

# Engines

Section no.2: Lubrication system

# Section 2

## The importance of Lubrication

Know the importance of a lubrication system

01

## Types of Lubrication system

Know the different types of a lubrication system

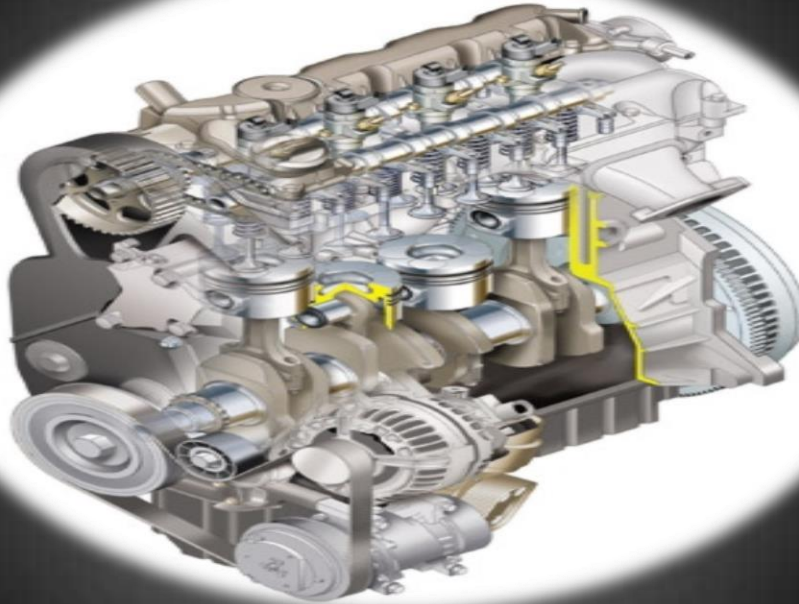
02

## Lubrication system components

Know the components of a lubrication system

03





# The importance of Lubrication

Know the importance of a lubrication system

# The importance of a lubrication system



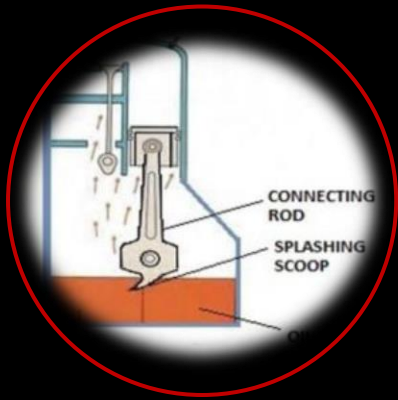
- Reduce friction
- Reduce wear
- Seal power
- Absorb shock
- Clean
- Cool



# Types of Lubrication system

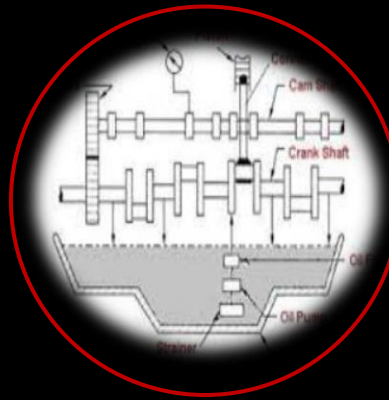
Know the different types of a lubrication system

# Types of Lubrication system



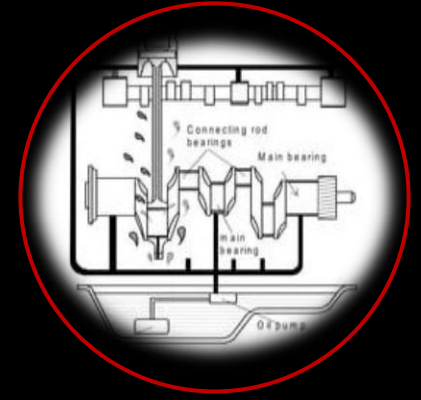
## Splash System

The splashing action of oil maintains a fog or mist of oil that drenches the inner parts of the engine.



