

in the lash adjuster

b. Before Grafal coating.

DESCRIPTION AND OPERATION > ENGINE - OVERVIEW > OVERVIEW

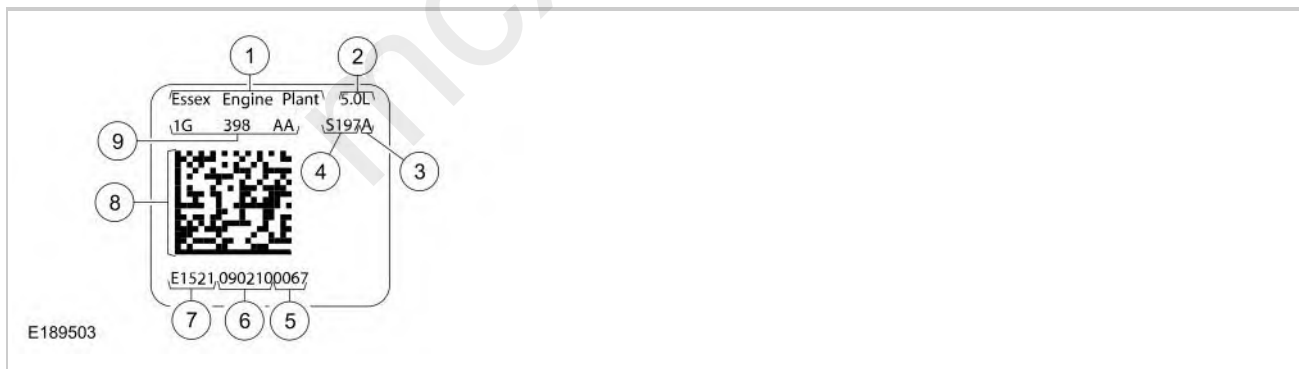
The 5.0L (302 CID) is a V-8 engine with the following features:

- Dual overhead camshafts
- Four valves per cylinder
- SFI
- 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.

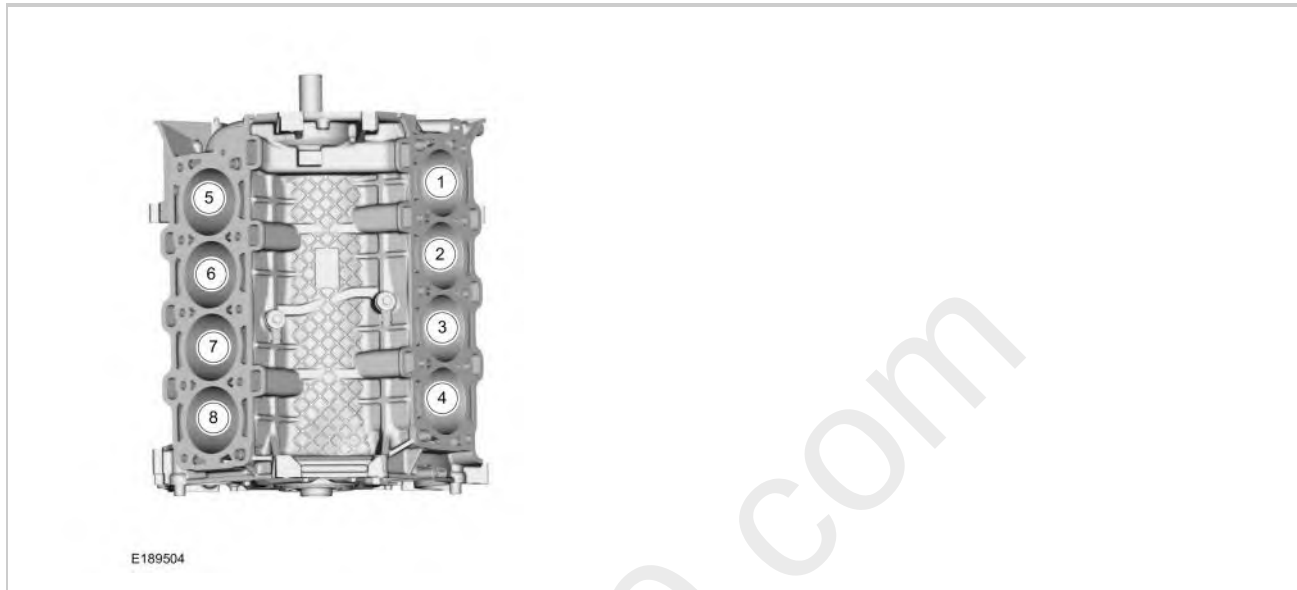
Engine Code Information Label



Item	Description
1	Essex engine plant
2	Engine displacement
3	Transmission
4	Vehicle line
5	Sequential number

6	Engine build date (DDMMYY)
7	Essex engine plant
8	Bar code
9	Engine part number

Engine Cylinder Identification



Engine Oil Flow Illustration



Item	Description
1	Oil filter
2	Oil filter adapter
3	EOP switch
4	Cylinder head - LH
5	Timing chain tensioner - LH
6	Exhaust camshaft
7	Intake camshaft

8	Exhaust VCT unit
9	Intake VCT unit
10	Cylinder block
11	Cylinder head - RH
12	Timing chain tensioner - RH
13	Oil pump
14	Oil pump screen and pickup tube
15	Oil pan baffle and gasket
16	Oil pan
17	Oil Cooler

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.

The heart of the system is a positive displacement internal gear oil pump.

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