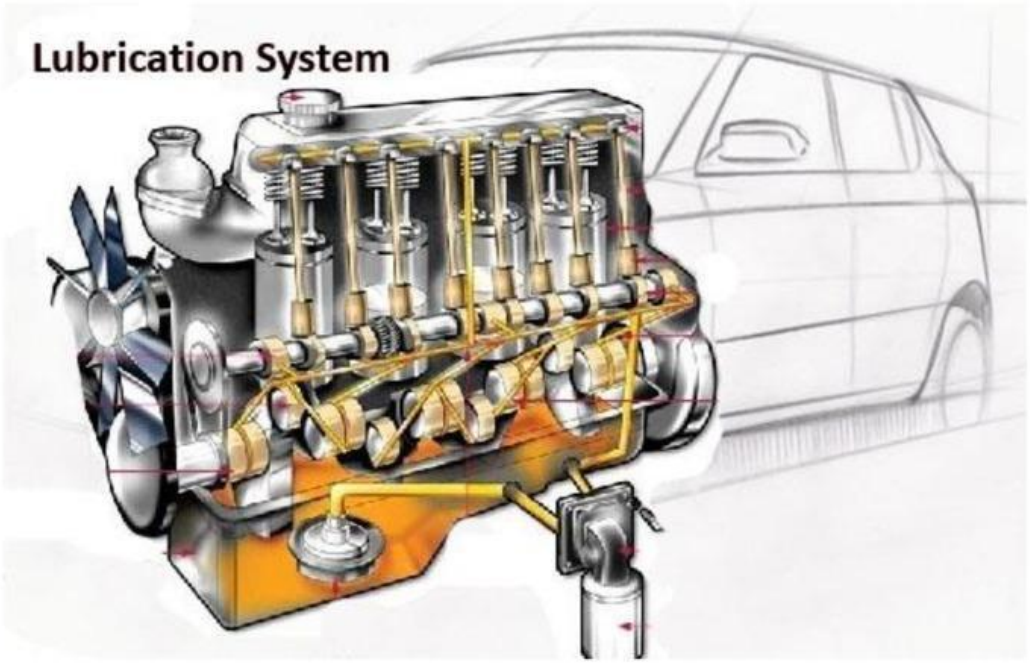
Lubrication system



Task 1. Read the text Lubrication system.

Engine lubrication by means of oil is primarily used to reduce friction between moving parts and dissipate heat. This wet sump lubrication use a four-stroke engine with only one cylinder. In the lower area of the engine is the oil sump in which the oil can be found. The oil pump is responsible for pumping the oil through oil galleries. When the oil has become very hot after several cycles, it is cooled by an oil cooler. The oil is then pumped to the oil filter. Inside the oil filter is a filter that catches the particles in the oil and does not allow them to pass through to the engine. The oil flows from the outside into the oil filter, then runs through the filter which is made invisible here and flows through the center tube. Then the oil flows upwards. The oil flows to the engine where it is used to lubricate the crankshaft bearings. In four-stroke engines crankshaft bearings are almost always plane bearings. Unlike roller bearings which use roller elements to move the inner and outer ring against each other, plain bearings use oil to form a lubricating film. The lubricating film is created by the two contact surfaces that move. The crankshaft has oil galleries so that the connecting rod bearing can be supplied with oil. In diesel engines the connecting rod can also have an oil gallery to use the oil for cooling and lubricating the piston and the piston pin.

For gasoline engines, on the other hand, the oil which splashes out of the sides of the bearing is used to cool and lubricate the piston, pin and cylinder. Holes can also help to transport the oil to the desired parts and spots. The piston has one or two compression rings and one oil scraper ring. The oil scraper ring is responsible for controlling the oil balance at the piston and the compression rings. Excess oil flows inwards through holes especially when the piston is running down. Then the oil can drain down from the piston into the oil sump.

Task 2. Match the words with the definitions.

1. to lubricate
2. oil pressure
3. lubrication system
4. oil pump
5. oil filter

A. is a screen that removes dirt from the oil.

B. is the amount of force created by the oil pump that keeps oil on the engine parts.
C. is a device that moves oil around an engine
D. is a group of devices that deliver oil to moving parts of an engine to avoid damage
E. is to put oil on something to make it move easily.

Task 3. Complete the sentences according the text.

1. In four-stroke engines crankshaft bearings are almost always _____ bearings.
2. The crankshaft has oil _____so that the connecting rod bearing can be supplied with oil.
3. In _____engines the connecting rod can also have an oil gallery to use the oil for cooling and lubricating the piston and the piston pin.
4. For_____ engines, on the other hand, the oil which splashes out of the sides of the bearing is used to cool and lubricate the piston, pin and cylinder.
5. The _____is responsible for controlling the oil balance at the piston and the compression rings.