DESCRIPTION AND OPERATION

ENGINE

The 2.3L (140 CID) 4-cylinder engine has the following features:

- Dual overhead camshaft
- Four valves per cylinder
- Sequential Multi-Port Fuel Injection (SFI)
- Aluminum cylinder head
- Aluminum cylinder block
- Electronic ignition system with 2 coil packs

The 2.3L engine is a 4 valve-per-cylinder, dual overhead camshaft engine. The engine uses a distributorless ignition system. The cylinder block is made of aluminum and the bearing caps are integrated into the ladder assembly. An aluminum oil pan bolts to the bottom of the lower cylinder block and to the transmission to provide greater strength. The camshafts are mounted in the cylinder heads and act against valve tappets to open and close the valves. The camshafts are driven off the front of the cylinder head by one timing chain. The chain is driven by a sprocket that is located on the crankshaft. The piston assembly is an aluminum piston with a cast iron connecting rod. The oil pump is driven by the crankshaft via a dedicated chain that is driven by the same sprocket that drives the timing chain.

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 that the correct parts are obtained. These codes contain all the pertinent information relating to the dates, optional equipment and revisions.

Engine Code Information Label

The engine code information label, located on the front side of the valve cover, contains the following:

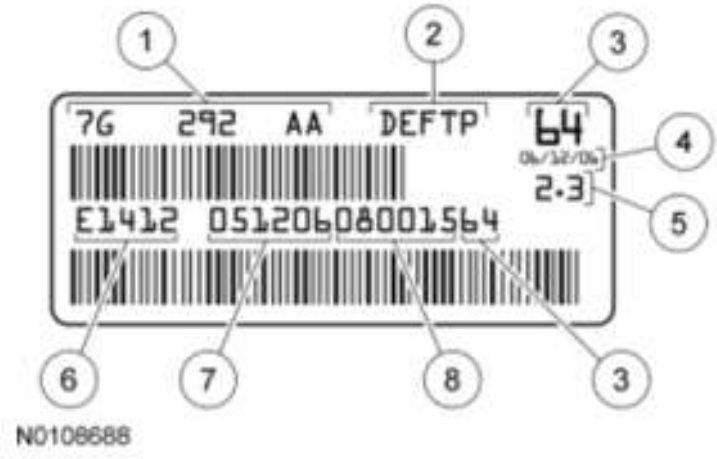

Fig. 1: Identifying Engine Code Information Label
Courtesy of FORD MOTOR CO.

DESCRIPTION CHART

Item	Description
1	Engine part number
2	Dearborn Engine and Fuel Tank Plant
3	Catch code (indicates transmission type and emission level)
4	Engine build date (DDMMYY)
5	Engine displacement
6	Plant code
7	Block finish date (DDMMYY)
8	Block finish time (HHMMSS)

Exhaust Emission Control System

Operation and necessary maintenance of the exhaust emission control devices used on this engine are covered in **INTRODUCTION - GASOLINE MODELS** .

Induction System

The **SFI** provides the fuel/air mixture needed for combustion in the cylinders. The 4 solenoid-operated fuel injectors:

- are mounted in the cylinder head.
- meter fuel to the air intake stream in accordance with engine demand.
- are positioned so their tips direct fuel just ahead of the engine intake valves.

PCV System

All engines are equipped with a closed-type PCV system recycling the crankcase vapors to the intake manifold.

Lubrication System

The engine lubrication system operates as follows:

- Oil is drawn into the oil pump through the oil pump screen cover and tube in the sump of the oil pan.
- Oil is pumped through the oil filter on the left front side of the cylinder block.
- Oil enters the main gallery where it is distributed to the crankshaft main journals and to the cylinder head.
- From the main journals, the oil is routed through cross-drilled passages in the crankshaft to lubricate the connecting rod bearings. Controlled leakage through the crankshaft main bearings and connecting rod bearings is slung radially outward to cool and lubricate the cylinder walls as well as the entire connecting rod, piston and piston ring assembly.

Engine Cylinder Identification

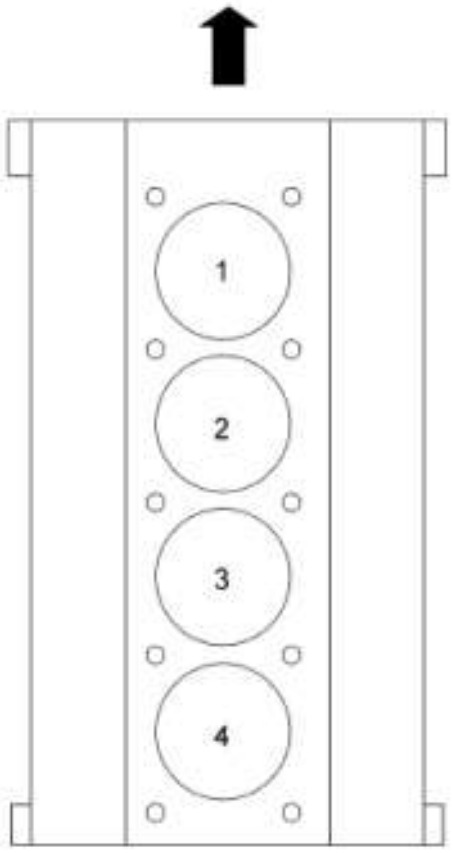

Fig. 2: Identifying Engine Cylinder Identification
Courtesy of FORD MOTOR CO.