

PRACTICE EXAM 6: A6 SIMULATION

— ELECTRICAL/ELECTRONIC SYSTEMS

1. A vehicle has been brought in with the following findings: complaint of multiple electronic system warning lights illuminated, stored DTCs for body control module, instrument cluster, ABS, and security system, and the body control module is not communicating on the CAN bus. The MOST likely cause is:

- A. A worn power steering pulley
- B. A CAN bus communication fault, BCM fault, or open circuit in the BCM power or ground
- C. A worn ball joint
- D. Air in the clutch hydraulic system

2. The proper procedure for diagnosing a body control module CAN bus communication fault is to:

- A. Apply compressed air to the system
- B. Replace the BCM as the most direct repair
- C. Replace the brake fluid as the only step
- D. Use a scan tool to verify CAN bus communication, check for network DTCs, inspect bus wiring, and verify module power and ground

3. A vehicle equipped with integrated body electrical control has been brought in with a complaint of multiple body electrical issues. Scan tool data shows DTCs for both BCM and engine control module. The MOST likely cause is:

- A. A common signal or shared sensor that affects both BCM operation and engine torque management

- B. Apply compressed air to the system
- C. Replace the BCM as the most direct repair
- D. Replace the brake fluid as the only step

4. The proper procedure for diagnosing body-engine integration faults is to:

- A. Apply compressed air to the system
- B. Replace the BCM as the most direct repair
- C. Verify all sensor signals, retrieve DTCs from all affected modules, and identify the specific cause shared between modules
- D. Replace the brake fluid as the only step

5. A vehicle equipped with matrix LED headlights has been brought in with a complaint that one matrix headlight has reduced output. The MOST likely cause is:

- A. Apply compressed air to the headlight
- B. A failed individual LED module within the matrix, fault in the matrix control module, or fault in the wiring to the matrix
- C. Replace the headlight as a precaution
- D. Replace the brake fluid as the only step

6. The proper procedure for diagnosing matrix LED headlight faults is to:

- A. Apply compressed air to the headlight
- B. Replace the headlight as the most direct repair
- C. Replace the brake fluid as the only step
- D. Verify the customer concern, retrieve stored DTCs, monitor scan tool data for individual LED control, and identify the specific cause

7. A vehicle equipped with adaptive driving beam (ADB) has been brought in with a complaint that the ADB system does not function. The MOST likely cause is:

- A. A failed forward-facing camera, fault in the ADB module, miscalibration, or fault in the matrix headlight system that ADB controls
- B. Apply compressed air to the system
- C. Replace the ADB module as a precaution
- D. Replace the brake fluid as the only step

8. The proper procedure for ADB system calibration is to:

- A. Apply compressed air to the camera
- B. Replace the ADB module as a precaution
- C. Replace the brake fluid as the only step
- D. Park on a level surface, perform the manufacturer-specified calibration with proper targets, and verify proper operation

9. A vehicle equipped with laser headlights has been brought in for diagnosis. The proper purpose of laser headlights is to:

- A. Apply compressed air to the headlights
- B. Replace the headlights as a precaution
- C. Provide extremely long range, focused illumination using laser technology to excite a phosphor that produces the visible light
- D. Filter contaminants from the headlights

10. The proper procedure for diagnosing laser headlight faults is to:

- A. Apply compressed air to the headlights

B. Verify the customer concern, retrieve stored DTCs, follow manufacturer-specified diagnostic procedure with proper PPE, and identify the specific cause

C. Replace the headlights as a precaution

D. Replace the brake fluid as the only step

11. A vehicle equipped with telematics has been brought in with a complaint that the telematics service does not function. The MOST likely cause is:

A. Apply compressed air to the system

B. Replace the telematics module as the most direct repair

C. A failed telematics module, fault in the cellular antenna, fault in the GPS antenna, or service connectivity issue

D. Replace the brake fluid as the only step

12. The proper procedure for diagnosing telematics system faults is to:

A. Verify the customer concern, retrieve stored DTCs, verify cellular and GPS signal reception, verify telematics module operation, and identify the specific cause

