

KEY COMPONENTS OF A 4-STROKE ENGINE

This page includes interactive exercises to help you learn about main components of a four-stroke internal combustion engine and improve your listening skills



PREPARATION TASK

Look at the picture and do the matching-up.

- | | |
|-----------------------|---------------------|
| 1. cylinder | a. поршень |
| 2. spark plug | b. свеча зажигания |
| 3. piston | c. распредвал |
| 4. combustion chamber | d. цилиндр |
| 5. intake valve | e. выпускной клапан |
| 6. exhaust valve | f. коленчатый вал |
| 7. crankshaft | g. пружина клапана |
| 8. connecting rod | h. впускной клапан |
| 9. valve spring | i. камера сгорания |
| 10. cylinder block | j. поршневое кольцо |
| 11. piston ring | k. шатун |
| 12. camshaft | l. блок цилиндра |

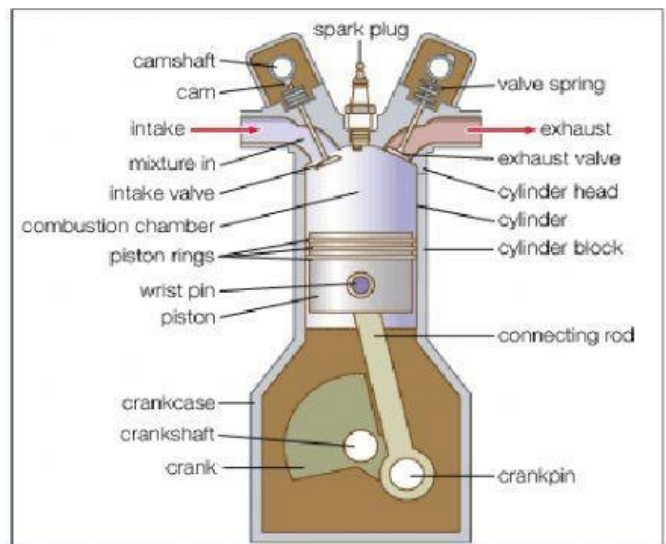


Fig.1 Engine and its components

WHILE-WATCHING

Watch the video. Do the exercise below.

Mark the statements as True or False.

1. The engine has two types: one is the internal combustion engine and another one is external combustion engine.
☐ True ☐ False
2. In the internal combustion engine, the fuel is burnt outside the engine cylinder.
☐ True ☐ False
3. The cylinder block is usually made of silver and its alloys.
☐ True ☐ False
4. The cylinder head contains a combustion chamber above each cylinder.
☐ True ☐ False
5. Cylinder liners are made of special alloy (iron containing silicon, manganese, nickel and chromium) to provide the resistance to wear and corrosion.
☐ True ☐ False
6. The spark plug is a cylindrical plug that moves up and down in the cylinder.
☐ True ☐ False
7. The highest position of the piston reaches in the cylinder is called the Bottom Dead Centre and the lowest position it reaches is called the Top Dead Centre.
☐ True ☐ False
8. The connecting rod is fitted in between the piston and the crankshaft.
☐ True ☐ False
9. The flywheel used in a transmission system of a vehicle.
☐ True ☐ False
10. The materials used for inlet and exhaust valve are generally the same.
☐ True ☐ False

SPEAKING

Explain the function of these parts of engine. Speak the missing words.

1. A _____ ignites the mixture of petrol, vapour and compressed air.
2. The _____ connects the piston to the crankshaft.
3. The _____ serves as a reservoir for the storage and cooling of engine lubricating oil.
4. The _____ moves up and down in the cylinder and helps to convert pressure energy obtained by the combustion of fuel into useful mechanical power.
5. The _____ is to convert the reciprocating motion of the piston into the rotary motion of the crankshaft.
6. The _____ is responsible for the opening of the valves.
7. The _____ is essential to control the timing of air-fuel mixture entry into the cylinder.
8. The _____ controls the timing of combustion products out of the cylinders.