Fig. 2: Exploded View Of Engine (1 Of 2)
Courtesy of FORD MOTOR CO.

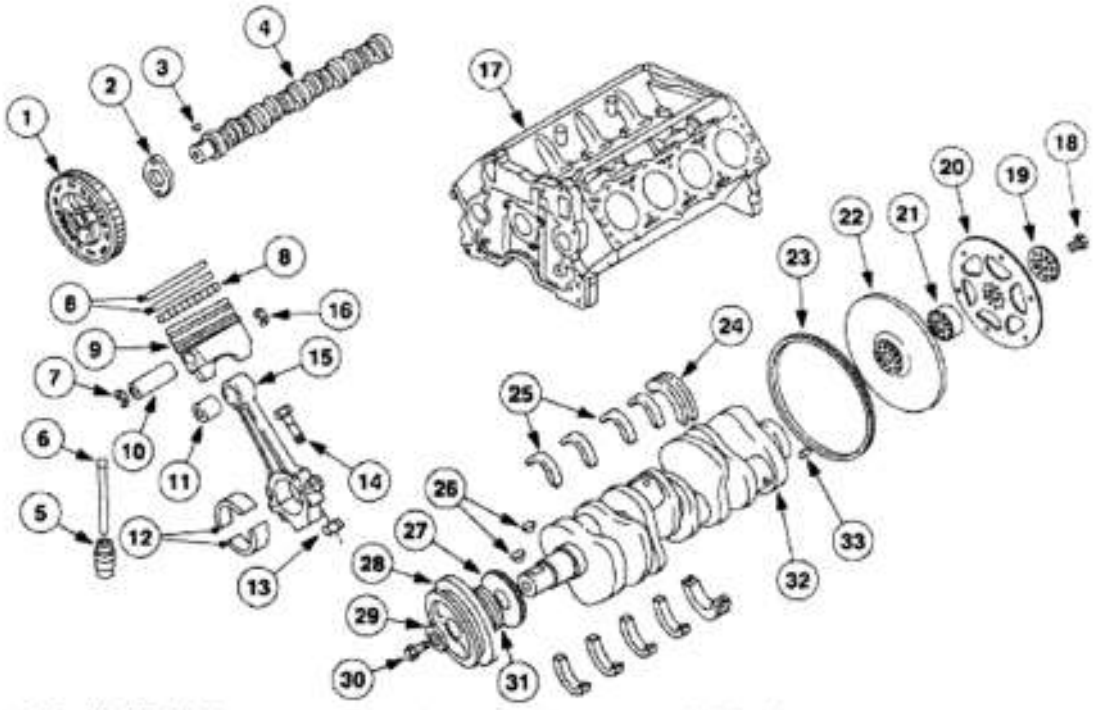

Fig. 3: Exploded View Of Engine (2 Of 2)
Courtesy of FORD MOTOR CO.

ENGINE

The 7.3L diesel engine is a 4-cycle turbo-charged V-8 with overhead valves, separated into 2 banks. The right bank cylinders are numbered 1, 3, 5, 7 and the left bank cylinders are numbered 2, 4, 6, 8. On "F" series models, the 7.3L diesel engine is rated at 250 horsepower for automatic transmission and 275 horsepower for manual transmission. On "E" series models the 7.3L diesel engine is rated at 215 horsepower.

CYLINDER BLOCK

The cylinder block has been designed to withstand the loads of diesel operations by using 4 bolt main bearing caps, internal piston cooling oil jets, a forged steel crankshaft and heavy-duty forged steel connecting rods.

PISTONS

The pistons are made of aluminum alloy, fitted with an upper keystone compression ring, a lower

rectangular compression ring and oil control rings.

PISTON PINS

The piston pins are a free-floating type permitting the piston pin to move/float freely in the piston pin bore. Piston pins are retained in the piston and rings by piston pin retainers.

CAMSHAFT

On "F" series and Excursion models, the camshaft is a roller design. On all models the camshaft is supported by 5 insert-type camshaft bearings and driven by the crankshaft through the use of the crankshaft gear and the camshaft gear.

HYDRAULIC VALVE TAPPETS

The hydraulic valve tappets minimize engine noise by maintaining zero valve lash. The hydraulic valve tappets incorporate camshaft follower guides and a roller follower design that reduces camshaft wear.

CYLINDER HEADS

The cylinder heads are designed with integral high pressure oil galleries to incorporate electronically controlled/hydraulically actuated fuel injectors. The fuel injectors are located in the center of the combustion chambers between the rocker arms.

GLOW PLUG SYSTEM

The glow plug system is mounted directly into the cylinder heads, controlled by the Engine Control Module (ECM) and designed to preheat the cylinders for faster cold weather starts and smoke reduction.

BLOCK HEATER (OPTIONAL)

The optional block heater is designed to heat the engine coolant and oil for improved cold weather starts. The optional block heater is located near the oil filter in the oil cooler and powered by a 120-volt external power source. The optional block heater is not repairable, a NEW block heater must be installed.

FUEL INJECTION SYSTEM

The fuel injection system is controlled by the Powertrain Control Module (PCM) and utilizes an electric in-line fuel pump. The fuel circulates through a combination fuel filter, fuel heater and water separator assembly and uses 8 electronically controlled/hydraulically actuated fuel injectors. The fuel injection system maintains operating pressures between 40-65 psi (2.8-4.5 Kg/Cm^2).

ENGINE LUBRICATION SYSTEM

The engine lubrication system is divided into 2 systems. The low pressure system lubricates the engine, and the high pressure system actuates the fuel injectors. The engine lubrication low pressure system maintains pressures of 0-60 psi (0-4.21 Kg/Cm^2). The high pressure system maintains pressures of 600-3,000 psi (42-211 Kg/Cm^2). The engine lubrication system is cooled by an engine oil cooler and utilizes an oil pressure sensor and an oil pressure regulator. For more information on low and high pressure oiling systems, see **ENGINE OILING**.