Automotive Technology 6th Edition
Chapter 86 - Exhaust Gas Recirculation (EGR) Systems
Quiz 86A

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Which type of EGR valve requires a positive exhaust system pressure to operate? 1) _____
A) Positive backpressure
B) Negative backpressure
C) Linear
D) Digital

2) Manually opening an EGR valve with a vacuum pump or scan tool will cause the engine to idle roughly or stall. 2) _____
A) True
B) False

3) At about what temperature does oxygen combine with the nitrogen in the air to form NOx? 3) _____
A) 500 degrees F
B) 750 degrees F
C) 1500 degrees F
D) 2500 degrees F

4) Which of the following are symptoms of a clogged EGR passage? 4) _____
A) Detonation during acceleration or cruise
B) Reduced NOx emissions
C) Rough idle and stalling
D) Poor performance and lack of power

5) Blocking off the EGR valve passages will have no effect on the OBD-II system. 5) _____
A) True
B) False

6) The following statements are all correct EXCEPT _____. 6) _____
A) linear EGR systems require exhaust backpressure
B) OBD-II vehicles require monitoring of the EGR system
C) the MIL will be turned on after the second failure
D) many vehicles use the MAP sensor to monitor EGR operation

7) What causes the nitrogen and oxygen in the air to combine and form NOx? 7) _____
A) Sunlight
B) Any spark will cause this to occur
C) Heat above 2,500°F (1,370°C)
D) Chemical reaction in the catalytic converter

8) A vehicle comes into the shop and the technician retrieves the diagnostic code P0401 "EGR flow insufficient." Which of these could be the cause? 8) _____

A) Clogged EGR ports or passages
B) EGR valve stuck open
C) Electrical wiring shorted
D) All of these are correct.

9) When testing an EGR system for proper operation using a vacuum gauge, how much should intake manifold vacuum drop when the EGR valve is commanded open by a scan tool? 9) _____

A) 6-8 in. Hg.
B) 1-2 in. Hg.
C) 6-8 PSI
D) 14.7 PSI

10) The linear EGR valve uses _____ to control the opening of the valve. 10) _____

A) a pulse-width modulated solenoid
B) a vacuum
C) a pressure valve
D) none of these

Answer Key
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1) A
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2) A
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3) D
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4) A
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5) B
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6) A
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7) C
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8) A
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9) A
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10) A
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