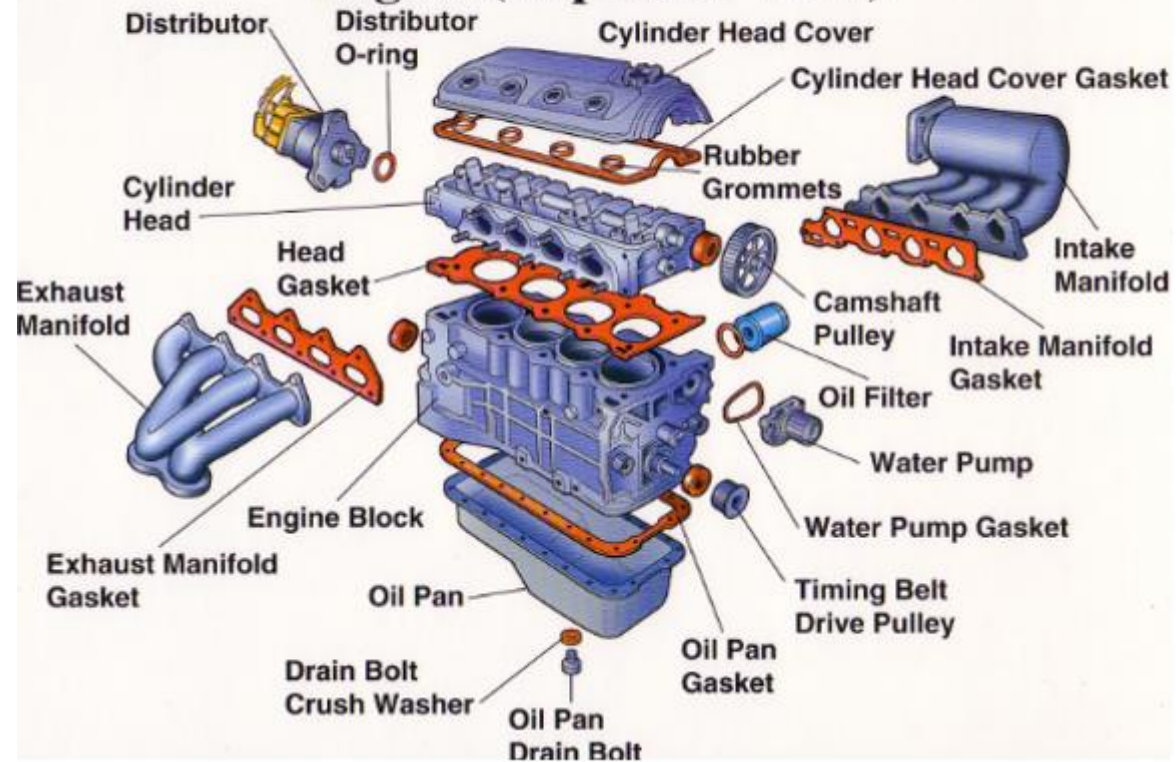
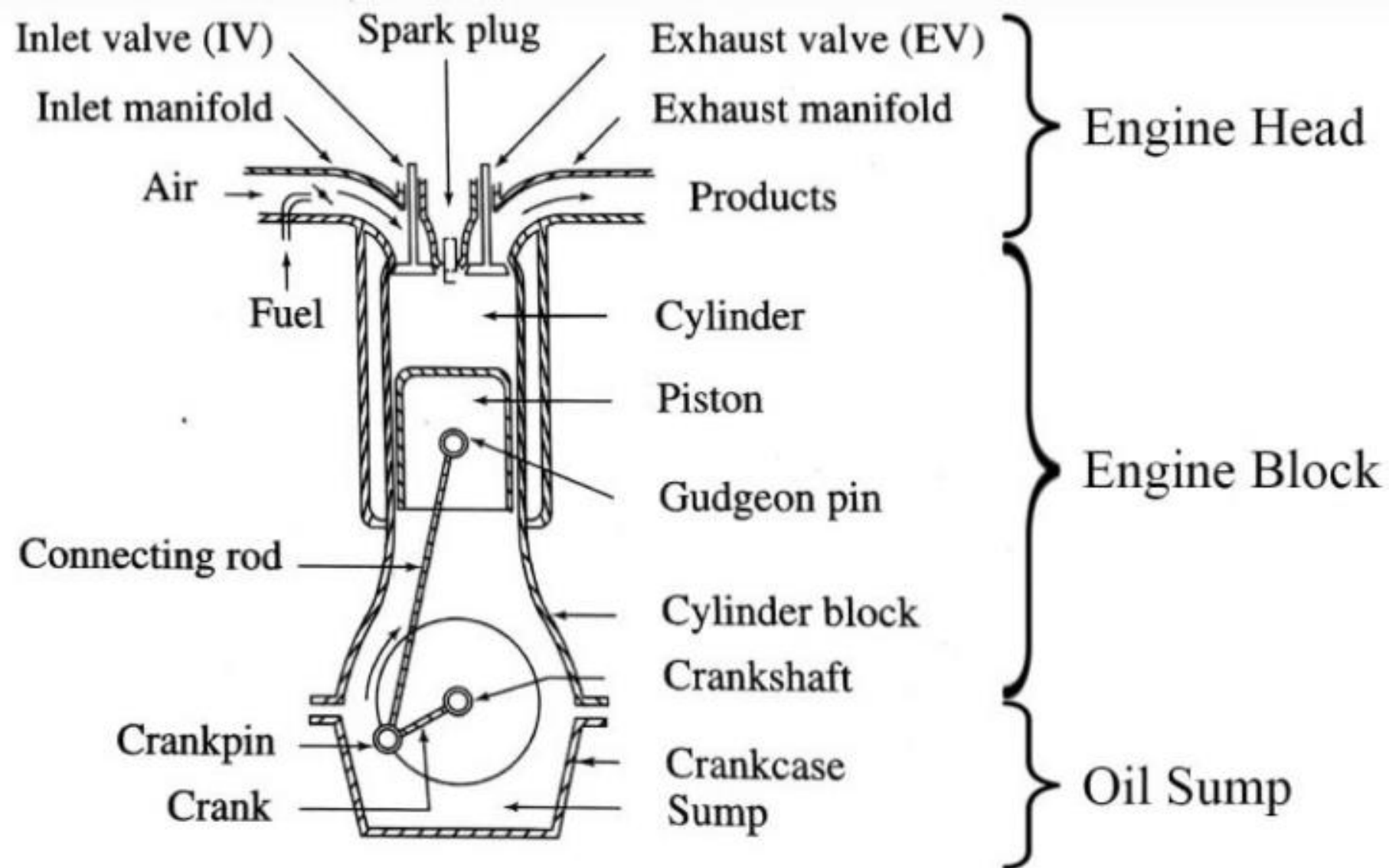


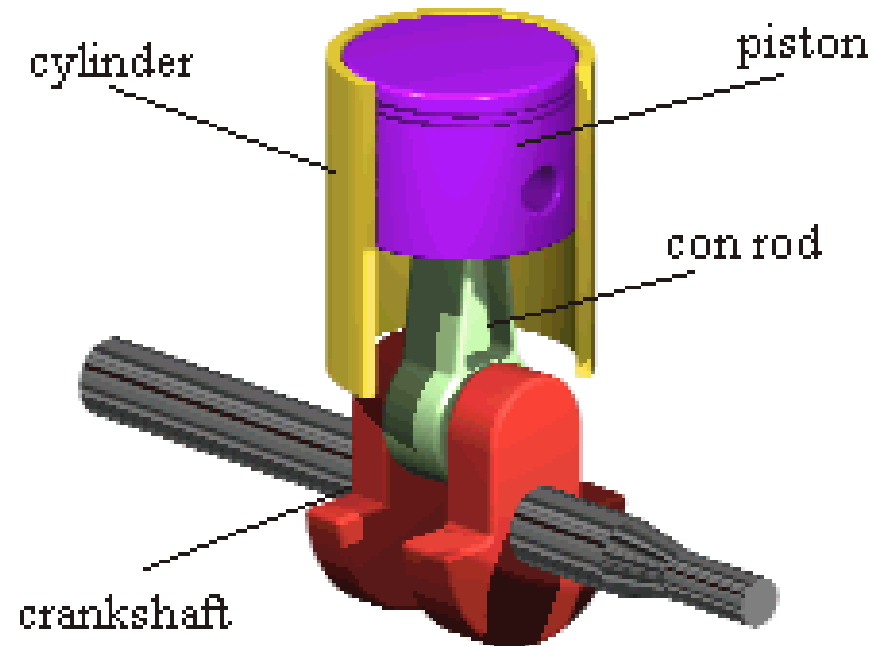
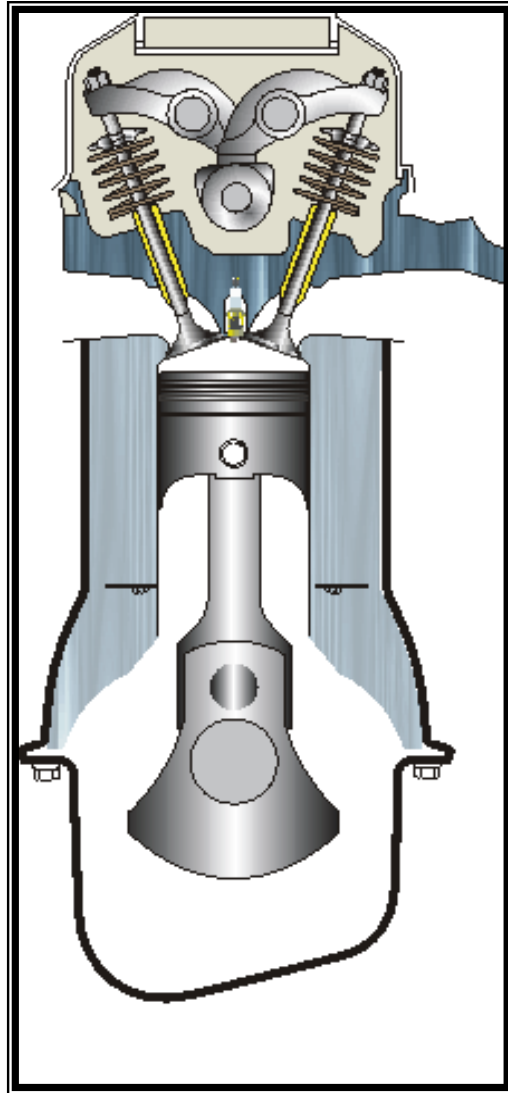
# Automobile Pictures