B. Apply compressed air to the system

C. Replace the telematics module as a precaution

D. Replace the brake fluid as the only step

13. A vehicle equipped with connected vehicle services has been brought in for diagnosis. The proper purpose of connected vehicle services is to:

A. Apply compressed air to the system

B. Replace the system as a precaution

C. Filter contaminants from the system

D. Provide cloud-based services including remote diagnostics, software updates, navigation services, and emergency response

14. A vehicle equipped with over-the-air (OTA) software updates has been brought in with a complaint that an OTA update has failed. The MOST likely cause is:

A. Apply compressed air to the system

B. Cellular signal interruption during the update, vehicle battery voltage drop during the update, or fault in the OTA process

C. Replace the telematics module as a precaution

D. Replace the brake fluid as the only step

15. The proper procedure for completing a failed OTA update is to:

A. Apply compressed air to the system

B. Replace the telematics module as a precaution

C. Replace the brake fluid as the only step

D. Verify cellular signal, ensure stable battery voltage, follow the manufacturer-specified update procedure, and verify successful update

16. A vehicle has been brought in with a complaint of multiple electrical issues that began after a software update. The MOST likely cause is:

A. The update may have introduced an issue requiring rollback or further update, or the update was incomplete

B. Apply compressed air to the system

C. Replace the affected modules as a precaution

D. Replace the brake fluid as the only step

17. The proper procedure for addressing post-update electrical issues is to:

- A. Apply compressed air to the system
- B. Replace the affected modules as a precaution
- C. Verify the update was completed successfully, contact the manufacturer if issues persist, and follow recommended procedure
- D. Replace the brake fluid as the only step

18. A vehicle has been brought in with a complaint of intermittent battery warning. Scan tool data shows the alternator is functioning normally, but the battery is occasionally not receiving proper charge. The MOST likely cause is:

- A. Apply compressed air to the system
- B. A marginal connection in the charging circuit, fault in the battery sensor (if equipped), or fault in the charging system control
- C. Replace the alternator as a precaution
- D. Replace the brake fluid as the only step

19. The proper procedure for diagnosing intermittent charging issues is to:

- A. Verify the customer concern, monitor scan tool data during operation, perform wiggle testing, identify the marginal connection or fault, and address accordingly
- B. Apply compressed air to the system
- C. Replace the alternator as a precaution
- D. Replace the brake fluid as the only step

20. A vehicle equipped with battery management system (BMS) has been brought in for diagnosis. The proper purpose of BMS is to:

- A. Apply compressed air to the system
- B. Replace the BMS as a precaution
- C. Filter contaminants from the system
- D. Monitor battery state of charge, state of health, current, and temperature, and adjust charging based on the data

21. The proper procedure for diagnosing BMS faults is to:

- A. Apply compressed air to the system
- B. Replace the BMS as the most direct repair
- C. Verify the customer concern, retrieve stored DTCs, verify battery sensor operation, and identify the specific cause
- D. Replace the brake fluid as the only step

22. A vehicle has been brought in with a complaint of unusually high charging voltage. Scan tool data shows the BMS is commanding higher charging due to detected battery condition. The MOST likely cause is:

- A. Apply compressed air to the system
- B. The BMS is operating correctly to address a battery condition (low state of charge, sulfation, or temperature requirements)
- C. Replace the BMS as a precaution
- D. Replace the brake fluid as the only step

23. The proper procedure for verifying BMS operation is to:

- A. Apply compressed air to the system
- B. Replace the BMS as a precaution
- C. Replace the brake fluid as the only step
- D. Verify battery sensor operation, verify proper BMS commands, monitor scan tool data, and verify proper charging response

24. A vehicle equipped with start-stop system and reinforced AGM battery has been brought in with a complaint that the start-stop system has stopped functioning. The MOST likely cause is:

- A. A degraded AGM battery (reduced capacity affecting start-stop operation), fault in the high-cycle starter, or fault in the start-stop control module
- B. Apply compressed air to the system
- C. Replace the start-stop system as a precaution
- D. Replace the brake fluid as the only step

