AT7 Chapter 82 A8 13 Questions

Catalytic Converters

1. What is the purpose of a catalytic converter?
A. To increase engine performance
B. To reduce exhaust emissions outside of the engine
C. To improve fuel efficiency
D. To decrease the lifespan of the vehicle
2. Which of the following is NOT a function of the catalyst used in a catalytic converter?
A. To create a chemical reaction
B. To change harmful emissions into nonharmful ones
C. To increase the temperature of the exhaust system
D. To reduce the amount of pollutants released into the environment
3. Where is the catalytic converter installed in a vehicle?
A. In the engine
B. In the fuel tank
C. In the exhaust system
D. In the transmission
4. What material are most converters constructed of?
A. Steel
B. Aluminum
C. Ceramic
D. Plastic

5. Which of the following materials are applied on top of the converter substrate?
A. Porous aluminum
B. Rhodium, palladium, and platinum
C. Carbon dioxide and water
D. None of the above
6. What is the light-off temperature for a catalytic converter?
A. Close to 100°F
B. Close to 200°F
C. Close to 300°F
D. Close to 500°F
7. What is the main cause of premature converter failure?
A. Excessive temperatures
B. Physical damage
C. Contamination
D. All of the above
8. What is the maximum back pressure at idle that a catalytic converter should have?
A. Less than 0.5 PSI
B. Less than 1.0 PSI
C. Less than 1.5 PSI
D. Less than 2.0 PSI
9. How can you determine if the substrate inside a catalytic converter is broken?
A. By measuring exhaust system back pressure
B. By performing a tap test
C. By monitoring catalytic converter performance with a heated oxygen sensor
D. By repairing engine problems as soon as possible

11. What should happen to the temperature of a properly working catalytic converter?
A. It should decrease by at least 10%.
B. It should increase by at least 10%.
C. It should remain the same
D. It should increase by less than 10%.
12. What should be checked when a defective catalytic converter is found?
A. The tires and brakes.
B. The suspension system.
C. The ignition and fuel systems.
D. The transmission fluid
13. What guidelines does the EPA have for catalytic converter replacement?
A. No guidelines.
B. Guidelines for the type of vehicle only.
C. Guidelines for the type of catalytic converter only.
D. Strict guidelines for catalytic converter replacement.

10. What is the best method to test a catalytic converter?

B. Measure inlet and outlet temperatures with an infrared pyrometer.

A. Check intake manifold vacuum at 2,500 RPM.

C. Conduct an oxygen level and snap-throttle test.

D. Check the catalytic converter's cerium content.

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- 1. B
- 2. C
- 3. C
- 4. C
- 5. B
- 6. D
- 7. D
- 8. C
- 9. B
- 10. B
- 11. B
- 12. C
- 13. D