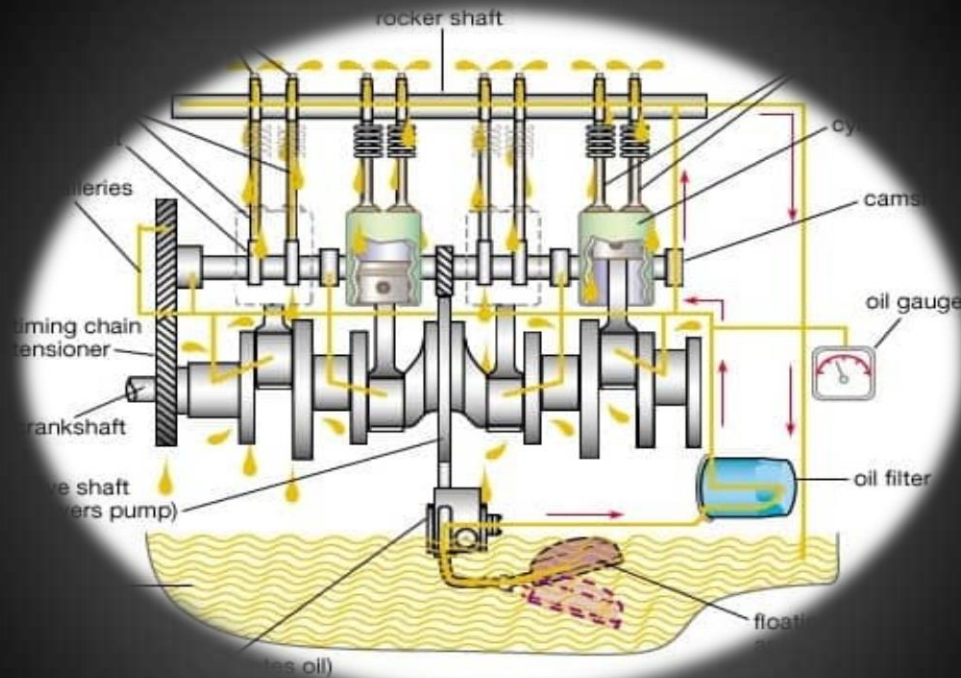
## Forced Feed System

The oil is pumped directly to the crank shaft, connecting rod, piston pins, timing gears, and cam shaft of the engine through suitable paths of oil.



## Combination of splash and forced feed system

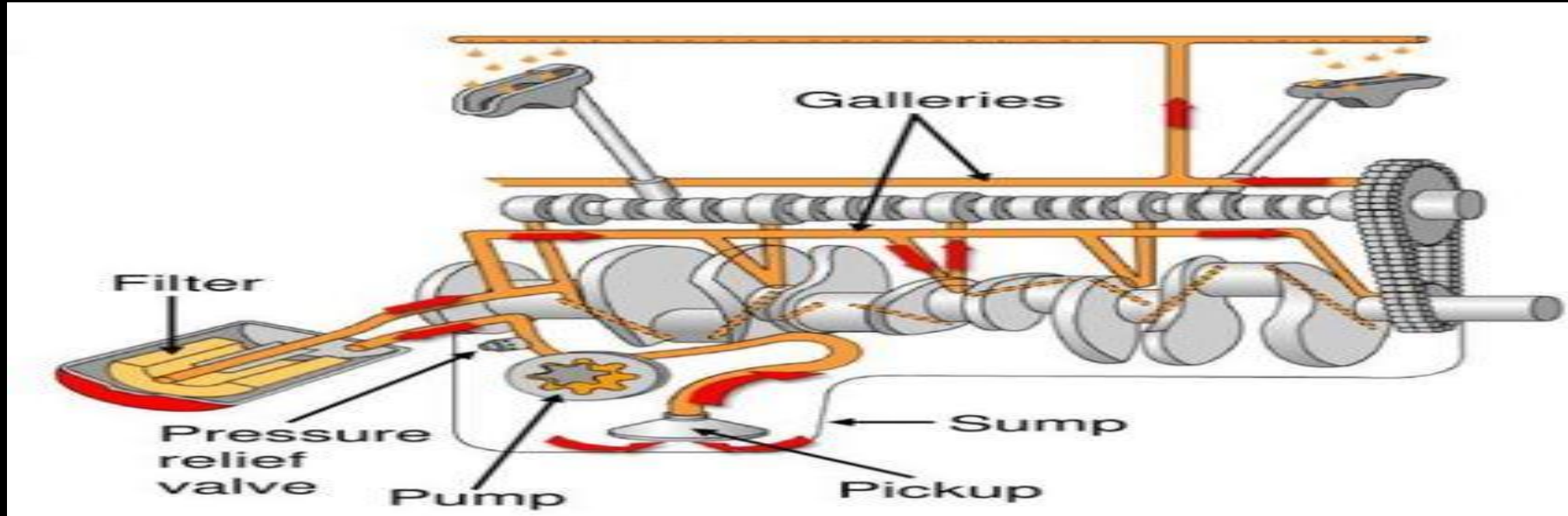




# Lubrication system components

Know the different types of a lubrication system

# Lubrication system components



Oil sump

Oil pickup and  
strainer

Oil pump

Pressure relief  
valve

Oil filter

Galleries and  
dipstick



# Oil sump



- It holds a supply of oil for the lubrication system.
- The oil sump is fitted with a screw-in drain plug for oil changes.