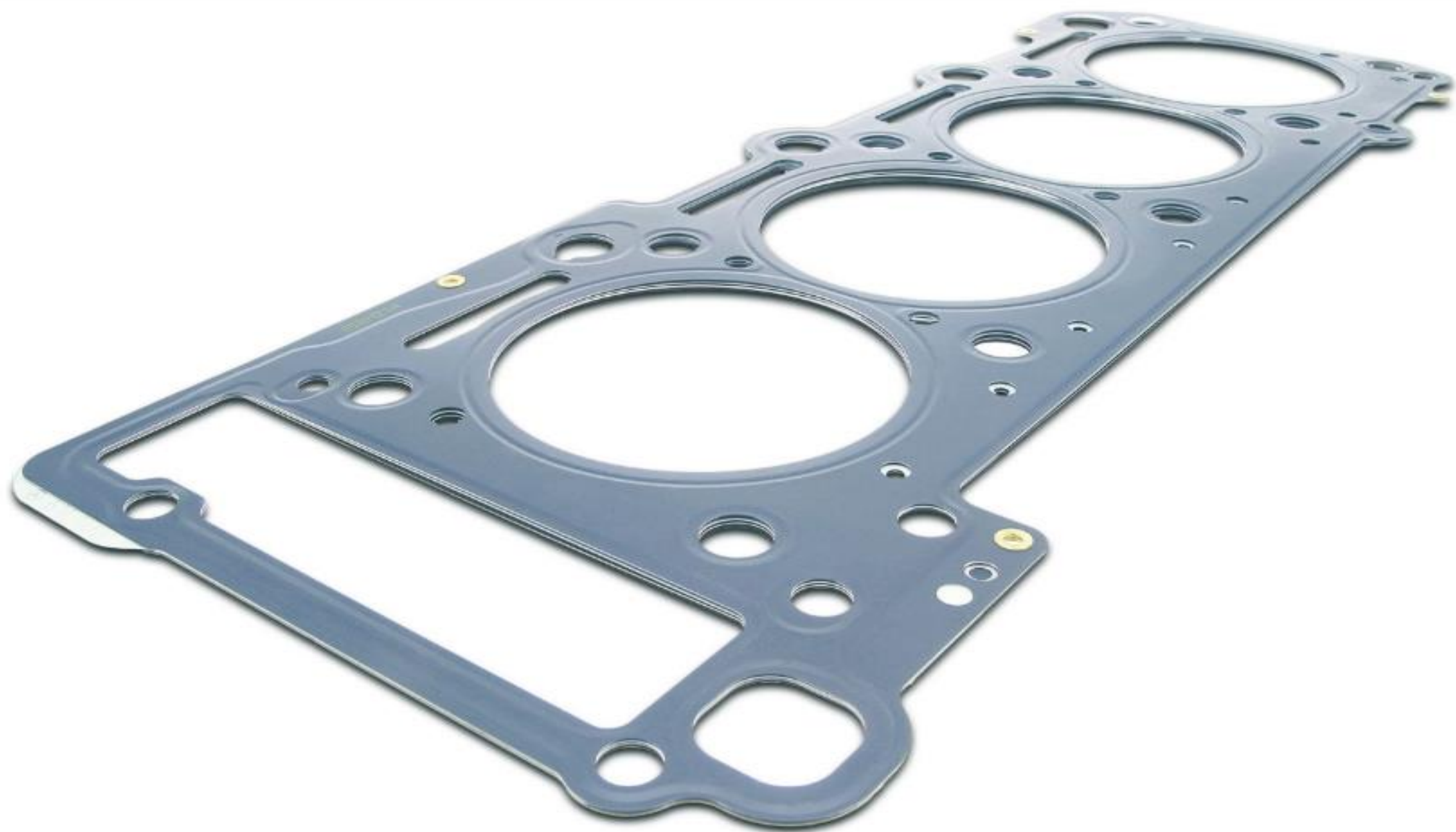
## Engine (Exploded View)

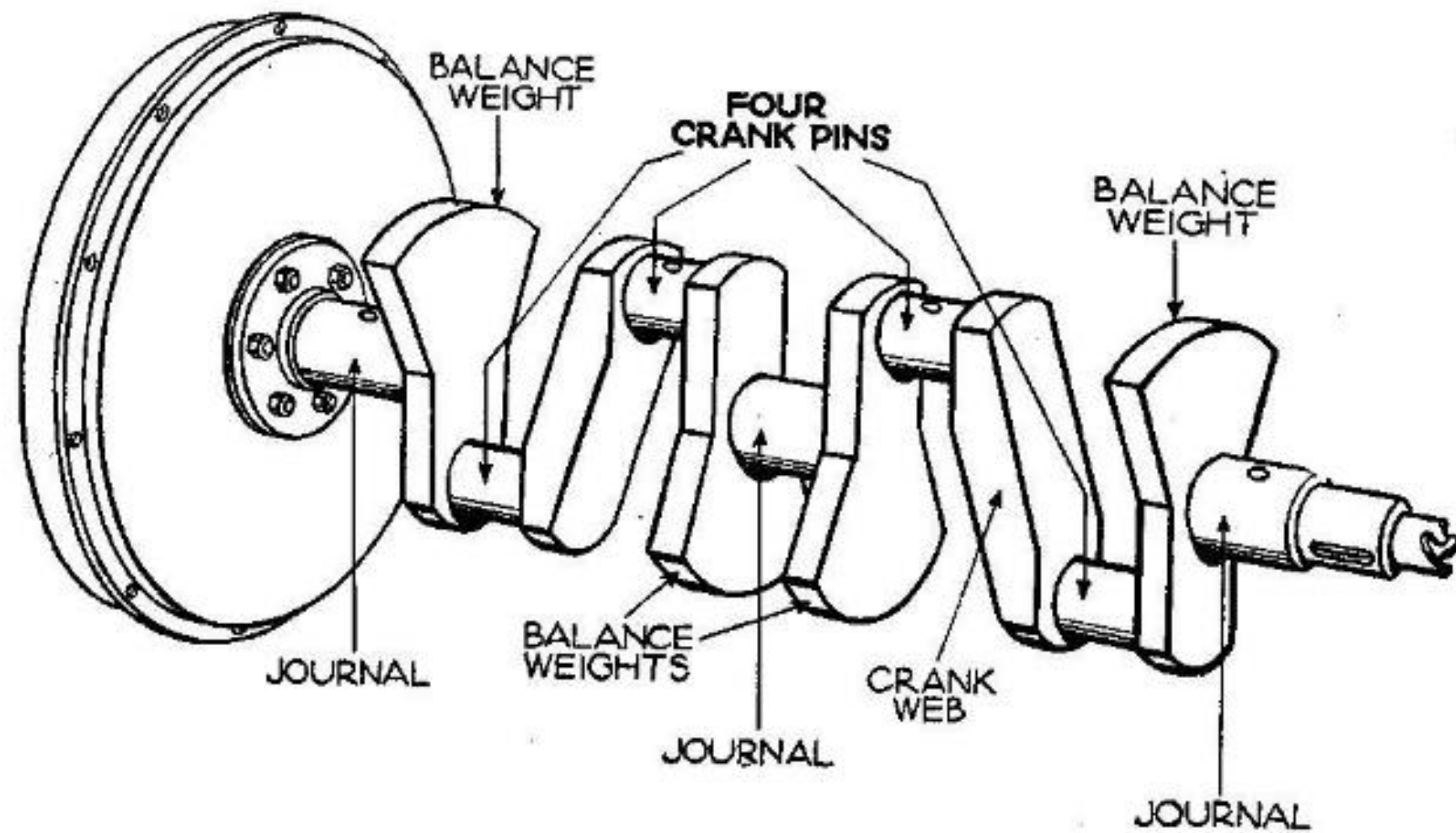




# Engine Design





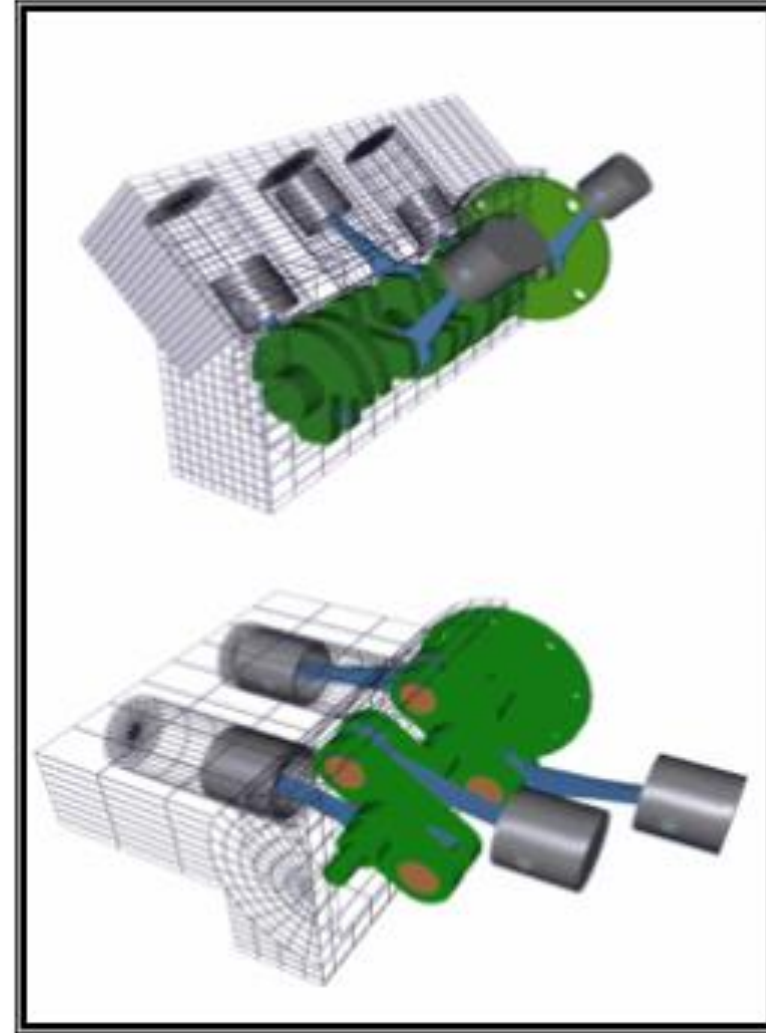
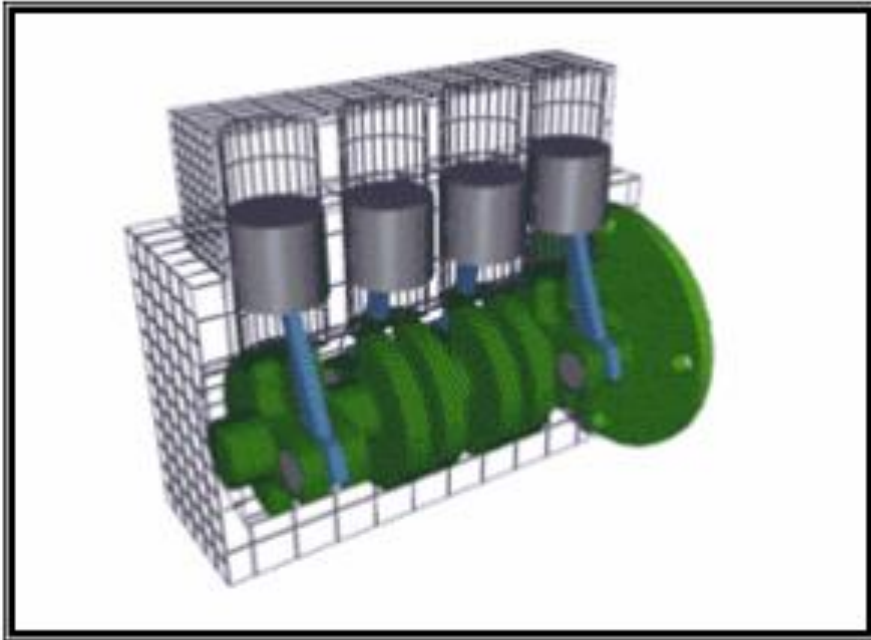








