

Drive Systems

1. What is needed to safely remove and/or install a permanent magnet rotor?

- a. HV gloves
- b. A special holder/installer
- c. Insulated tools (wrenches and pliers)
- d. All of the above

2. Hybrid electric vehicle (HEV) diagnostic trouble codes _____.

- a. Are global (generic) codes only (P0XXX)
- b. Can include letters such as P0A30
- c. Often can pin down the fault
- d. Both b and c

3. An insulation (isolation) tester applies _____ to test for continuity between the high-voltage cable and the chassis ground.

- a. A high voltage pulse
- b. A high amperage current supplied at 12 volts
- c. A resistance between the two components being tested
- d. A low voltage (about 2 volts) and a low current (about 0.5 A)

4. What data would be an indication of where a noise or shudder from the drivetrain may be located?

- a. A low HV battery SOC
- b. An auxiliary battery fault code
- c. An insulation/isolation fault DTC for the traction motor
- d. A fault code (DTC) for a failed resolver

Drive Systems

5. If there is a stored diagnostic trouble code (DTC) for a loss of insulation, where should the technician first check?

- a. At the HV disconnect plug
- b. At the location stated in the DTC description
- c. At the closest location to the chassis ground connection
- d. At the closest location to the HV battery

6. What type of lubricant is used in most HEV transmissions?

- a. POE dielectric fluid
- b. Usually ATF of the specified type
- c. POA engine oil
- d. Silicone grease

7. A diagnostic trouble code (DTC) has been set for motor-rotor position sensor (resolver) fault. Technician A says that this part is a replaceable part if defective. Technician B says that it is part of the traction motor assembly and is replaced as an assembly. Which technician is correct?

- a. Technician A only
- b. Technician B only
- c. Both Technicians A and B
- d. Neither Technician A nor B

8. A cover is being removed from a HV component such as the inverter/converter. What is the purpose of the two-wire connector that is disconnected in order to remove the cover?

- a. It is used to set a diagnostic trouble code if the cover is removed
- b. Used to shut off the HV system and discharge the capacitors to avoid personal injury
- c. Used to trigger the dash warning lamp for overheat of the inverter/converter
- d. Used a ground connection so the cover is properly grounded

Drive Systems

9. The parking pawl on most hybrid electric vehicles (HEVs) _____.

- a. Is mechanically applied using a cable
- b. Is not used but instead uses an electromagnet to keep the vehicle from rolling when parked
- c. Uses an electric motor to move the parking pawl into position
- d. Uses the traction motor to keep the vehicle from moving when parked

Drive Systems

Answer Key

1. b

2. d

3. a

4. c

5. b

6. b

7. a

8. b

9. c