₂ sensor check for the analyzer> the % of O₂ should be about 20-21% when sampling atmosphere

Detonation theory: Caused by the premature combustion/dual flame propagation across the top of the piston milliseconds prior to combustion or when two flames meet at the top of the piston. The actual Ping is the hyper violence of the combustion process rattling the piston wrist pin.

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