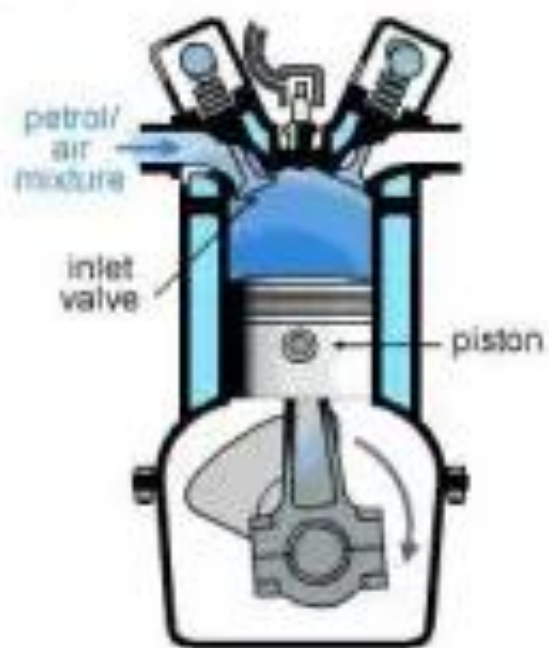
# Cylinder Arrangement







Stroke 1. Intake



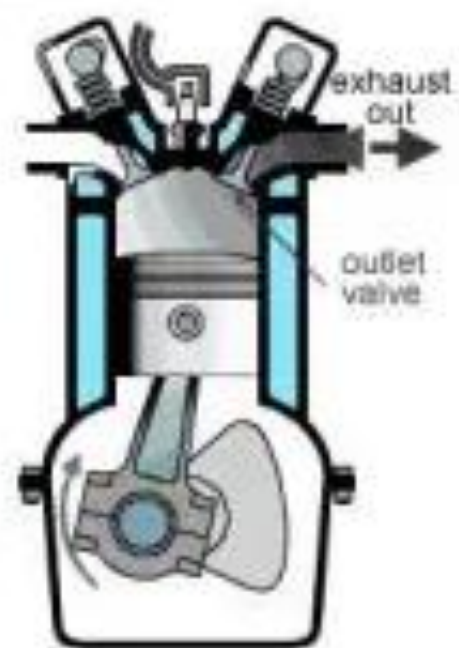
Stroke 2. Compression



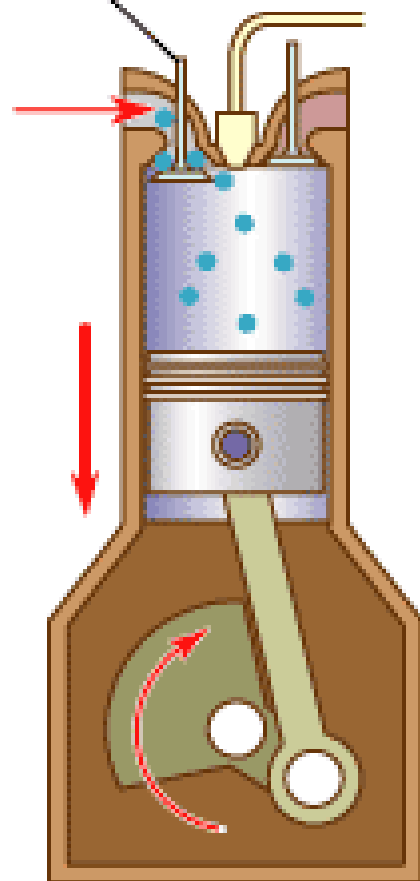
Stroke 3. Ignition



Stroke 4. Exhaust

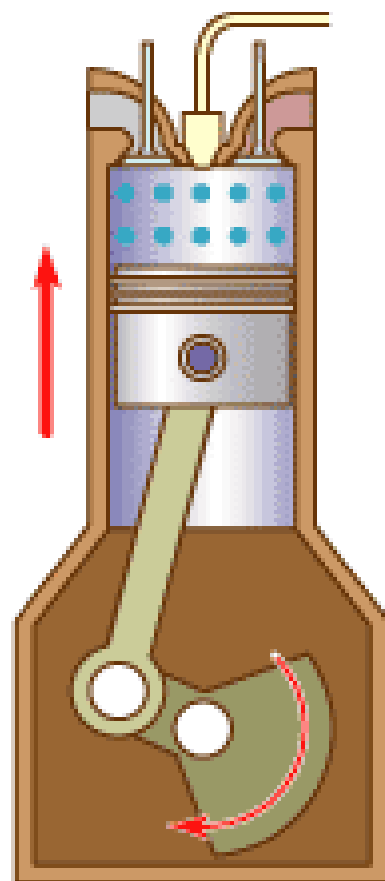


intake valve



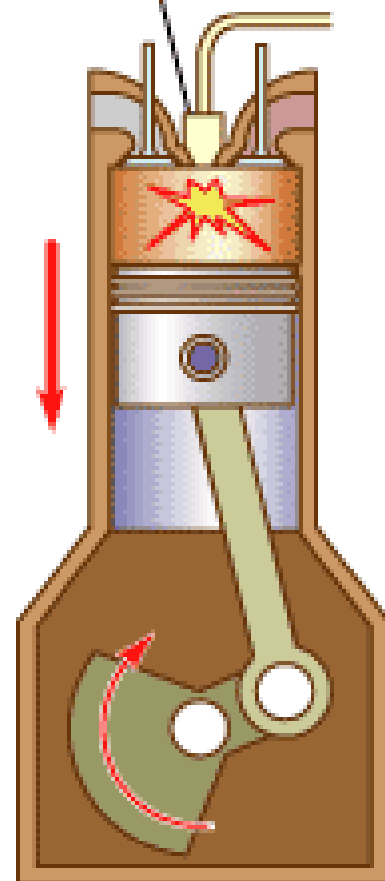
