PRACTICE EXAM 33

1. A radar module sets a "no communication" DTC. At the module connector, the technician measures 0 volts on the supply circuit and good ground. The MOST likely cause is:

A. An internal short within the radar module's processor circuit

B. A misaligned radar bracket shifting the sensor's horizontal aim

C. A calibration file that became corrupt above a set vehicle speed

D. An open or blown supply circuit between the source and the module

2. A technician suspects high resistance in an ADAS sensor ground. The BEST test to confirm this is a:

A. Continuity test performed with the circuit fully powered and loaded

B. Voltage-drop test across the ground path while the circuit is loaded

C. Resistance measurement taken with the battery disconnected entirely

D. Visual inspection of the connector without any electrical measurement

3. On a CAN bus, the two data lines normally sit near a common bias voltage and swing in opposite directions during transmission. A technician measuring CAN-High stuck at battery voltage would suspect:

A. A short to voltage on the CAN-High circuit affecting the bus

B. A perfectly normal idle condition requiring no further diagnosis

C. A calibration fault inside the forward camera module only

D. A misaimed radar sensor pulling the bus voltage upward

4. A pending DTC differs from a current (active) DTC in that a pending code:

A. Indicates a fault detected but not yet meeting the criteria to mature

B. Confirms a hard failure that is currently present at this moment

C. Can only be set by the forward camera module and no other module

D. Permanently disables the affected ADAS system until it is replaced

5. A technician finds an ADAS sensor circuit with correct voltage at the source but low voltage at the module. This pattern indicates:

A. A short to ground somewhere in the module's internal circuitry

B. A perfectly healthy circuit requiring no further investigation

C. An open ground that would read normal source voltage everywhere

D. Unwanted resistance (voltage drop) in the supply circuit wiring

6. A history (stored) DTC that is not currently active indicates that:

A. The fault is present right now and actively affecting the system

B. The fault occurred previously but is not currently being detected

C. The module must be replaced because the code cannot be cleared

D. The sensor requires immediate calibration before any other step

7. A technician needs to view the real-time value a radar module reports for a target's range. The BEST scan-tool function is:

A. The bi-directional output test that commands an actuator to move

B. The DTC clearing function that erases all stored fault codes

C. The live data (PID) display showing the module's reported values

D. The module reprogramming function that flashes new software

8. Two CAN bus termination resistors are wired in parallel across the bus. Measuring resistance across the bus with the system off should read approximately:

A. Zero ohms, indicating the two resistors are shorted together

B. Infinite resistance, indicating an open circuit on the bus

C. About 60 ohms, the parallel value of two 120-ohm resistors

D. About 240 ohms, the series total of the two resistors combined

9. A technician finds an intermittent ADAS fault that appears only over rough roads. The MOST likely cause is:

A. A corrupt calibration file that activates only at higher speeds

B. A software version mismatch in the forward camera module

C. A misaimed radar sensor that loses targets on smooth roads

D. A loose connection or chafed wire disturbed by road vibration

10. A technician measures an ADAS connector terminal and finds it spread, causing intermittent contact. The BEST repair is to:

A. Repair or replace the affected terminal to restore proper tension

B. Add dielectric grease and reconnect without addressing the terminal

C. Increase the module's supply voltage to overcome the poor contact

D. Replace the entire module instead of servicing the spread terminal

11. A technician must determine whether an ADAS circuit fault is in the wiring or the module. Substituting a known-good module is appropriate only after:

A. Replacing all four ADAS sensors as a complete matched set first

B. Calibrating the suspect module to rule out an aim-related fault

C. Verifying the power, ground, and signal circuits to the module

D. Clearing all DTCs and releasing the vehicle to monitor the fault

12. A wiring schematic shows an ADAS sensor sharing a ground with several other modules. A poor shared ground would MOST likely cause:

A. A fault isolated to one single module with no other effects

B. The radar sensor to gain detection range from the extra ground

C. Symptoms across multiple modules that share that ground path

D. The camera to recalibrate itself automatically on each key cycle

13. A technician uses a lab scope on a CAN bus and sees the signal flatline with no transitions. This MOST likely indicates:

A. A bus fault such as an open, short, or loss of communication

B. A perfectly normal high-speed bus operating without any faults

C. A calibration error inside the forward-facing camera module

D. A misaimed radar sensor altering the bus signal waveform shape

14. A technician finds battery voltage present on an ADAS sensor's signal line that should carry a low-voltage data signal. This suggests:

