|  |  |  |  |
| --- | --- | --- | --- |
| Problem | Indicator(s)/  diagnostics | Possible causes | Repair |
| Fractured piston ring |  |  |  |
| Cracked piston crown |  |  |  |
| Exhaust vavle seal corrosion |  |  |  |
| Flush back caused by misfire |  |  |  |
| Clogged fuel oil strainer |  |  |  |
| Blackout |  |  |  |
| Worn cylinder liner |  |  |  |
| Exhaust valves that stick |  |  |  |
| Defective high-pressure fuel pump |  |  |  |
| Worn crankshaft bearing |  |  |  |
| Worn scraper ring and piston rings |  |  |  |
| Valve that will not seal |  |  |  |