intake

fuel injector

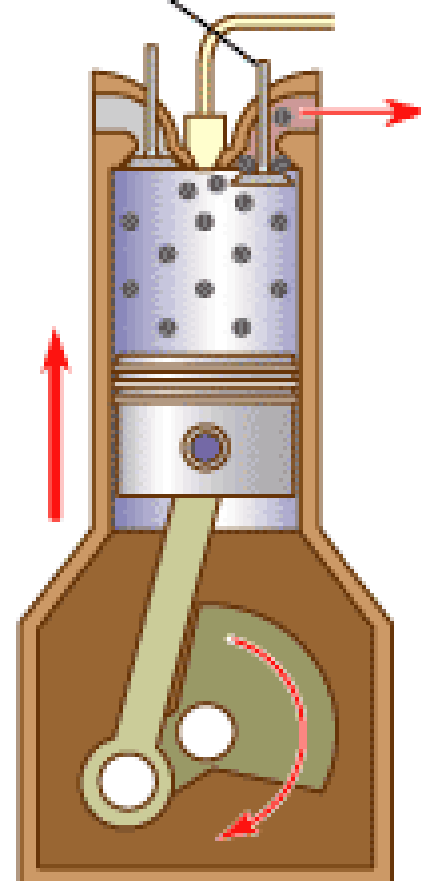


compression

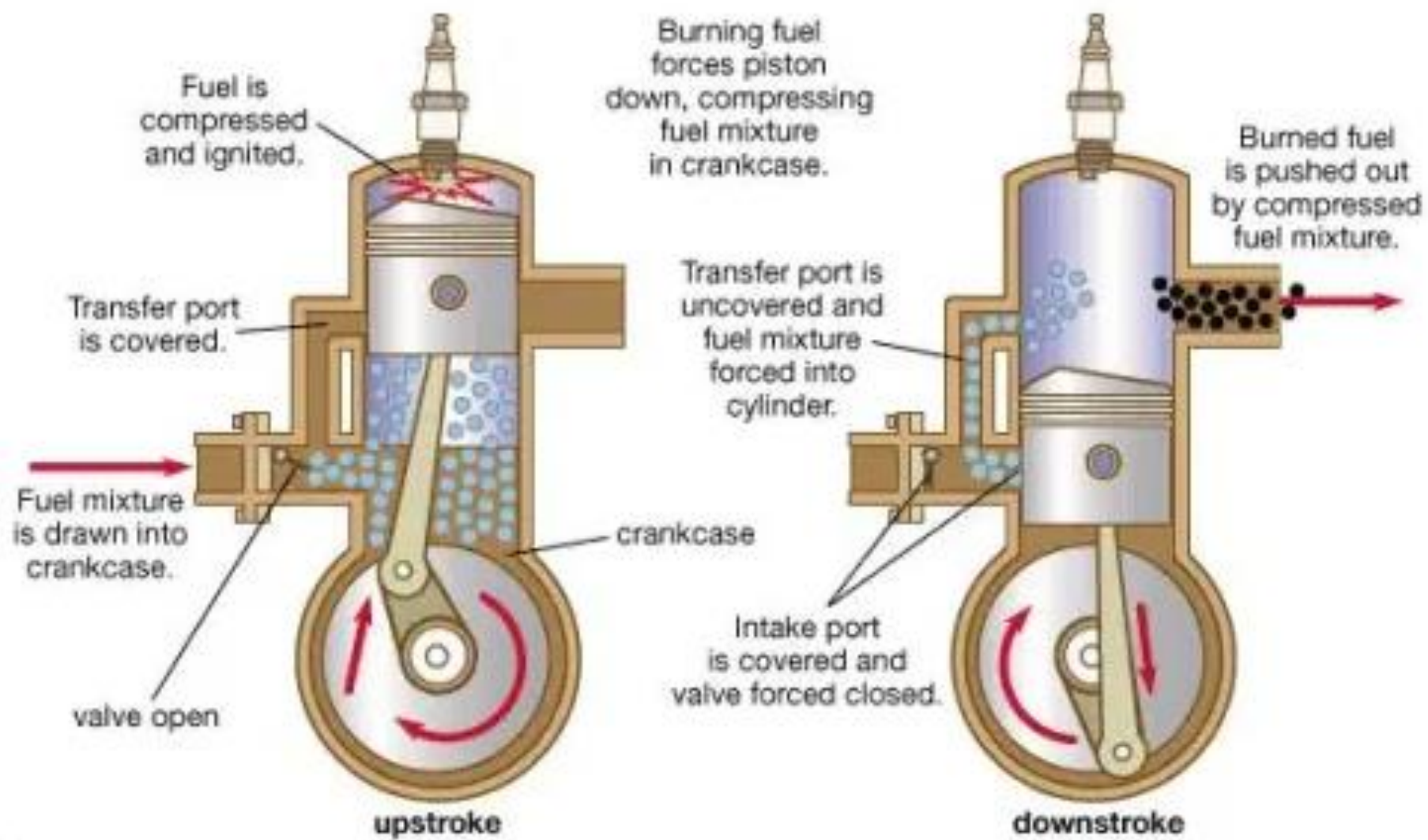
exhaust valve



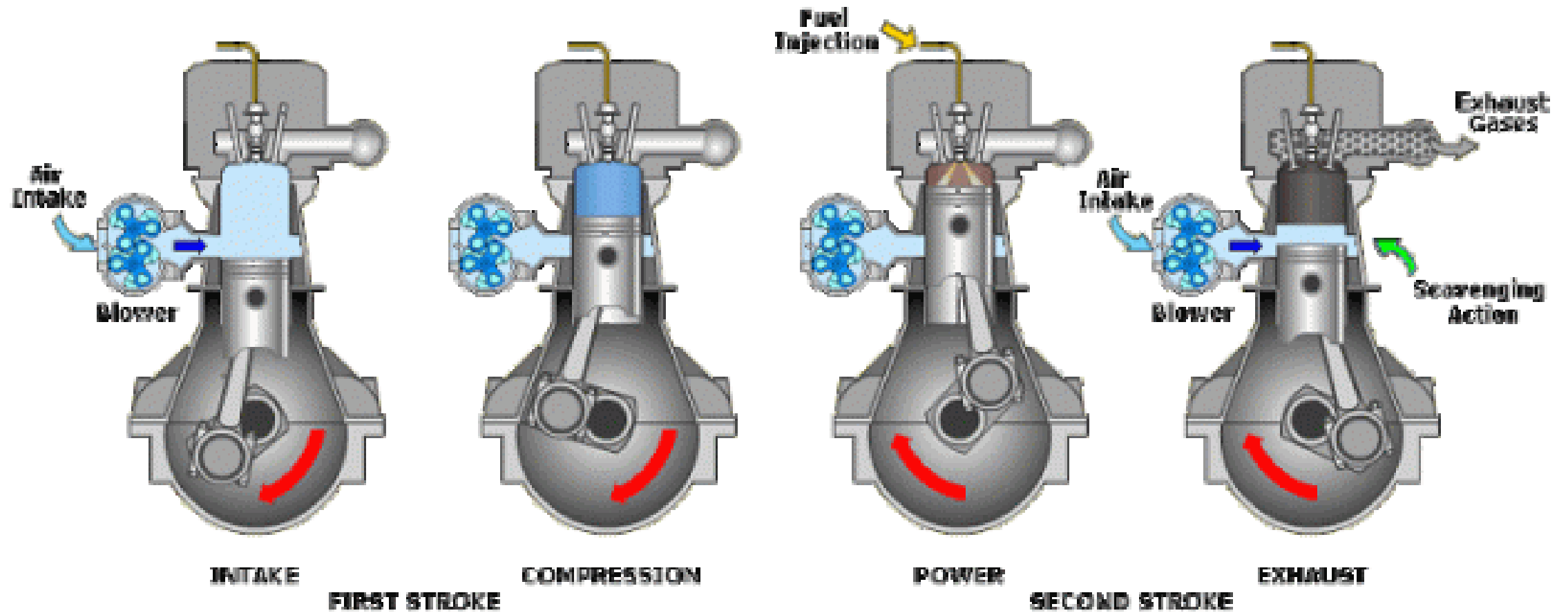
power

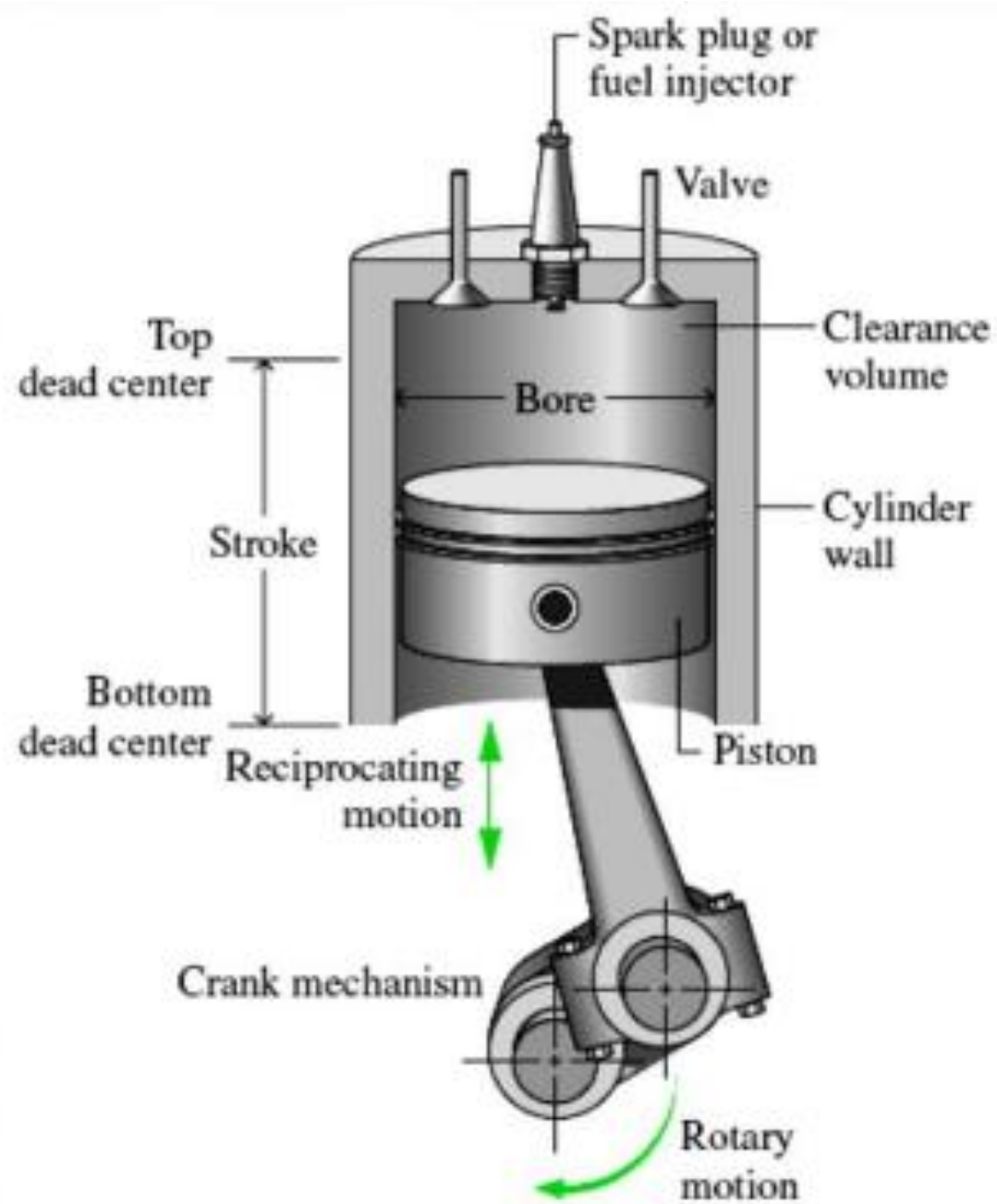


exhaust



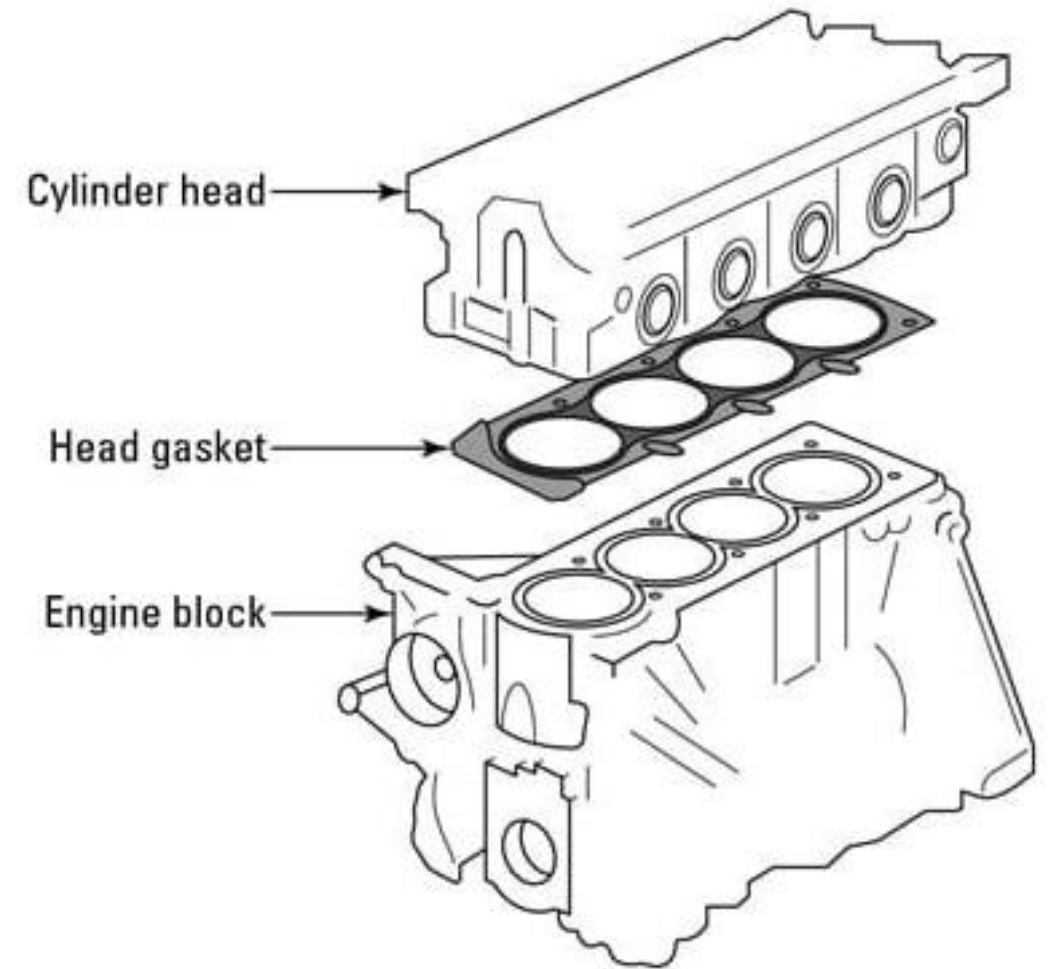
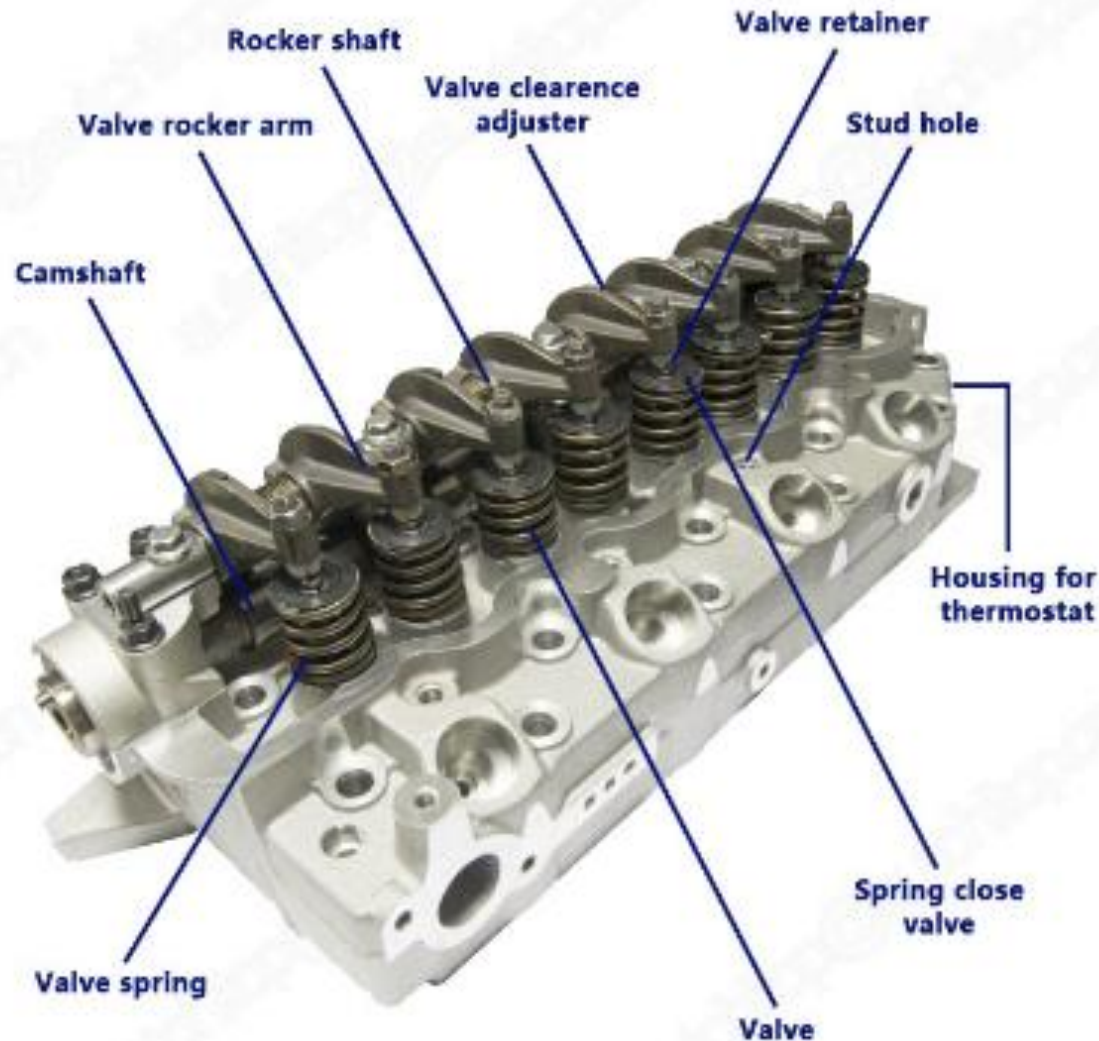