25. The proper procedure for diagnosing start-stop system non-operation is to:

- A. Apply compressed air to the system
- B. Replace the start-stop module as the most direct repair
- C. Verify the customer concern, retrieve stored DTCs, verify battery state of charge and capacity, verify starter operation, and identify the specific cause
- D. Replace the brake fluid as the only step

26. A vehicle equipped with a hybrid system has been brought in with a complaint of reduced regenerative braking. The MOST likely cause is:

- A. Apply compressed air to the system

B. A degraded hybrid battery (reduced capacity for regenerative absorption), fault in the regenerative braking system, or fault in the hybrid control module

C. Replace the hybrid system as a precaution

D. Replace the brake fluid as the only step

27. The proper procedure for diagnosing reduced regenerative braking is to:

A. Apply compressed air to the system

B. Replace the hybrid system as a precaution

C. Verify the customer concern, retrieve stored DTCs, monitor scan tool data for battery state and regen function, and identify the specific cause

D. Replace the brake fluid as the only step

28. A vehicle equipped with EV high-voltage system has been brought in with a complaint of slow DC fast charging. The MOST likely cause is:

A. A degraded high-voltage battery (reduced capacity affecting fast charging), fault in the charging system, or charging station communication issue

B. Apply compressed air to the system

C. Replace the high-voltage system as a precaution

D. Replace the brake fluid as the only step

29. The proper procedure for diagnosing slow EV DC fast charging is to:

A. Apply compressed air to the system

B. Replace the high-voltage system as a precaution

C. Replace the brake fluid as the only step

D. Verify the customer concern, retrieve stored DTCs, test with a known good charger, monitor scan tool data, and identify the specific cause

30. A vehicle equipped with vehicle-to-grid (V2G) capability has been brought in for diagnosis. The proper purpose of V2G technology is to:

- A. Apply compressed air to the system
- B. Replace the system as a precaution
- C. Filter contaminants from the system
- D. Allow the vehicle to discharge electricity back to the grid, supporting grid stability and providing a power source

31. The proper procedure for diagnosing V2G system faults is to:

- A. Apply compressed air to the system
- B. Verify the customer concern, retrieve stored DTCs, verify high-voltage system operation, and identify the specific cause per the manufacturer's procedure
- C. Replace the V2G system as a precaution
- D. Replace the brake fluid as the only step

32. A vehicle equipped with vehicle-to-vehicle (V2V) communication has been brought in for diagnosis. The proper purpose of V2V is to:

- A. Apply compressed air to the system
- B. Replace the system as a precaution
- C. Allow vehicles to communicate with each other for safety information sharing (collision avoidance, traffic alerts, etc.)
- D. Filter contaminants from the system

33. A vehicle has been brought in with a complaint of multiple electrical issues that occur only at certain ambient temperatures. The MOST likely cause is:

- A. A temperature-sensitive electrical issue (marginal connection, component near specification limit, or thermal expansion-related issue)
- B. Apply compressed air to the system
- C. Replace the affected systems as a precaution
- D. Replace the brake fluid as the only step

34. The proper procedure for diagnosing temperature-related electrical issues is to:

- A. Apply compressed air to the system
- B. Replace the affected systems as a precaution
- C. Verify the symptom under matching temperature conditions, identify the specific cause, and address accordingly
- D. Replace the brake fluid as the only step

35. A vehicle has been brought in with a complaint of electrical issues that occur only after extended driving. The MOST likely cause is:

- A. Apply compressed air to the system
- B. A heat-sensitive component (component drift at temperature, marginal connection affected by thermal expansion, or component failure under heat)
- C. Replace the affected systems as a precaution
- D. Replace the brake fluid as the only step

36. The proper procedure for diagnosing heat-related electrical issues is to:

- A. Apply compressed air to the system

- B. Replace the affected systems as a precaution
- C. Replace the brake fluid as the only step
- D. Verify the symptom under matching heat conditions, identify the specific cause, and address accordingly

