

Diesel Exhaust Gas Recirculation System

TECHNOLOGY

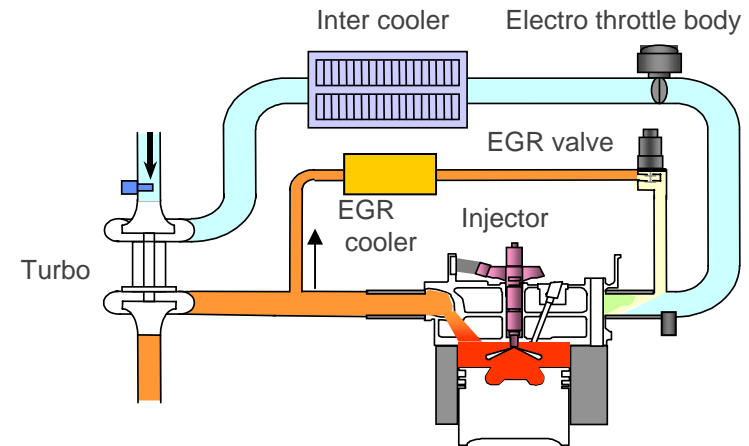
Optimizes engine combustion temperature for cleaner exhaust gases

TECHNOLOGY EGR Technology

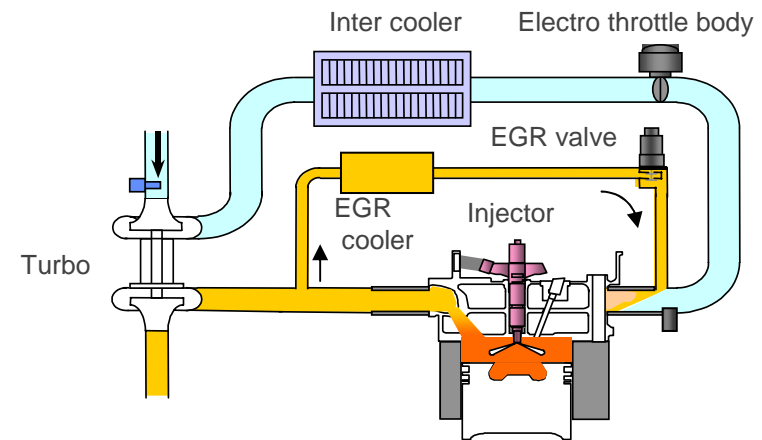
Exhaust-gas recirculation returns some of the exhaust gases to the intake system, limiting the fresh-air intake and lowering the engine's combustion temperature to reduce NOx output.

Increasing the EGR volume lowers NOx production to a point, but excessive EGR volume causes incomplete combustion, raising the particulate levels. Achieving the opposing goals of lower NOx production and lower particulate levels requires carefully tuned EGR levels.

DENSO uses an electronically controlled EGR valve that operates in tandem with an electronic throttle.



Without EGR: during air intake, since the oxygen density is high, combustion temperature is high, leading to higher NOx.



With EGR: Since oxygen density during air intake is reduced, combustion temperature is reduced, leading to lower NOx.

DENSO