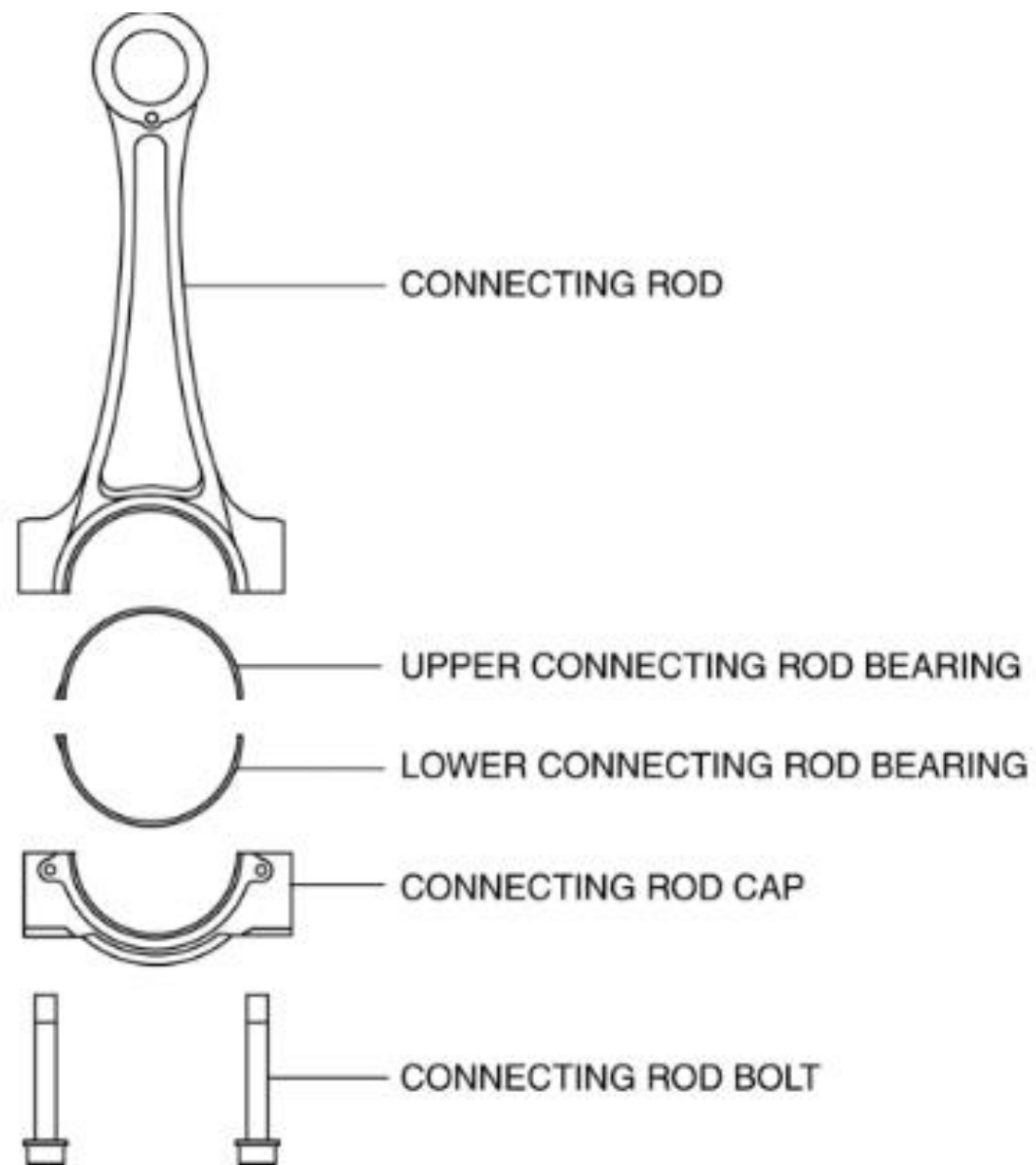




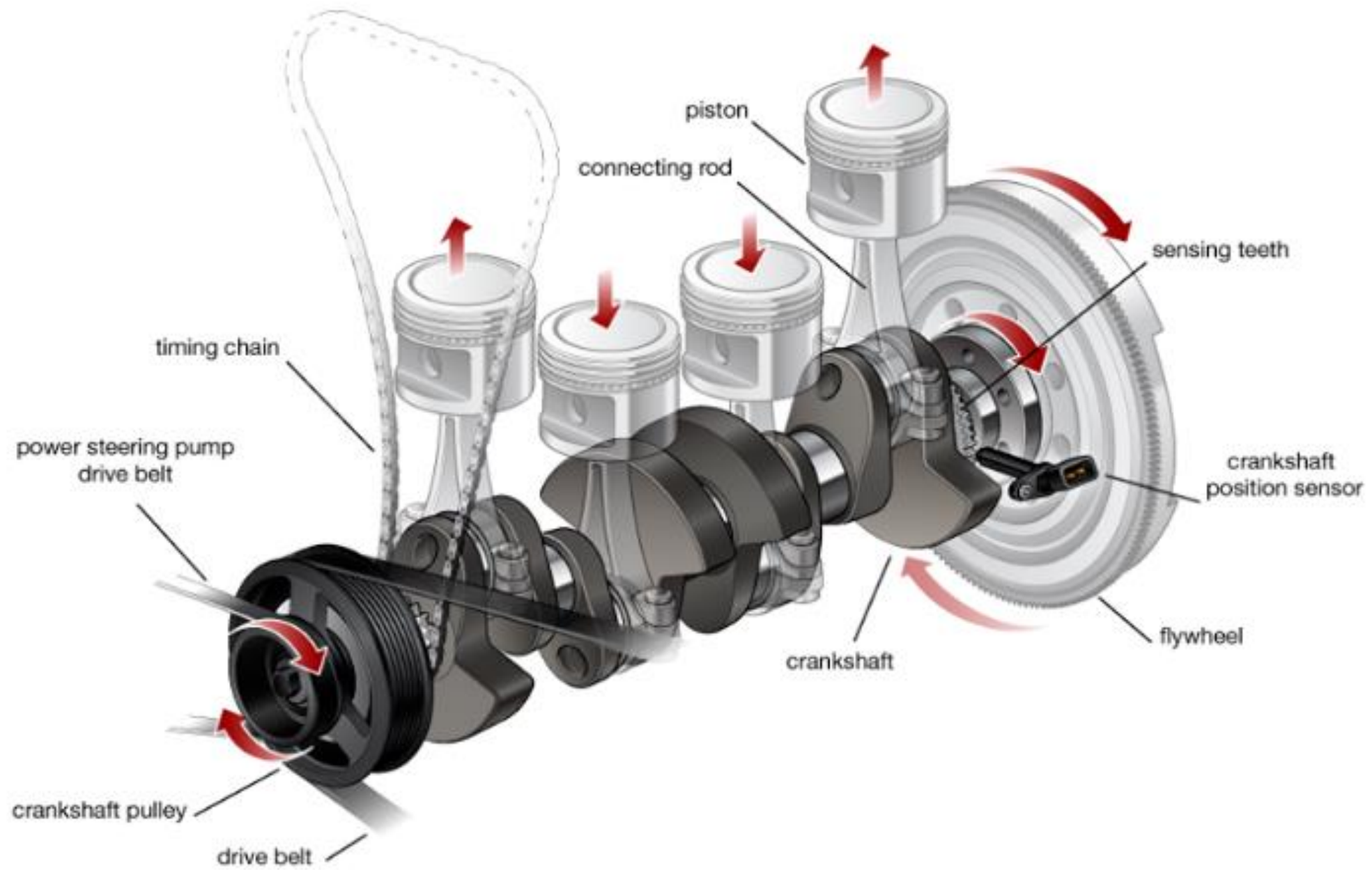
# Engine Components – Engine(Cylinder) Head