37. A vehicle equipped with passive entry/passive start (PEPS) has been brought in with a complaint that PEPS does not function. The MOST likely cause is:

- A. A failed receiver, fault in the PEPS module, low key fob batteries, or fault in the PEPS antenna
- B. Apply compressed air to the system
- C. Replace the PEPS module as a precaution
- D. Replace the brake fluid as the only step

38. The proper procedure for diagnosing PEPS faults is to:

- A. Apply compressed air to the system
- B. Verify key fob operation, verify PEPS antenna operation, verify PEPS module operation, and identify the specific cause
- C. Replace the PEPS module as a precaution
- D. Replace the brake fluid as the only step

39. A vehicle equipped with smart proximity sensors has been brought in with a complaint of false sensor activation. The MOST likely cause is:

- A. Apply compressed air to the sensors
- B. Replace the sensor module as a precaution
- C. Sensor contamination, miscalibration, environmental conditions affecting the sensor, or fault in the sensor module
- D. Replace the brake fluid as the only step

40. The proper procedure for diagnosing smart sensor faults is to:

- A. Verify the customer concern, retrieve stored DTCs, verify sensor operation under varied conditions, and identify the specific cause
- B. Apply compressed air to the sensors
- C. Replace the sensor as a precaution
- D. Replace the brake fluid as the only step

41. A vehicle has been brought in with a complaint of multiple electrical issues. The technician finds the negative battery cable showing visible damage from chafing against the chassis. The MOST appropriate action is:

- A. Apply compressed air to the cable
- B. Replace the cable as a precaution
- C. Replace the brake fluid as the only step
- D. Replace the cable, address the chafing source, verify proper routing and protection, and verify proper operation

42. The proper procedure for verifying cable repair is to:

- A. Apply compressed air to the cable
- B. Verify proper routing, verify proper protection, perform voltage drop testing if applicable, and verify proper operation
- C. Replace the cable as a precaution
- D. Replace the brake fluid as the only step

43. A vehicle has been brought in with a complaint of multiple electrical issues. The technician finds visible signs of accident damage to wiring, fuse box, and related components. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Replace the affected systems as a precaution
- C. Identify the extent of damage, repair affected components per manufacturer-specified procedure, verify all related systems operate properly, and verify resolution
- D. Replace the brake fluid as the only step

44. The proper procedure for verifying accident damage repair is to:

- A. Verify all repairs, verify all related systems operate properly, retrieve any stored DTCs, road test, and verify resolution
- B. Apply compressed air to the system
- C. Replace the affected systems as a precaution
- D. Replace the brake fluid as the only step

45. A vehicle has been brought in with a complaint of high-voltage warning on a hybrid vehicle. The technician finds visible damage to the high-voltage cabling. The MOST appropriate action is:

- A. Apply compressed air to the cabling
- B. Replace the high-voltage system as a precaution
- C. Replace the brake fluid as the only step
- D. Follow the manufacturer-specified isolation procedure, verify zero voltage, repair the high-voltage cabling per the manufacturer's specification, restore the system, and verify proper operation

46. The proper procedure for verifying high-voltage system service is to:

- A. Apply compressed air to the system
- B. Verify all repairs, verify proper insulation, restore the high-voltage system, perform required tests, and verify proper operation
- C. Replace the high-voltage system as a precaution
- D. Replace the brake fluid as the only step

47. A vehicle has been brought in for routine inspection. The technician finds visible signs of abnormal heat damage to a wiring connector. The MOST appropriate action is:

- A. Apply compressed air to the connector
- B. Replace the connector as a precaution
- C. Identify the cause of the heat damage, address the cause, repair the connector, and verify proper operation
- D. Replace the brake fluid as the only step

48. The proper procedure for diagnosing connector heat damage is to:

- A. Apply compressed air to the connector
- B. Replace the connector as a precaution
- C. Replace the brake fluid as the only step
- D. Verify the cause (high resistance, current overload, marginal connection), address the underlying cause, repair the connector, and verify proper operation

49. A vehicle has been brought in with a complaint of multiple electrical symptoms. The customer reports that the issues began after parking in heavy rain. The MOST likely cause is:

- A. Water intrusion into electrical connectors, modules, or wiring causing corrosion or short circuits
- B. Apply compressed air to the system
- C. Replace the affected systems as a precaution
- D. Replace the brake fluid as the only step

50. The proper procedure for verifying electrical service after water-related repair is to:

- A. Apply compressed air to the system
- B. Verify all repairs, address the source of water intrusion, verify proper operation of all systems, and verify resolution
- C. Replace the affected systems as a precaution
- D. Replace the brake fluid as the only step

PRACTICE EXAM 6: A6 SIMULATION

— ANSWER KEY, EXPLANATIONS, AND TASK REMEDIATION

1. B — A CAN bus communication fault, BCM fault, or open circuit in the BCM power or ground. Multiple modules with stored DTCs and BCM not communicating is the diagnostic signature of major BCM or network issue. Each cause prevents proper communication. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
2. D — Use a scan tool to verify CAN bus communication, check for network DTCs, inspect bus wiring, and verify module power and ground. BCM CAN bus diagnosis requires comprehensive systematic approach. Each step provides different diagnostic information. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
3. A — A common signal or shared sensor that affects both BCM operation and engine torque management. BCM and ECM share signals and sensors. A common signal fault produces DTCs in both modules. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
4. C — Verify all sensor signals, retrieve DTCs from all affected modules, and identify the specific cause shared between modules. Body-engine integration fault diagnosis requires multi-module DTC retrieval and signal verification. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
5. B — A failed individual LED module within the matrix, fault in the matrix control module, or fault in the wiring to the matrix. Matrix LED reduced output indicates one or more LED modules have failed. The matrix control allows individual LED management. *ASE Task Reference: A6 Domain D — Lighting System. Review subsection 6.4.*
6. D — Verify the customer concern, retrieve stored DTCs, monitor scan tool data for individual LED control, and identify the specific cause. Matrix LED diagnosis requires scan tool integration to identify specific LED failures. Each individual module can be identified through scan data. *ASE Task Reference: A6 Domain D — Lighting System. Review subsection 6.4.*
7. A — A failed forward-facing camera, fault in the ADB module, miscalibration, or fault in the matrix headlight system that ADB controls. ADB depends on camera detection and matrix headlight control. Each component contributes to potential causes. *ASE Task Reference: A6 Domain D — Lighting System. Review subsection 6.4.*

8. D — Park on a level surface, perform the manufacturer-specified calibration with proper targets, and verify proper operation. ADB calibration requires precise positioning and proper procedure with manufacturer targets. Verification confirms successful calibration. *ASE Task Reference: A6 Domain D — Lighting System. Review subsection 6.4.*
9. C — Provide extremely long range, focused illumination using laser technology to excite a phosphor that produces the visible light. Laser headlights use blue laser diodes to excite a yellow phosphor, producing extremely focused white light. Range exceeds traditional headlight technology. *ASE Task Reference: A6 Domain D — Lighting System. Review subsection 6.4.*
10. B — Verify the customer concern, retrieve stored DTCs, follow manufacturer-specified diagnostic procedure with proper PPE, and identify the specific cause. Laser headlight diagnosis requires PPE and manufacturer-specific procedure. Safety precautions are critical due to the laser technology. *ASE Task Reference: A6 Domain D — Lighting System. Review subsection 6.4.*
11. C — A failed telematics module, fault in the cellular antenna, fault in the GPS antenna, or service connectivity issue. Telematics non-operation indicates the system cannot establish or maintain its services. Multiple components contribute to potential causes. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
12. A — Verify the customer concern, retrieve stored DTCs, verify cellular and GPS signal reception, verify telematics module operation, and identify the specific cause. Telematics diagnosis requires verification of communication paths and module operation. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
13. D — Provide cloud-based services including remote diagnostics, software updates, navigation services, and emergency response. Connected vehicle services use cellular and cloud connectivity for various functions. The features provide significant added capability. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
14. B — Cellular signal interruption during the update, vehicle battery voltage drop during the update, or fault in the OTA process. OTA updates require stable conditions throughout the process. Interruptions or voltage drops can corrupt or fail the update. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
15. D — Verify cellular signal, ensure stable battery voltage, follow the manufacturer-specified update procedure, and verify successful update. Failed OTA recovery requires stable conditions, manufacturer's procedure, and verification. Each step contributes to successful completion. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
16. A — The update may have introduced an issue requiring rollback or further update, or the update was incomplete. Post-update electrical issues can result from update problems. The manufacturer typically addresses these through subsequent updates or rollback procedures. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*

