

Tips & Technology

For Bosch Partners

Current topics for successful workshops No. 84/2014

Would you have known?



BOSCH

Invented for life

Automotive engineering questions

Do you still remember the test questions during your training? How much of this knowledge have you retained in your memory? What new subjects have you learned since then? Use the following questions to test your knowledge! Good luck!

Each question has only one correct answer.
You can find the answers on page 3.

Question 1:

What identifies a gasoline engine?

- a) It uses externally supplied ignition
- b) It uses glow ignition
- c) It uses auto-ignition
- d) It uses easy ignition



Question 2:

What statement about the fuel for such an engine is correct?

- a) On vehicles with direct injection, oil must be mixed with the fuel just like for a two-stroke engine
- b) To prevent the fuel from freezing in the winter, it must be mixed with 10% of spirit
- c) The higher the octane number, the higher the knock resistance of the fuel
- d) The higher the octane number, the greater the risk of auto-ignition

Question 3:

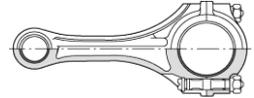
The engine no longer has compression. The pistons and the cylinder liners are worn. What can you not offer the customer?

- a) To install a replacement engine
- b) To disassemble the engine, grind the cylinders and then install new pistons and piston rings
- c) To disassemble the engine and install only new pistons
- d) To disassemble the engine and repair the cylinder block and cylinder liners with pistons and piston rings

Question 4:

When replacing a connecting rod or connecting rod bearing, why must new connecting rod bolts be included in the cost estimate?

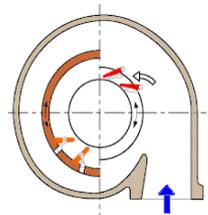
- a) Because these are expansion bolts
- b) Because these are square neck bolts
- c) Because these are hollow bolts
- d) Because these are striker bolts



Question 5:

A customer asks: "What is a VNT?"

- a) It is a pressure wave supercharger
- b) It is a supercharger with variable nozzle geometry
- c) It is a complex supercharger
- d) It is a spiral supercharger



Question 6:

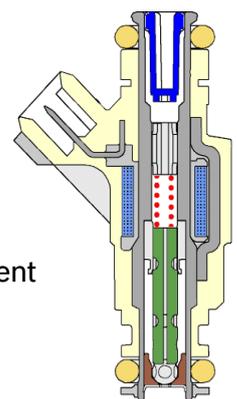
What is not true concerning the use of bio diesel?

- a) Increased wear in the fuel system can be expected
- b) Bosch has not approved the use of RME (rapeseed oil methylester)
- c) Escaping fuel attacks paint and rubber
- d) It is possible to measure a performance increase and consumption reduction

Question 7:

Which components are part of a cold-start device on a gasoline engine?

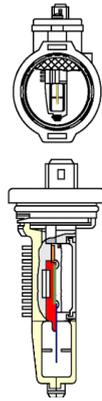
- a) Auxiliary air valve, thermo-time switch, cold-start valve
- b) Timing device, thermal expansion element, injection nozzle
- c) Rotary idle actuator, air-flow sensor, fuel quantity actuator
- d) Intake manifold preheater, throttle-valve actuator, thermal expansion element



Question 8:

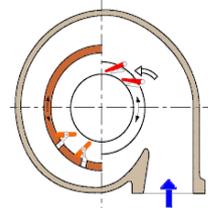
An HFM 5, is a...

- a) Thermal sensor that measures the incoming air mass
- b) Thermal sensor that measures the incoming air-mass flow
- c) Mechanical sensor that measures the air flow rate
- d) Piezoresistive sensor that measures the pressure in the intake manifold

**Question 9:**

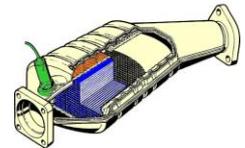
Which statement about charge exchange control is correct?

- a) A turbocharger is a mechanical supercharger system
- b) A variable-tract intake manifold changes the valve open times
- c) Camshaft adjustment is possible only with the intake camshaft
- d) The wastegate valve controls the effective intake manifold length

**Question 10:**

Why do we need the catalytic converter? A catalytic converter...

- a) Is a reaction accelerator for combustion
- b) Increases engine output
- c) Cuts fuel consumption via afterburning
- d) Converts the exhaust gas and in this way reduces emission of pollutants



Answers: 1a) 2c) 3c) 4a) 5b) 6d) 7a) 8a) 9c) 10d)