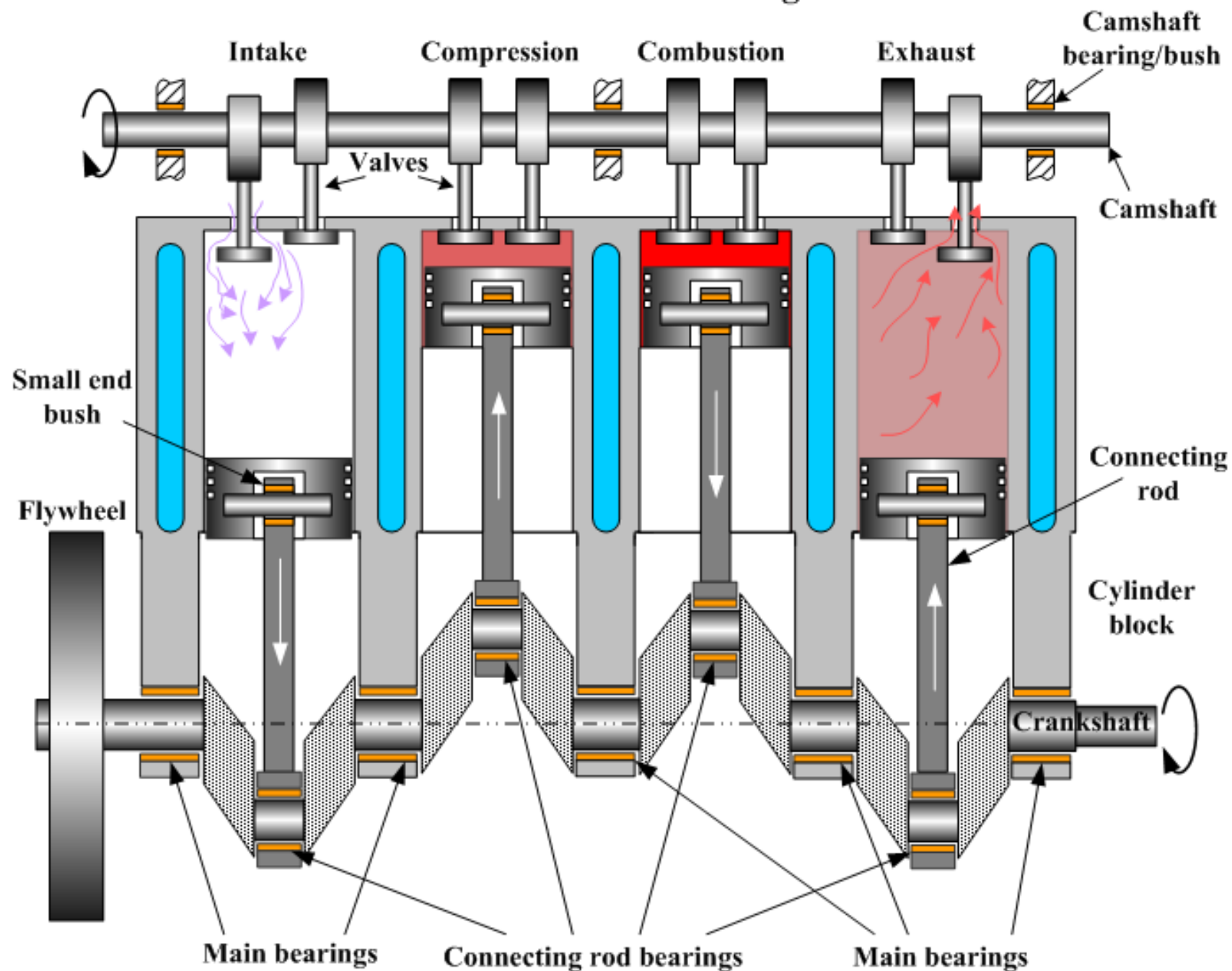




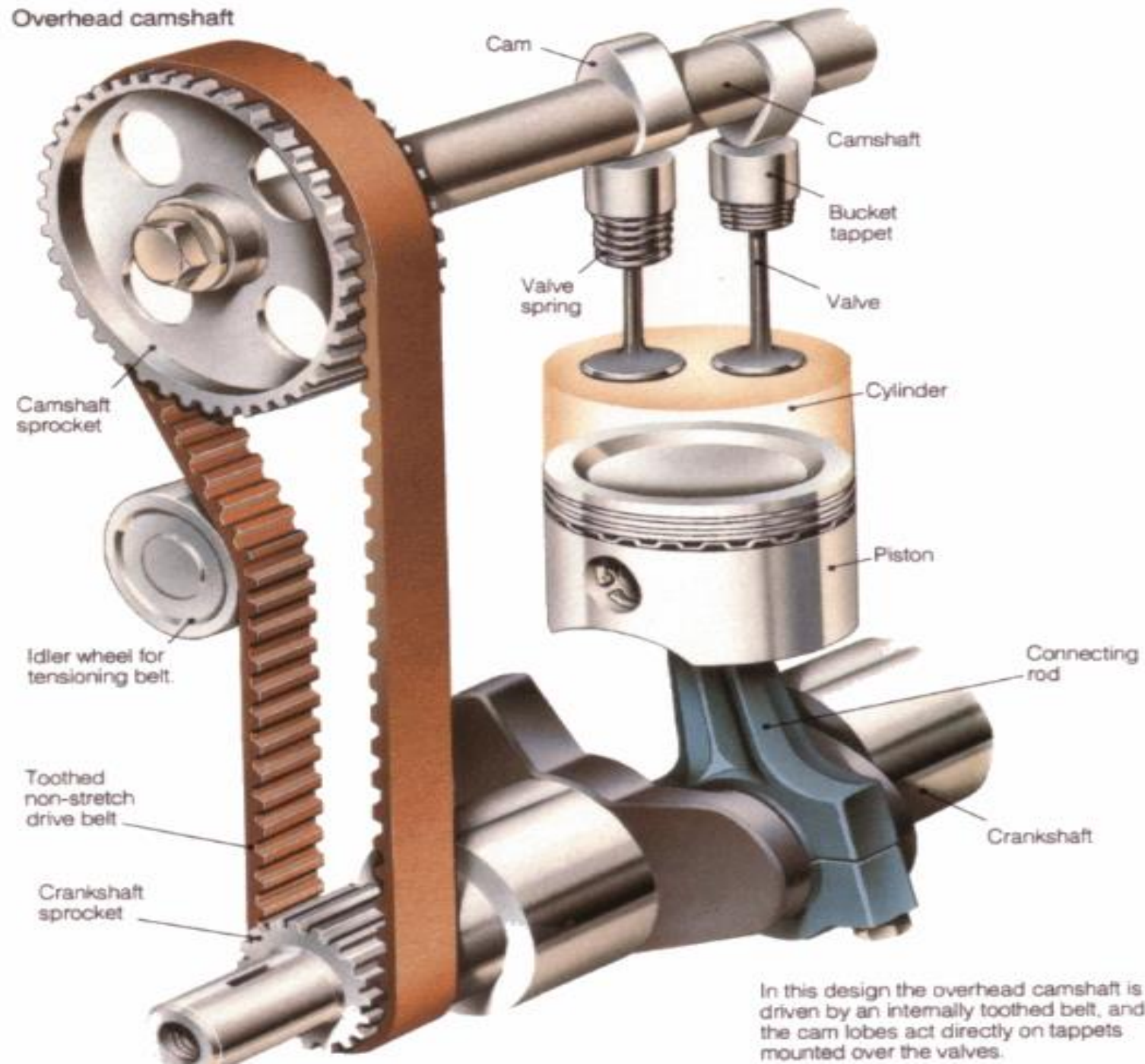




# Internal combustion engine

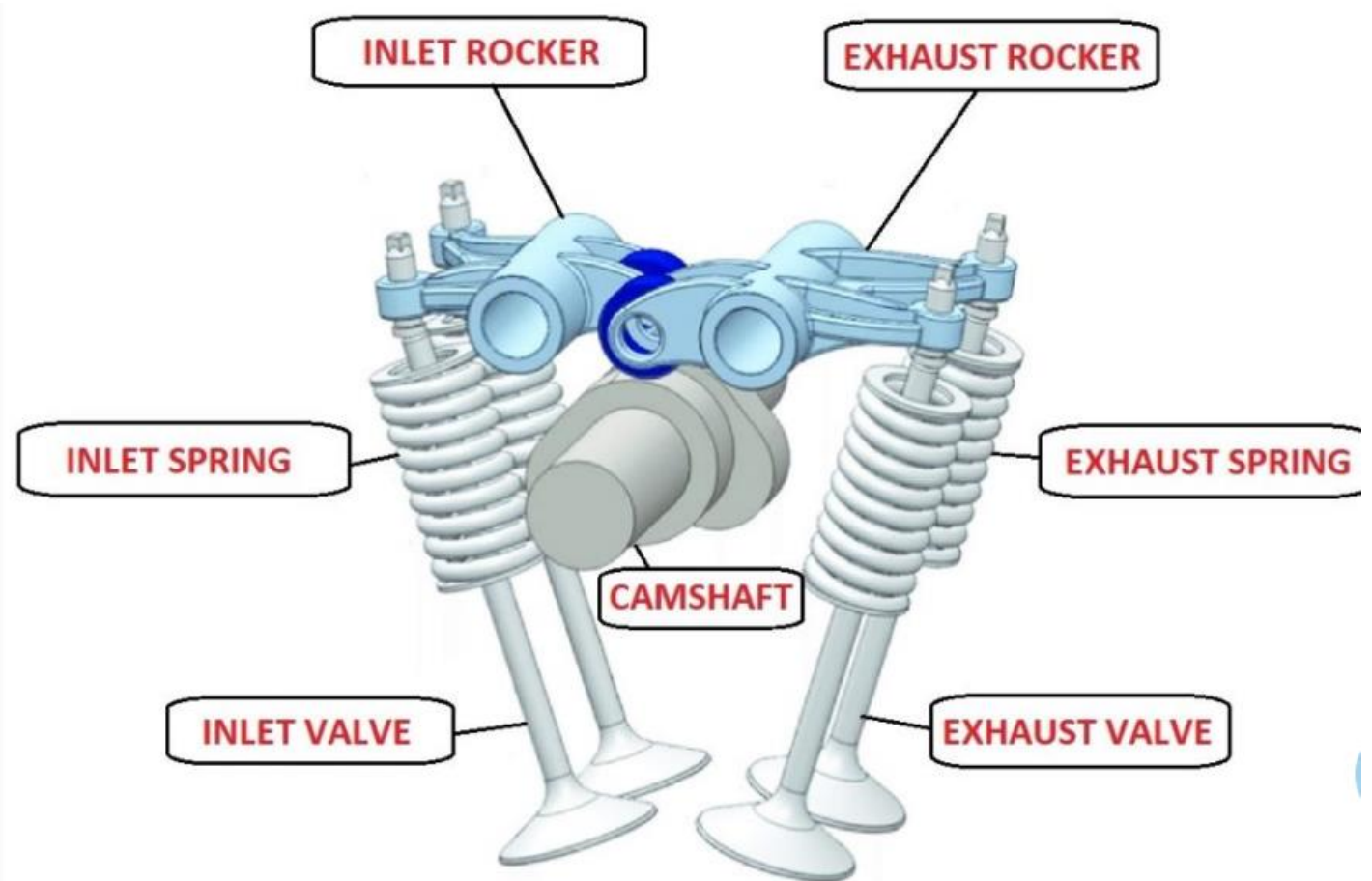
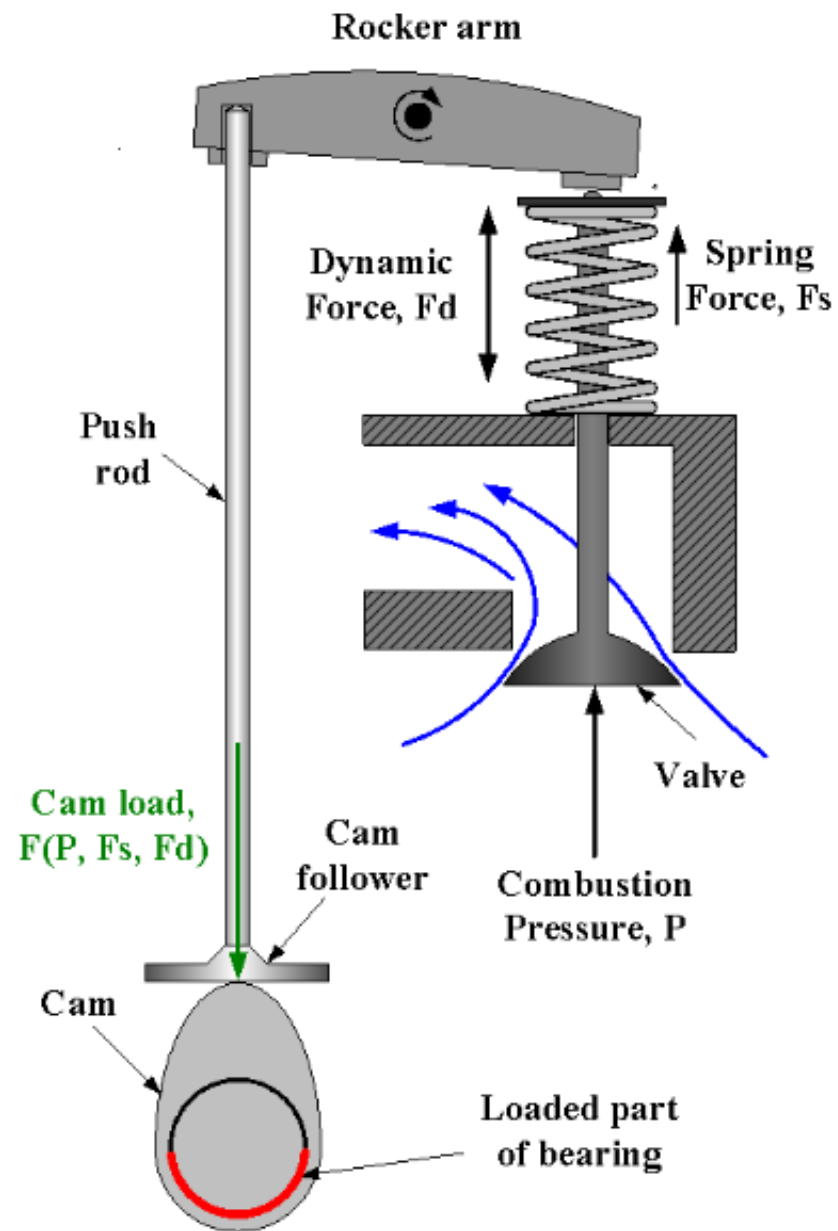