17. C — Verify the update was completed successfully, contact the manufacturer if issues persist, and follow recommended procedure. Post-update issues require verification and manufacturer guidance. The manufacturer typically has specific procedures for these situations. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
18. B — A marginal connection in the charging circuit, fault in the battery sensor (if equipped), or fault in the charging system control. Intermittent charging issues with normal alternator operation indicate subtle issues. Marginal connections, sensors, or control faults each produce intermittent symptoms. *ASE Task Reference: A6 Domain C — Charging System. Review subsection 6.3.*
19. A — Verify the customer concern, monitor scan tool data during operation, perform wiggle testing, identify the marginal connection or fault, and address accordingly. Intermittent charging diagnosis requires symptom-matching conditions and physical testing. Each method reveals different aspects. *ASE Task Reference: A6 Domain C — Charging System. Review subsection 6.3.*
20. D — Monitor battery state of charge, state of health, current, and temperature, and adjust charging based on the data. BMS optimizes battery performance and life. Real-time monitoring and charging adjustment maintain proper battery operation. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
21. C — Verify the customer concern, retrieve stored DTCs, verify battery sensor operation, and identify the specific cause. BMS diagnosis requires DTC retrieval and sensor verification. Each step provides different diagnostic information. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
22. B — The BMS is operating correctly to address a battery condition (low state of charge, sulfation, or temperature requirements). Higher charging voltage commanded by BMS is intentional response to battery condition. The system is operating correctly to address the situation. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
23. D — Verify battery sensor operation, verify proper BMS commands, monitor scan tool data, and verify proper charging response. BMS verification requires sensor verification and command monitoring. Both contribute to proper operation. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
24. A — A degraded AGM battery (reduced capacity affecting start-stop operation), fault in the high-cycle starter, or fault in the start-stop control module. Start-stop non-operation has multiple potential causes. Each component contributes to system function. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
25. C — Verify the customer concern, retrieve stored DTCs, verify battery state of charge and capacity, verify starter operation, and identify the specific cause. Start-stop diagnosis requires comprehensive systematic approach. Each component must be evaluated. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*

26. B — A degraded hybrid battery (reduced capacity for regenerative absorption), fault in the regenerative braking system, or fault in the hybrid control module. Reduced regen indicates the system cannot capture the available energy. Battery degradation, system faults, or control issues each produce this symptom. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
27. C — Verify the customer concern, retrieve stored DTCs, monitor scan tool data for battery state and regen function, and identify the specific cause. Reduced regen diagnosis requires DTC retrieval and scan data monitoring. Each step provides different diagnostic information. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
28. A — A degraded high-voltage battery (reduced capacity affecting fast charging), fault in the charging system, or charging station communication issue. Slow DC fast charging has multiple potential causes. Each contributes to fast charging performance. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
29. D — Verify the customer concern, retrieve stored DTCs, test with a known good charger, monitor scan tool data, and identify the specific cause. Slow charging diagnosis requires comprehensive approach including charger testing. Each step isolates different potential causes. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
30. D — Allow the vehicle to discharge electricity back to the grid, supporting grid stability and providing a power source. V2G technology enables bidirectional energy flow. The vehicle becomes both an energy consumer and energy source. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
31. B — Verify the customer concern, retrieve stored DTCs, verify high-voltage system operation, and identify the specific cause per the manufacturer's procedure. V2G diagnosis requires manufacturer-specific procedures. The technology and diagnostics vary by manufacturer. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
32. C — Allow vehicles to communicate with each other for safety information sharing (collision avoidance, traffic alerts, etc.). V2V technology enables vehicle-to-vehicle communication for safety. Information sharing supports cooperative safety functions. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
33. A — A temperature-sensitive electrical issue (marginal connection, component near specification limit, or thermal expansion-related issue). Temperature-related electrical issues indicate subtle problems that change with temperature. Each cause changes with temperature in different ways. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*
34. C — Verify the symptom under matching temperature conditions, identify the specific cause, and address accordingly. Temperature-related diagnosis requires symptom-matching conditions. Each

cause reveals itself under specific temperatures. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*

