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## **Exhaust Gas Temperature (EGT) Measurements on Diesel Particulate Filter (DPF) Equipped Vehicles**

As vehicle emission standards become more stringent, the implementation of DPF technology is increasing across all diesel vehicles. The DPF is designed to capture large diesel exhaust particles (soot) which can be burnt off during regeneration. Regeneration characteristics vary between vehicle manufacturers and engine configurations, as does the location of the DPF in the exhaust system.

DPF regeneration can create higher than normal combustion exhaust gas temperatures, up to 700c. This means that if an EGT sensor is installed after the DPF in the exhaust system, it will measure not only the normal exhaust gas temperatures, but also the DPF regeneration temperatures.

If your vehicle is equipped with a DPF, it is advisable to install the EGT sensor before the DPF to ensure that only combustion exhaust gas temperatures are measured. This means you can effectively monitor the engines exhaust output without being influenced by DPF regeneration.

If your vehicle is equipped with a DPF and you cannot install the EGT sensor before the DPF, the EGT gauge alarm level must be set to maximum to avoid false triggering due to DPF regeneration. This means that if there is an abnormal engine condition causing excessive combustion exhaust gas temperatures then the alarm will not sound unless the temperature reaches the maximum setting.

***REDARC advise that the new 2016 2.8L D4D diesel engine in Toyota Prado, Fortuner and Hilux is equipped with DPF and cannot have the EGT sensor installed before the DPF. The DPF on these engines is directly fitted to the outlet of the turbocharger. In these vehicles, set the EGT alarm point to maximum and advise the customer of the reason. If they do choose to have the alarm set at a level for normal combustion temperature monitoring they will experience the alarm when regeneration occurs.***

# **TECH TIP**

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