

Engine - Overview

Base Part Number: Base Part Number: 6L084

Overview

The 5.0L is a V-8 engine with the following features:

- Interference design engine
- Dual overhead camshafts
- Four valves per cylinder
- SFI
- Direct fuel injection
- Aluminum cylinder heads
- Aluminum, 90-degree V-cylinder block
- Twin independent VCT system
- Individually chain-driven camshafts with a hydraulic timing chain tensioner on each timing chain
- Electronic ignition system with 8 ignition coils

Engine Identification

Always refer to these labels when installation of new parts is necessary or when checking engine calibrations. The engine parts often differ within a CID family. Verification of the identification codes will make sure the correct parts are obtained. The codes contain all the pertinent information relating to the dates, optional equipment and revisions.

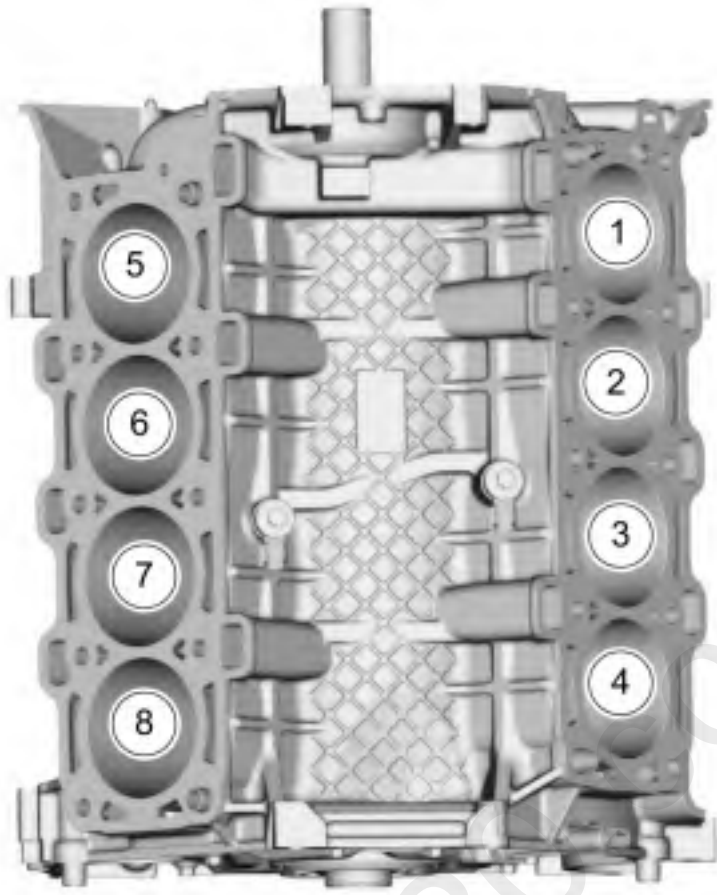
Engine Code Information Label



E265778

Item	Description
1	Essex engine plant
2	Engine displacement
3	Engine build calender date (DDMMYY)
4	Engine build Julian date (YYJJJ)