35. B — A heat-sensitive component (component drift at temperature, marginal connection affected by thermal expansion, or component failure under heat). Heat-related electrical issues indicate components that change with temperature. Multiple causes affect components when heated. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*
36. D — Verify the symptom under matching heat conditions, identify the specific cause, and address accordingly. Heat-related diagnosis requires symptom-matching conditions. The fault must be observed under the conditions that produce it. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*
37. A — A failed receiver, fault in the PEPS module, low key fob batteries, or fault in the PEPS antenna. PEPS non-operation has multiple potential causes. Each component contributes to system function. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
38. B — Verify key fob operation, verify PEPS antenna operation, verify PEPS module operation, and identify the specific cause. PEPS diagnosis requires verification of multiple components. Each component contributes to potential causes. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
39. C — Sensor contamination, miscalibration, environmental conditions affecting the sensor, or fault in the sensor module. Smart sensor false activation has multiple potential causes. Each contributes to incorrect detection. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
40. A — Verify the customer concern, retrieve stored DTCs, verify sensor operation under varied conditions, and identify the specific cause. Smart sensor diagnosis requires comprehensive systematic approach including operation under varied conditions. *ASE Task Reference: A6 Domain F — Body Electrical and Accessories. Review subsection 6.6.*
41. D — Replace the cable, address the chafing source, verify proper routing and protection, and verify proper operation. Chafed battery cable requires replacement plus addressing the chafing source. Without addressing the source, the new cable will be damaged. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
42. B — Verify proper routing, verify proper protection, perform voltage drop testing if applicable, and verify proper operation. Cable repair verification requires routing, protection, electrical, and operational verification. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*

43. C — Identify the extent of damage, repair affected components per manufacturer-specified procedure, verify all related systems operate properly, and verify resolution. Accident damage repair requires comprehensive assessment and repair. Each component must be evaluated. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*
44. A — Verify all repairs, verify all related systems operate properly, retrieve any stored DTCs, road test, and verify resolution. Accident damage repair verification requires comprehensive approach. Each step ensures proper restoration. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*
45. D — Follow the manufacturer-specified isolation procedure, verify zero voltage, repair the high-voltage cabling per the manufacturer's specification, restore the system, and verify proper operation. High-voltage cable repair requires safety procedures and manufacturer specifications throughout. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
46. B — Verify all repairs, verify proper insulation, restore the high-voltage system, perform required tests, and verify proper operation. High-voltage system service verification requires comprehensive approach including insulation verification. *ASE Task Reference: A6 Domain B — Battery and Starting System. Review subsection 6.2.*
47. C — Identify the cause of the heat damage, address the cause, repair the connector, and verify proper operation. Heat damage at connectors indicates underlying issues. The cause must be identified to prevent recurrence. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*
48. D — Verify the cause (high resistance, current overload, marginal connection), address the underlying cause, repair the connector, and verify proper operation. Heat damage diagnosis requires cause identification and underlying issue resolution. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*
49. A — Water intrusion into electrical connectors, modules, or wiring causing corrosion or short circuits. Post-rain electrical issues are the diagnostic signature of water intrusion. Multiple components can be affected by water entry. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*
50. B — Verify all repairs, address the source of water intrusion, verify proper operation of all systems, and verify resolution. Water-related electrical service verification requires source elimination and operation verification. Without source elimination, issues will recur. *ASE Task Reference: A6 Domain A — General Electrical/Electronic System Diagnosis. Review subsection 6.1.*