

EGR Coolers



Why do EGR Coolers fail?

EGR Coolers are used on many later model diesel engine vehicles these days. They are there for environmental reasons, to assist in reducing NOx emissions from diesel engines.

The Exhaust Gas Recirculation Cooler is a Heat Exchanger that does what its name suggests, cools exhaust gases prior to re-entering the intake manifold.

Some models of vehicle suffer from failure more than others. Some of this is due to EGR Cooler design, but the main reason they all fail is due to excessive EGT (Exhaust Gas Temps). The main culprit for this is "Incorrect Fuel Delivery", bad injectors. When the fuel is not atomised correctly it leads to greatly increased EGTs. These much higher EGTs can and do boil the coolant with in the EGR Cooler, this will then cause the cooler to become fractured either internally or externally. When they fracture internally, engine coolant will then be "sucked" from the cooling system and exited out through the exhaust. This will obviously lead to an over heating event, causing possible engine component failure. High EGTs can also be caused by exhaust system failures. Such as over boosting turbos, blocked or restricted exhaust systems.

Summary; if the real reason for failure is not identified at repair time, then the most likely out come will be the failure of the newly fitted part as well.