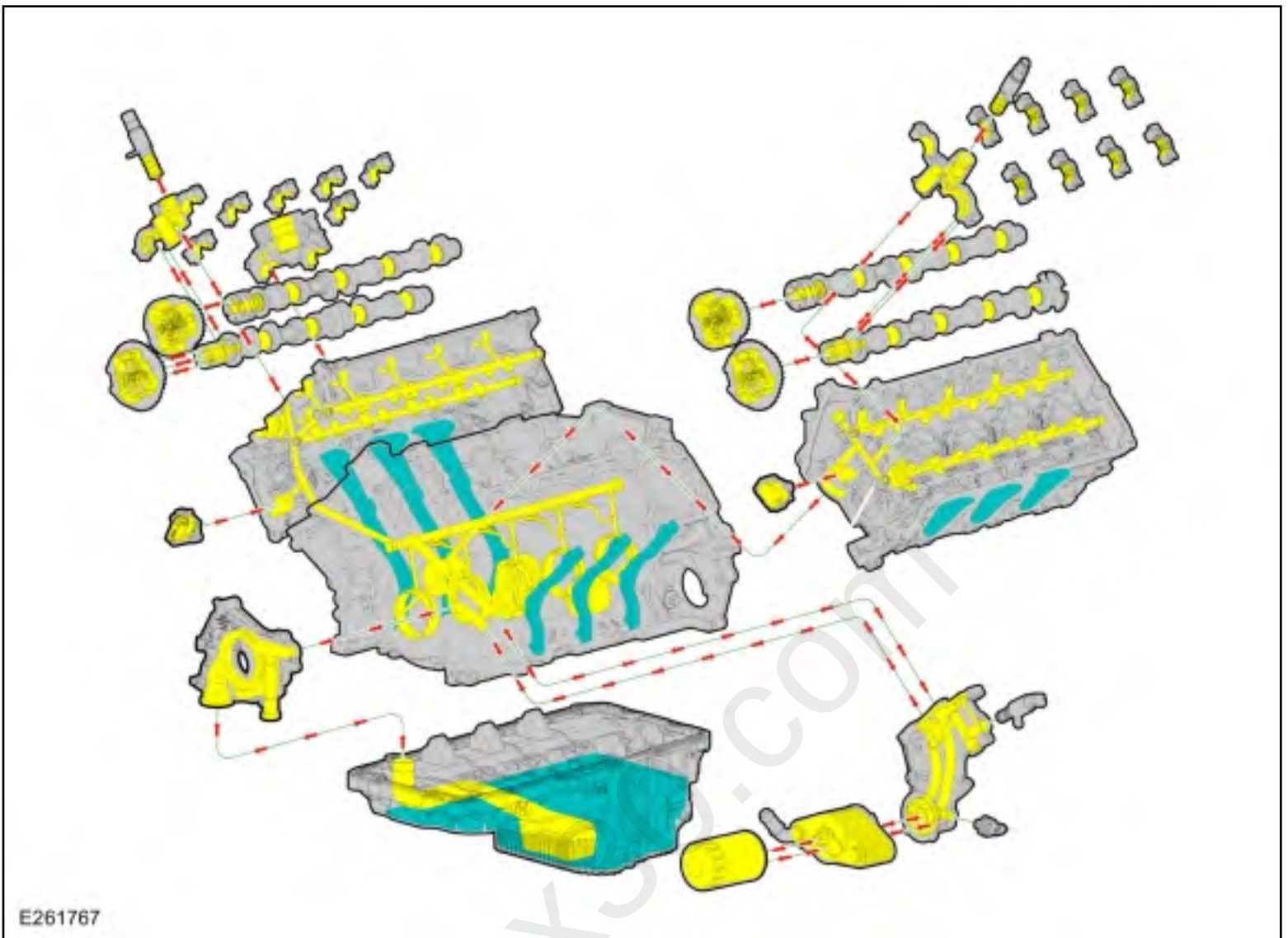
Engine Cylinder Identification



E189504

Engine Oil Flow Illustration

Oil Flow



Item	Description
Yellow	High pressure oil
Blue	Oil return low pressure

Lubrication System

The engine lubrication system is of the force-feed type in which oil is supplied under full pressure to the:

- crankshaft main bearings.
- crankshaft thrust main bearing.
- connecting rod bearings.
- oil galleries.

All other parts are lubricated by splash of the oil.

The lubrication system of the 5.0L (4V) engine is designed to provide optimum oil flow to critical components of the engine through its entire operating range. The heart of the system is a positive displacement internal gear oil pump using top seal rotors.

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Generically, this design is known as a gerotor pump, which operates as follows:

- The oil pump is mounted on the front face of the cylinder block.
- The inner rotor is piloted on the crankshaft post and is driven through flats on the crankshaft.
- System pressure is limited by an integral, internally-vented relief valve which directs the bypassed oil back to the inlet side of the oil pump.
- Oil pump displacement has been selected to provide adequate volume to make sure of correct oil pressure both at hot idle and maximum speed.
- The relief valve calibration protects the system from excessive pressure during high viscosity conditions.
- The relief valve is designed to provide adequate connecting rod bearing lubrication under high-temperature and high-speed conditions.

Valve Train

The valves are actuated by a hydraulic lash adjuster and roller follower. The hydraulic lash adjusters and roller followers:

- provide hydraulic lash adjustment.
- ride on the camshaft lobes.

Twin Independent VCT System

The twin independent VCT system allows variable control of the valves which optimizes combustion at full load providing improved power and low speed torque (broadening the torque curve) which enables variable valve overlap which provides better fuel economy and emissions and provides optimized cold start operation with improved exhaust emissions.