FUEL INJECTION

1. What is the importance of fuel injection?
2. Read the passage and insert the missing words:

The last stage of the fuel oil system is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_(1) of the fuel in the combustion chamber. This is done by the fuel injectors which are fitted on the cylinder head. Their main function is to inject and disperse in a form of spray a certain amount of fuel in the combustion chamber.

The normal burning of the fuel and the efficient running of the engine depend on the precise and timely operation of the fuel injectors.

Incorrect injection timing can cause the engine not to start or to be hard to start. It can also cause lack of power or cause the engine to produce white smoke as there is \_\_\_\_\_\_\_\_\_\_\_\_(2) temperature to properly burn the fuel.

A faulty injection pump can be the culprit behind a stalling engine or a rough running engine.

Fuel injectors are distinguished into single atomizer and \_\_\_\_\_\_\_\_\_\_\_\_(3) injectors. Most injectors are operated \_\_\_\_\_\_\_\_\_\_\_\_(4)

In four stroke diesel engines besides the main fuel injector, there may be a piloting injector as well, fitted at the side of the cylinder cover

3. Which words in the above passage mean?

1. To spread all over
2. Secondary, subordinate
3. Opening through which the fuel is sprayed
4. Exact
5. At the right time
6. Reduction of revolutions, eventual stopping of the engine
7. Reason

4. A fuel injector consists of three main parts: the injector holder, the needle with its stem and return spring and the nozzle assembly. Inside the culindrical holder there is a centrally formed cylindrical case where the needle stem and its return spring are fitted.

The nozzle assembly is screwed at the bottom of the injection holder. It has one or more atomizers through which the fuel is sprayed into the combustion chamber. The pressure chamber is a hollow inside the assembly which ends to a tapered seat where the injection needle ends too.