# Oil pickup and strainer



- A strainer is usually a coarse filter to remove the larger contaminating particles.
- An oil pickup tube draws oil up out of the oil pan sump and pushes it.

# Oil pump



- The oil pump is responsible for conveying the oil for engine lubrication and building up the oil pressure in the lubrication system.

# Pressure relief valve



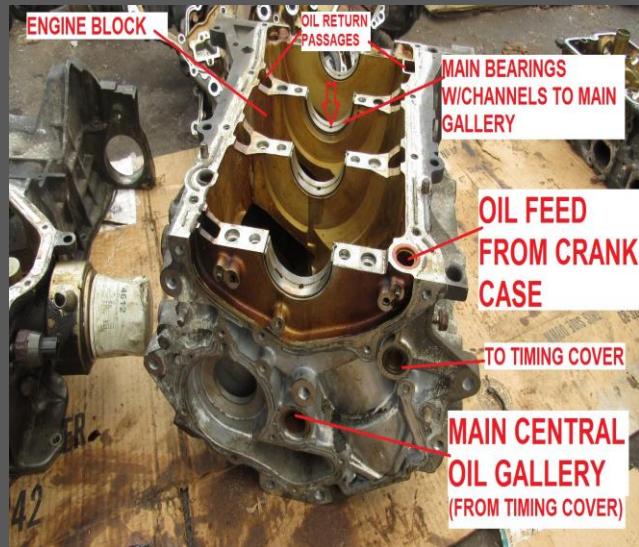
- Is provided to control the quantity of oil circulation and to maintain the correct pressure in the lubricating system.

# Oil filter



- The oil filter helps remove contaminants from your engine oil that can accumulate over time as the oil keeps your engine clean.

# Galleries



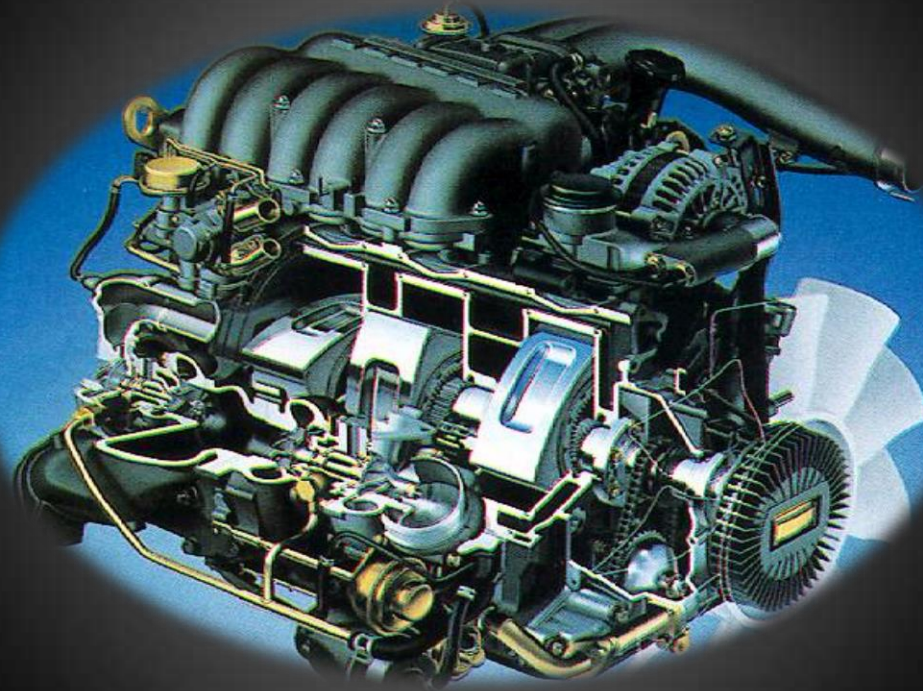
- The function of oil galleries (passage through the cylinder block) in the engine lubrication system is to circulate oil quickly to reach all moving parts in automobiles.



# Dipstick

- It is marked to show the level of oil with in the oil sump.





