

Failure Diagnosis – Abnormal Combustion

Replacement of engine gaskets can be time wasted, if the cause of engine failure has not been identified. Gaskets act much like a safety valve or fuse, designed to give way, amid underlying fitting or operational problems, thus preventing more detrimental engine damage. As such, clues left on the gasket may help you diagnose failure, preventing any re-occurrence.

Small indentations or damage, around the circumference of the head gaskets bore ferrules (fire-rings), indicates the presence of abnormal combustion; lean burn, detonation, pre-ignition. Excessive combustion pressures and shock-loadings damage the gasket, reducing the ability to seal combustion gases.



Radial indentation damage to bore ferrules



Combustion allowed to escape into the cooling system