

Tips & Technology

For Bosch business partners

Current topics for successful workshops No. 07/2014

Would you have known?



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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:

A customer would like to know what is actually measured during the diesel emissions test?

- a) The lambda value is measured
- b) The readiness code is queried
- c) A four-gas test is performed
- d) Turbidity values during acceleration against inertia are measured

Question 2:

With which equipment is the diesel AU performed?

- a) Smokemeter
- b) Refractometer
- c) Four-gas tester
- d) Mass spectrometer

Question 3:

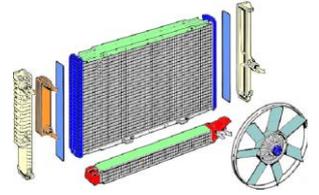
Which are the critical diesel exhaust gases?

- a) NO_x and soot particles
- b) CO₂ and soot particles
- c) CO and soot particles
- d) HC and soot particles

Question 4:

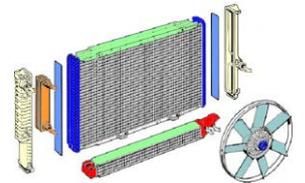
What is the function of the coolant pump? It allows...

- a) The coolant to circulate only in a large circuit?
- b) The coolant to circulate only in a small circuit?
- c) The coolant to circulate in a large and small circuit?
- d) The coolant to circulate only through the engine block?

**Question 5:**

A customer complains about poor heater performance? What is the most probable cause of the problem?

- a) Electric fan not working
- b) Radiator clogged
- c) Thermostat malfunction, opens too soon
- d) The viscous fan drive is not working

**Question 6:**

Why is a charge-air cooler sometimes installed on an engine with a turbocharger?

- a) The cooling reduces the thermal load, lowers the exhaust temperature and thus the NOx emissions
- b) Because the thick cooler is chic
- c) Solely to improve the volumetric efficiency
- d) Because of noise generation

Question 7:

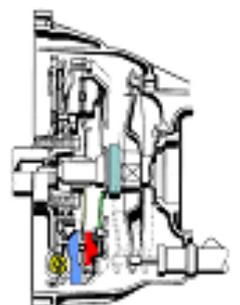
A technically adept customer has noticed that the fuel in his vehicle is cooled! Why is the fuel in the return cooled somewhat when a UIS or CR is used?

- a) Because of vapor bubbles in the fuel tank
- b) So that the fuel tank does not explode
- c) Because plastic fuel tanks can not withstand temperatures above 112 °C
- d) An auxiliary heater for the winter is involved

Question 8:

What is the benefit of a torque converter lockup clutch?

- a) It offers an overboost function
- b) It offers an overdrive function
- c) It reduces the slip in the torque converter and thus increases the efficiency
- d) It reduces disturbing noises during shifting



Question 9:

Despite having a clutch in proper working order, a manual transmission sticks and grinds when shifting gears. What could cause the problem?

- a) Differential improperly shimmed
- b) Power take-off worn
- c) Transfer case improperly adjusted
- d) Synchronizer assembly worn

**Question 10:**

A type approval for the rim exists for a wheel/tire conversion. The new tire size, however, is not listed in the vehicle documentation. Must a technical expert issue an approval?

- a) No, if the type approval is always kept in the vehicle
- b) Yes, because despite having the type approval the tire size is not listed
- c) Yes, an approval is always required regardless of what is converted
- d) No, if each of the components has an EC test symbol

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

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