

THE SYMPTOMS

- Low oil pressure warning.
- Turbocharger failure.
- Hydraulic Lifter failure or excessive engine knocking.
- Noise during operating temperature.
- Timing system noise during deceleration.
- Timing failure.
- Poor performance or fuel economy.
- Evidence of oil starvation such as Camshaft damage or bearing journal scoring.
- Irregular service or oil contamination due to excessive levels of hydrocarbon in the Oil Sump Pan filter.

THE REASON

- If hydrocarbon contamination from the combustion cycles are not controlled by regular oil changes an abrasive paste is developed.
- Use of the wrong oil can also cause an abrasive paste which is deposited at the bottom of the Sump Pan. This can work its way through the Oil Pump reducing efficiency and pressure. This may then lead to oil starvation of the bearing journals and Hydraulic systems, causing Timing failure.

THE SOLUTION

- Use a surface roughness test and narrow nose feeler gauge to confirm tolerances.
- If results are outside the stated tolerances, displaying evidence of oil starvation, contamination damage or excessive wear, replace the Oil Pump.
- If unsure, replace.

OIL PUMP REPLACEMENT

Examination areas and operation

THIS INFORMATION IS FOR THE FORD DURATORQ COMMON RAIL ENGINE FROM 2000 - 2006, FITTING 2.0^{CC}, 2.2^{CC} AND 2.4^{CC}

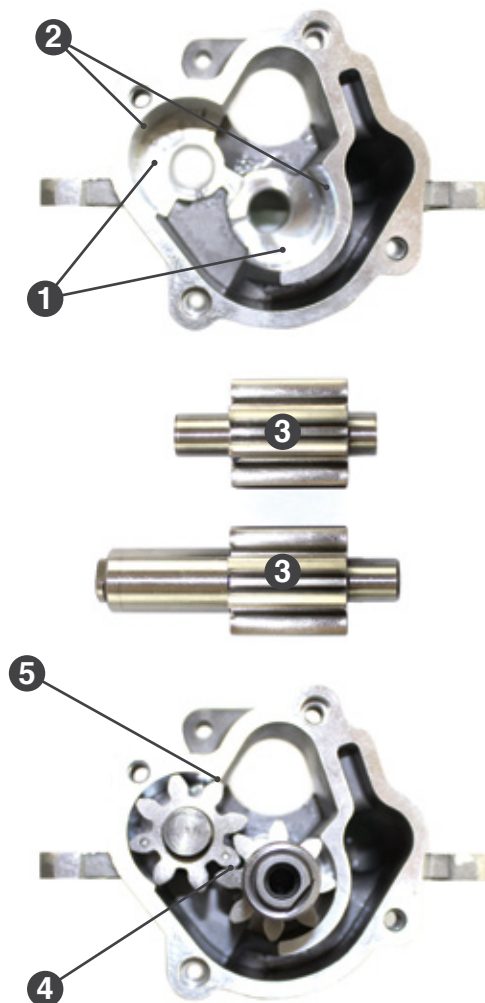


DIAGRAM	TEST AREA	TEST TYPE	TOLERANCE	EXAMINE FOR
1	Upper and lower thrust control faces	Surface finish	0.220 > 0.400µm	Wear and scoring
2	Main rotor pressure control faces	Surface finish	0.350 > 0.700µm	Wear and scoring
3	Rotor tooth	Surface finish	0.300 > 0.600µm	Wear and scoring
4	Rotor tooth	Backlash	0.07 > 0.12mm	Wear and scoring
5	Rotor to control face	Clearance gap	0.03 > 0.05mm	Wear and scoring

! BGA products are to be replaced by an experienced automotive installer. This information is to be used as reference only. Always seek manufacturer specification.