# Overhead camshaft

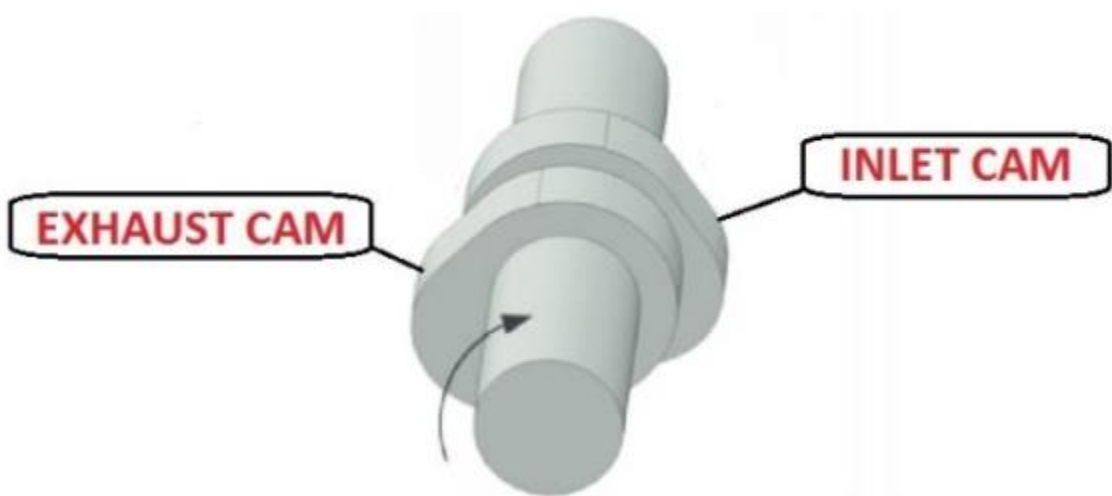


In this design the overhead camshaft is driven by an internally toothed belt, and the cam lobes act directly on tappets mounted over the valves.