# Summary

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## Section no.2

### The importance of Lubrication

Reduce friction

Reduce wear

Seal power

Absorb shock

Clean

Cool

### Types of Lubrication system

Splash System

Forced Feed System

Combination of splash and forced feed system

### Lubrication system components

Oil sump

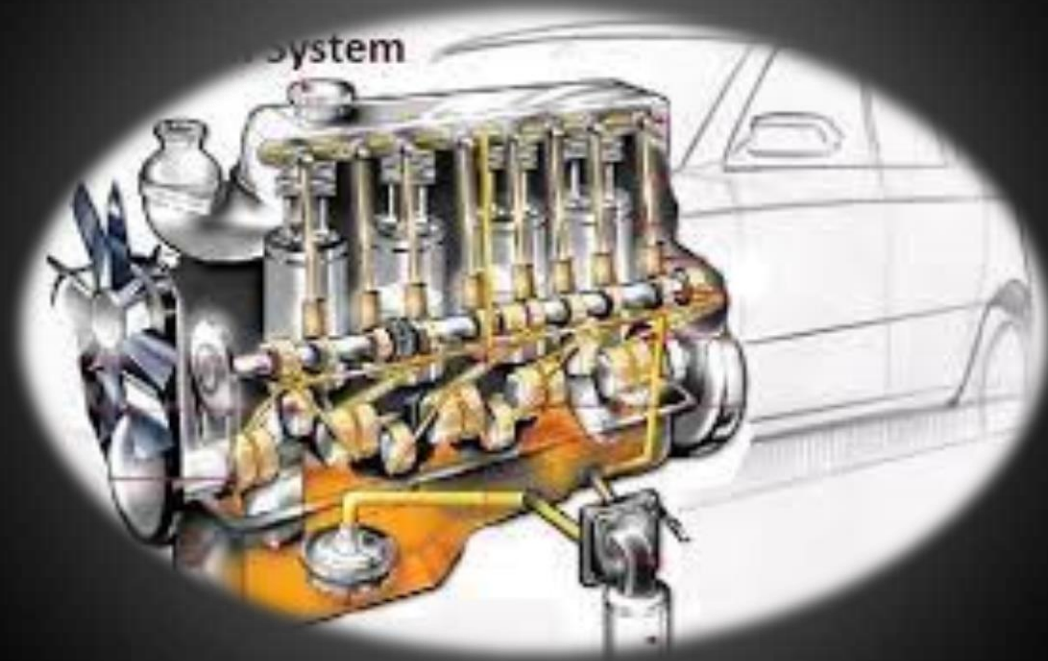
The strainer and oil pickup tube

Oil pump

Pressure relief valve

Oil filter

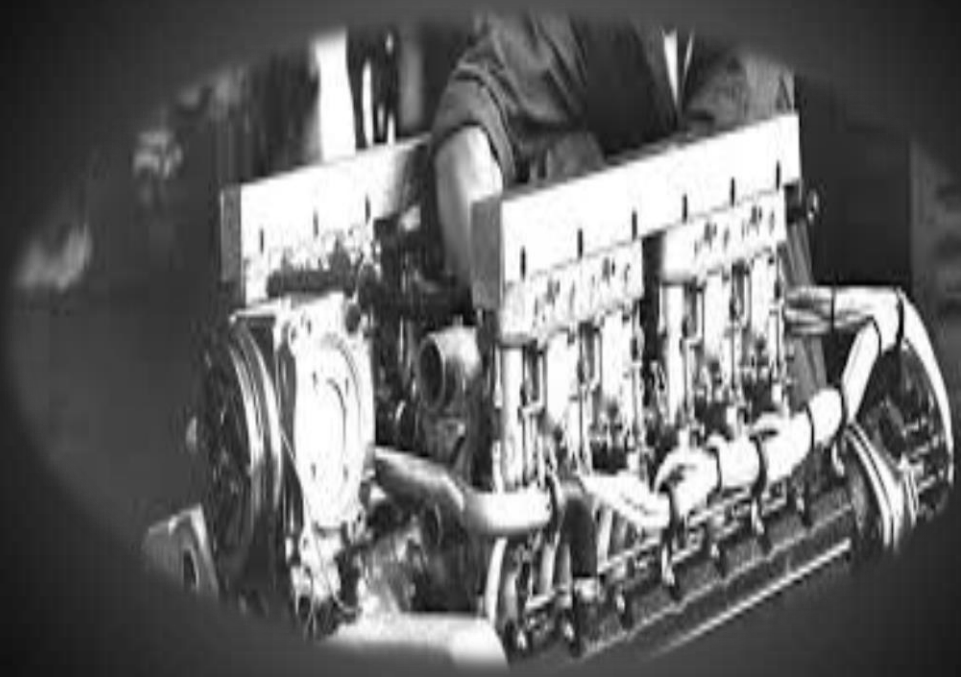
Galleries and dipstick



# Videos

# Videos to illustrate what has been explained

- How Engine Lubrication System Works (<https://www.youtube.com/watch?v=mmmcyj53TNic>).



# Activity



# Activity

- **Report about Different types of Lubrication systems (use – advantage – disadvantage).**

**With my best wishes**

*Eng./ Gamal Ahmed Hendy*