

Electric and Hybrid Electric Vehicles, 1st Edition

Quiz 15A

NAME _____

1. If the steering column of an electric power steering system vehicle is replaced, what may have to be recalibrated by the electric power steering control module? 1. _____
 - A) Lock-to-lock distance
 - B) Vehicle toe-in
 - C) Torque sensor zero
 - D) Turn signal cancel trigger

2. Two technicians are discussing electric power steering (EPS) systems. Technician A says that some systems operate on 12 volts. Technician B says that some systems operate on 42 volts, such as on some hybrid electric vehicles. Which technician is correct? 2. _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B

3. The steering shaft torque sensor uses _____ as inputs to the EPS control module. 3. _____
 - A) calibrated springs
 - B) vacuum pulses
 - C) viscous resistances
 - D) voltage signals

4. What type of motor is used in most electric power steering (EPS) systems? 4. _____
 - A) AC brush type
 - B) DC brushless
 - C) Stepper
 - D) None of the above

5. While troubleshooting an electric power steering (EPS) system concern, a scan tool displays DTC U0073. What part of the EPS system has detected a fault? 5. _____
 - A) The motor circuit
 - B) Data communication
 - C) Torque sensor
 - D) Steering angle sensor

6. The steering torque sensor in an electric power steering system senses _____. 6. _____
 - A) steering wheel torque
 - B) steering wheel direction
 - C) Both a and b
 - D) Neither a nor b

7. Which of these must be serviced together, as a unit? 7. _____
 - A) Steering wheel and air bag
 - B) Steering torque and position sensors
 - C) Steering warning lamp and PSCM
 - D) All of these can be serviced individually.

8. The advantages of electric power steering compared to hydraulic power steering include _____ 8. _____
- A) less weight
 - B) improved fuel economy
 - C) increased usable engine power
 - D) All of the above
9. What diagnostic equipment is usually needed to diagnose faults or relearn the electric power steering system? 9. _____
- A) Special electronic diagnostic equipment designed to test each specific system
 - B) Factory or factory-level scan tool
 - C) A breakout box
 - D) A 12-volt test light
10. What type of diagnostic trouble codes will be set when an EPS system fault is detected? 10. _____
- A) Type A code
 - B) Type B code
 - C) Type C code
 - D) Type D code

Answer Key

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1. C
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2. C
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3. D
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4. B
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5. B
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6. C
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