## Overhead valve (OHV) design



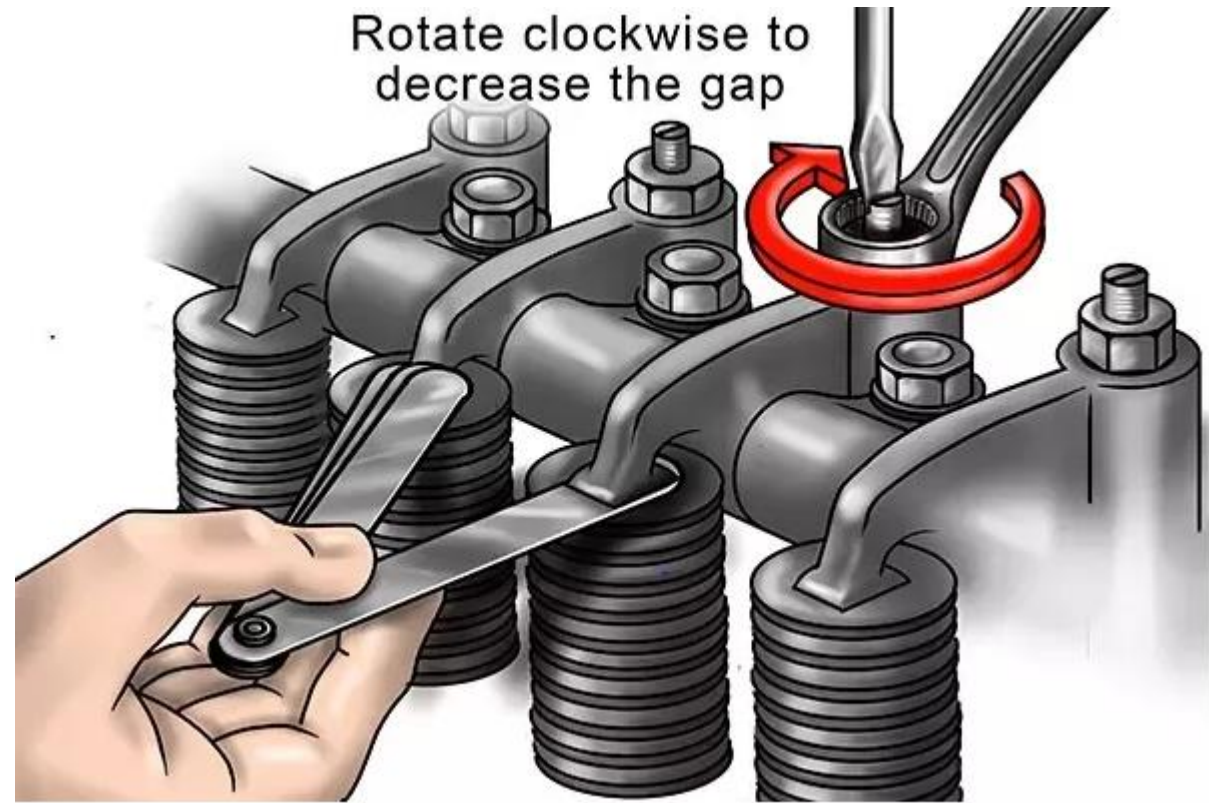
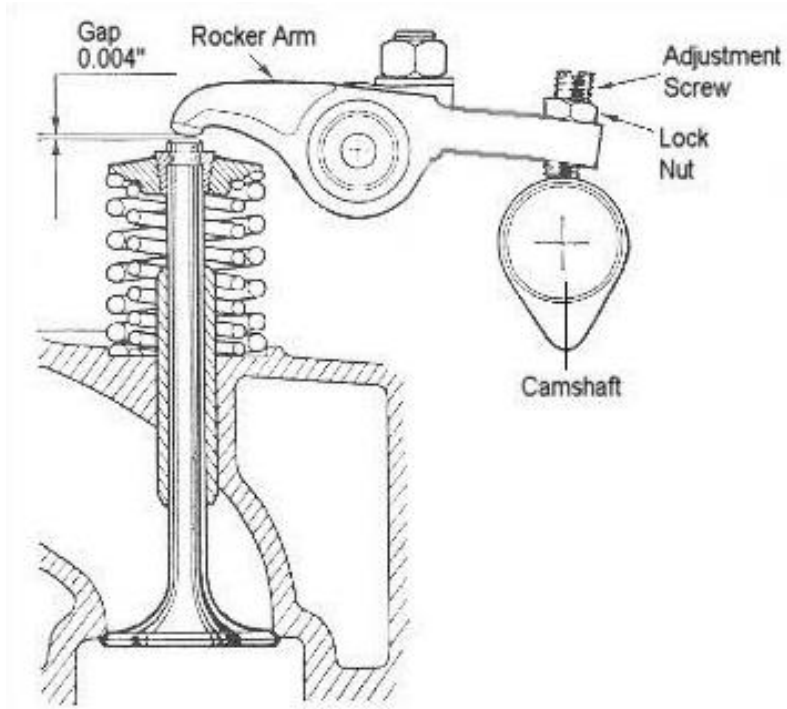




## VALVE CONSTRUCTION



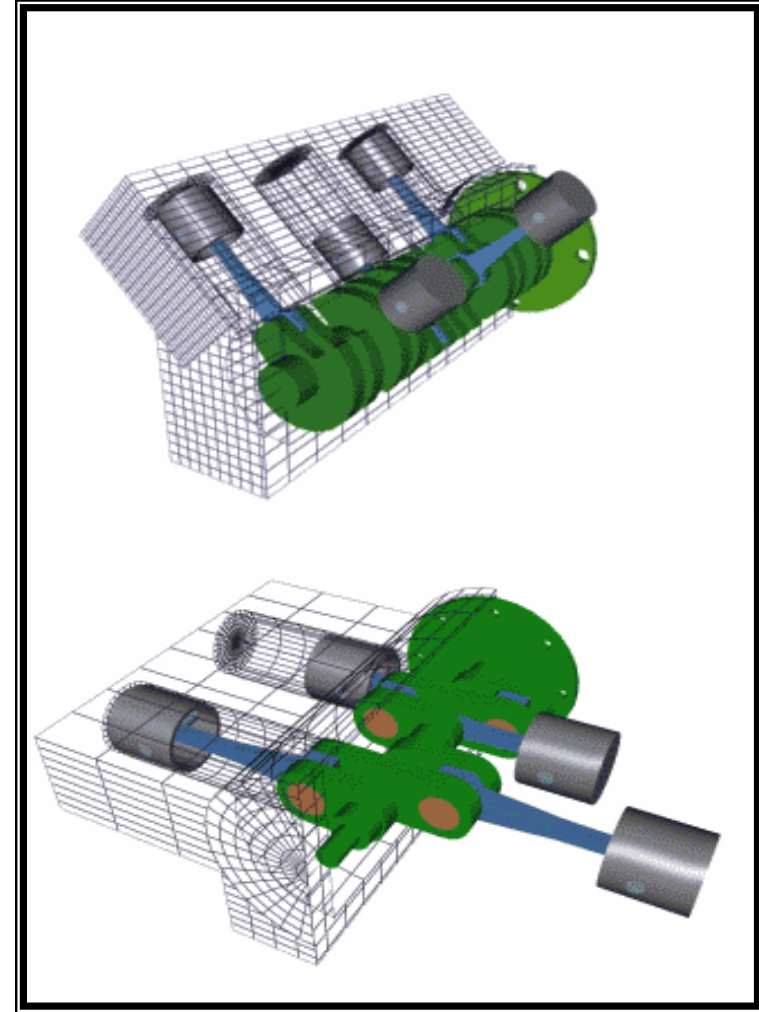
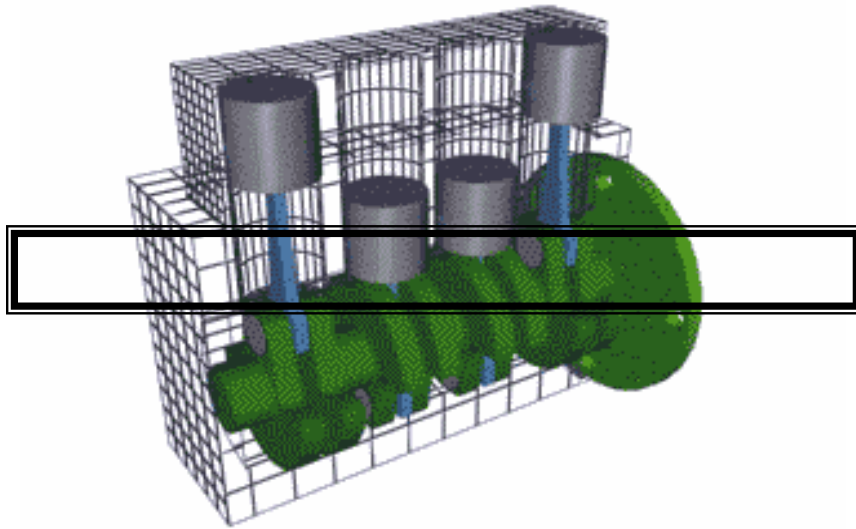
# Valve Tappet Clearance



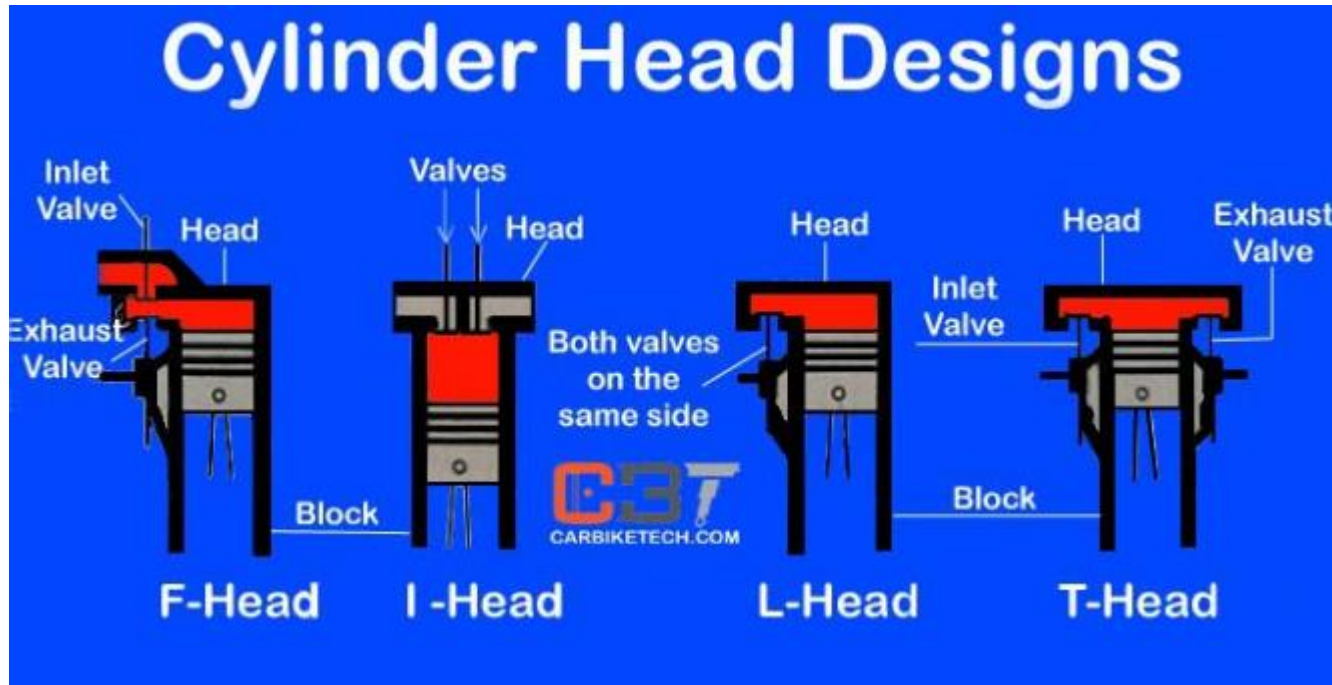
**Tappet clearance** is a space between the top of the stem of the valve and the rocker arm when the valves are closed position & the engine is at the cooled condition at the compression stroke.

Its purpose is to allow some mechanical expansion and lengthening of the valve stem and push rods when the engine warms up.

# Cylinder Arrangement



# According to Valve Arrangement....



~~However~~, the "I" head engines have the valves in the head which operate through push-rods and rocker arms. The "T" head engines have the inlet valves on one side and the exhaust valves on the other side which requires two camshafts. The "F" types have the inlet valve in the head and exhaust valve in the cylinder block and employ one camshaft.