A. A normal condition for a digital data line at idle on the bus

B. An open ground causing the signal line to float to mid-voltage

C. A short to voltage on the signal circuit affecting the data line

D. A calibration fault requiring a static target-based recalibration

15. A technician should clear ADAS DTCs only after:

A. Confirming the codes before performing any diagnosis at all

B. Diagnosing and repairing the underlying fault that set the codes

C. Replacing the module regardless of the actual root cause found

D. Releasing the vehicle to the customer to monitor for recurrence

16. A technician measures 12.6 volts at a sensor with the key on but engine off, and the value drops to 9 volts during cranking. Regarding ADAS calibration, this matters because:

A. Voltage sag during cranking can reset modules or interrupt calibration

B. The cranking voltage permanently raises the radar's detection range

C. The voltage drop sets the camera's white-balance reference value

D. Cranking voltage demagnetizes the wheel-speed sensor tone rings

17. A technician finds a chafed wire shorting an ADAS signal circuit to the vehicle chassis. This is a:

A. Short to ground that pulls the signal circuit voltage toward zero

B. Short to voltage that raises the signal circuit toward battery level

C. Normal open circuit requiring no electrical repair to the wire

D. Calibration fault that a static target procedure would correct

18. A technician must identify which module on a multi-module network is causing a bus fault. A systematic approach is to:

A. Replace every module on the bus simultaneously to save diagnostic time

B. Disconnect modules methodically while monitoring the bus condition

C. Calibrate each sensor in turn until the bus communication returns

D. Clear all codes and release the vehicle to monitor the bus behavior

19. A DTC for "implausible signal" from an ADAS sensor most often indicates that:

A. The sensor lost all electrical power at its connector terminals

B. The module requires only a software flash with no other action

C. The reported value conflicts with expected or cross-checked data

D. The sensor's mounting bracket fasteners are loose or missing entirely

20. A technician should consult the wiring diagram before probing an ADAS circuit primarily to:

A. Determine the camera's white-balance reference for the calibration

B. Identify correct test points, wire colors, and circuit functions

C. Set the radar sensor's internal operating frequency for the vehicle

D. Establish the ultrasonic array's maximum object detection distance

21. A technician finds a connector with green corrosion on the terminals of an ADAS sensor. The corrosion is a concern because it:

A. Improves the electrical connection by adding surface conductivity

B. Only affects the appearance and never the circuit's performance

C. Permanently raises the radar sensor's maximum detection range

D. Adds resistance that can cause voltage drop and intermittent faults

22. A technician measures CAN-High and CAN-Low and finds both lines shorted together. The MOST likely effect is:

A. Improved bus speed from the two lines reinforcing each other

B. No effect, since the two CAN lines are designed to be connected

C. A calibration fault isolated to the forward camera module only

D. Loss of communication, since the differential signal is collapsed

23. A technician needs to test an ADAS actuator's response without driving the vehicle. The appropriate tool function is:

A. A bi-directional command that activates the actuator on demand

B. A resistance measurement of the actuator with the circuit open

C. A calibration routine that aims the radar to the thrust line

D. A DTC clearing operation that erases the stored fault history

24. A technician finds that an ADAS module loses communication only when the wiring harness is flexed by hand. This points to:

A. An intermittent open or loose connection within the flexed harness

B. A corrupt calibration file that activates only during harness flexing

C. A misaimed radar sensor disturbed by the technician's hand movement

D. A software mismatch that appears only when the harness is touched

25. A technician measures continuity through an ADAS circuit and reads infinite resistance where continuity is expected. This indicates:

A. A short to ground somewhere along the measured circuit path

B. A short to voltage raising the circuit toward battery potential

C. A normal, healthy circuit with proper low-resistance continuity

D. An open circuit, such as a broken wire or disconnected terminal

26. A technician should use a fused jumper wire or current-limited source when bypassing an ADAS circuit to:

A. Protect the circuit and components from damage during the test

B. Permanently increase the radar sensor's maximum detection range

C. Reset the steering angle sensor's stored zero-point reference value

D. Calibrate the forward camera to the windshield-bonded bracket

27. A "current" DTC that resets immediately after being cleared indicates:

A. A historical fault that has already been fully resolved and repaired

B. An active, ongoing fault condition still present in the circuit now

C. A pending code that has not yet matured into an active fault state

D. A module that requires only calibration with no electrical repair

28. A technician finds an ADAS sensor with proper power and ground but no data output on the signal line. With the circuits verified, the fault MOST likely lies in:

A. The supply circuit, which was already confirmed to be good

B. The sensor or module itself, since its circuits test as good

C. The vehicle's battery, which powers every module on the network

D. The calibration, which only affects aim and not signal output

29. A technician measures the resistance of a single CAN termination resistor and expects to read approximately:

A. Zero ohms, indicating a direct short across the resistor body

B. Infinite resistance, indicating the resistor is open internally

C. About 60 ohms, the value of two resistors measured in parallel

D. About 120 ohms, the standard value of one termination resistor

30. A technician finds a DTC indicating "voltage too low" on an ADAS module. The FIRST circuits to check are:

A. The calibration parameters stored in the module's memory

B. The sensor's physical aim relative to the vehicle thrust line

C. The module's power supply and ground circuits for integrity

D. The CAN bus termination resistors at each end of the network

31. A technician should record live data values before and after a repair to:

A. Permanently aim the radar sensor to the vehicle's thrust line

B. Set the steering angle sensor's zero-point before the alignment

C. Establish the ultrasonic array's maximum object detection range

D. Verify the repair changed the values in the expected direction

32. A technician finds two ADAS modules offline while others communicate normally. Both offline modules share one harness branch. The MOST likely fault is in:

A. The internal processor of just one of the two offline modules

B. The shared harness branch feeding the two offline modules together

C. The forward camera's calibration offset stored at the last service

D. The steering angle sensor's zero-point reference after an alignment

33. A technician uses a scan tool to view a "freeze frame" captured when an electrical DTC set. The freeze frame is useful because it:

A. Physically aims the radar sensor to the vehicle's thrust line

B. Calibrates the forward camera to the windshield-bonded bracket

C. Records the operating conditions present when the fault occurred

D. Sets the steering angle sensor's zero-point before the alignment

34. A technician finds a wire with high resistance due to internal corrosion under intact insulation. The BEST detection method is:

A. A visual inspection of the wire's outer insulation surface only

B. A continuity check performed with no electrical load applied

C. A resistance reading taken with the battery completely disconnected

D. A voltage-drop test across the suspect wire under normal load

35. A technician should de-pin and inspect a suspect ADAS connector terminal when:

A. The module has already been replaced and the fault still remains

B. The calibration completed successfully with no remaining concern

C. Intermittent contact or terminal damage is suspected at that point

D. The vehicle's tire pressures do not match the placard specification

36. A technician finds that an ADAS sensor's signal is present but noisy on a lab scope, with erratic spikes. This MOST likely indicates:

A. Electrical interference, a poor connection, or a circuit fault

B. A perfectly clean signal requiring no further investigation at all

C. A calibration error that a static target procedure would resolve

D. A misaimed radar bracket altering the signal's voltage amplitude

37. A technician must verify a repair to an ADAS power circuit actually fixed the voltage drop. The appropriate confirmation is to:

A. Clear the DTCs and assume the repair resolved the voltage issue

B. Replace the module to be certain the circuit problem is gone

C. Calibrate the sensor and consider the electrical repair complete

D. Repeat the voltage-drop test under load to confirm normal values

38. A technician finds an ADAS DTC referencing a specific circuit number. The wiring diagram is used to:

A. Determine the camera's white-balance reference for the procedure

B. Set the radar sensor's internal operating frequency for the vehicle

C. Trace that circuit's path, connectors, and test points for diagnosis

D. Establish the ultrasonic array's maximum object detection distance

39. A technician measures an ADAS ground circuit and finds 1.5 volts of drop across it under load. This reading indicates:

A. A perfectly clean ground requiring no further attention at all

B. A short to voltage on the ground circuit raising its potential

C. A normal ground for any high-current ADAS sensor application

D. Excessive resistance in the ground path that needs to be repaired

40. A technician should disconnect the battery per OEM procedure before certain ADAS repairs to:

A. Prevent damage to circuits and avoid unintended module activation

B. Permanently raise the radar sensor's maximum detection range

C. Set the steering angle sensor's zero-point during the repair

D. Calibrate the forward camera to the windshield-bonded bracket

41. A technician finds that clearing a DTC causes the ADAS warning lamp to extinguish, but it returns after a drive cycle. This indicates:

A. The fault was permanently repaired by the act of clearing the code

B. The module must be replaced because the lamp returned after clearing

C. The underlying fault remains and reset the code during the drive cycle

D. The calibration was lost and only a static recalibration is required

42. A technician needs to confirm a CAN bus is communicating before deeper diagnosis. A quick valid check is to:

A. Measure the camera's white-balance reference value on the scan tool

B. Verify modules report data and check bus voltages or resistance

C. Aim the radar sensor to the thrust line and observe the bus response

D. Set the steering angle sensor zero-point and watch the bus recover

43. A technician finds a melted ADAS connector showing signs of overheating. The MOST likely underlying cause is:

A. A normal connector condition that requires no further attention

B. A calibration fault that overheated the connector during a drive

C. A misaimed radar sensor drawing excess current through the pin

D. High resistance or excessive current causing heat at the connection

44. A technician must determine whether an intermittent ADAS fault is electrical or mechanical. Monitoring live data while tapping and flexing the harness helps by:

A. Permanently aiming the radar sensor to the vehicle's thrust line

B. Setting the steering angle sensor zero-point before the road test

C. Provoking the fault to appear so its electrical source can be found

D. Calibrating the forward camera to the windshield-bonded bracket

45. A technician reads a DTC that sets only under specific conditions and is currently inactive. This is BEST described as a:

A. Current code that is actively present in the circuit at this moment

B. History or intermittent code recording a fault that is not now active

C. Permanent code that can never be cleared from the module's memory

D. Calibration code that only a static target procedure can resolve

46. A technician finds an ADAS module with correct supply voltage but a missing or poor ground. The MOST likely symptom is:

A. The module gaining additional detection range from the open ground

B. Erratic operation or no communication due to the poor ground path

C. The module recalibrating itself automatically on each key cycle

D. The radar sensor physically re-aiming itself during normal driving

47. A technician should use the OEM-specified test procedure for an ADAS circuit rather than a generic approach because the OEM procedure:

A. Specifies the correct test points, values, and steps for that circuit

B. Always completes faster than any generic diagnostic approach available

C. Eliminates the need to verify the module's power and ground circuits

D. Removes the requirement to perform any functional test after repair

48. A technician finds that an ADAS sensor connector was not fully seated after a prior repair. The MOST likely result is:

A. Improved circuit performance from the partially seated connection

B. Intermittent or lost communication due to the incomplete connection

C. The radar sensor gaining detection range from the loose connector

D. The camera recalibrating itself automatically to fix the connection

49. A technician measures voltage on both sides of an ADAS circuit fuse and finds voltage on one side only. This indicates:

A. A healthy fuse passing current normally through the circuit

B. A short to ground downstream that does not affect the fuse

C. An open (blown) fuse interrupting the circuit at that point

D. A calibration fault unrelated to the fuse or its circuit path

50. A technician completes an ADAS electrical repair and must verify the network is fully restored. The BEST verification is to:

A. Clear the codes and release the vehicle without any further checks

B. Perform a post-scan confirming all modules communicate and no DTCs remain

C. Calibrate every sensor again regardless of whether it was disturbed

D. Confirm only that the warning lamp is off at the moment of key-on

Answer Key & Full Answer Explanations

1. D — With 0 volts on the supply and a good ground, the supply circuit is open or blown between the source and the module, cutting power and communication. An internal short, bracket misalignment, or corrupt file would not produce zero supply voltage with good ground. The missing supply voltage points to an open feed.

2. B — A voltage-drop test across the ground path while the circuit is loaded reveals high resistance that a static reading misses. Continuity and resistance tests with no load can read acceptable yet hide a fault under current. Loaded voltage-drop testing exposes the bad ground.

3. A — CAN-High stuck at battery voltage indicates a short to voltage on that circuit, disrupting the differential signal. It is not a normal idle, a camera calibration fault, or a radar-aim effect. The shorted high line corrupts bus communication.

4. A — A pending DTC marks a fault detected but not yet meeting the criteria to mature into an active code. It is not a confirmed hard failure, camera-exclusive, or system-disabling. The pending status flags an emerging condition.

5. D — Correct source voltage with low module voltage indicates unwanted resistance, a voltage drop, in the supply wiring. A short to ground or an open ground would present differently. The drop along the feed is the issue.

6. B — A history (stored) DTC that is not active means the fault occurred previously but is not currently detected. It is not present now, does not mandate replacement, and does not require immediate calibration. The stored code records a past event.

7. C — The live data (PID) display shows the module's real-time reported values, such as target range. Bi-directional tests, code clearing, and reprogramming serve other purposes. Live data reveals what the module currently reports.

8. C — Two 120-ohm termination resistors in parallel measure about 60 ohms across the bus with the system off. Zero, infinite, or 240 ohms would indicate a fault or wrong configuration. The 60-ohm reading confirms healthy termination.

9. D — A fault appearing only over rough roads points to a loose connection or chafed wire disturbed by vibration. A speed-activated file, software mismatch, or smooth-road target loss do not fit the vibration pattern. Mechanical disturbance of the circuit is the cause.

10. A — A spread terminal causing intermittent contact should be repaired or replaced to restore proper tension. Grease alone, raising voltage, or replacing the module do not fix the terminal. Restoring terminal tension corrects the contact.

11. C — Module substitution is appropriate only after verifying the power, ground, and signal circuits to the module. Replacing all sensors, calibrating first, or clearing codes do not isolate the fault. Confirming the circuits prevents misdiagnosis.

12. C — A poor shared ground most likely causes symptoms across multiple modules that share that ground path. It is not isolated to one module, beneficial to radar, or a trigger for auto-recalibration. Shared-ground faults affect everything on the path.

13. A — A flatlined CAN signal with no transitions indicates a bus fault such as an open, short, or loss of communication. It is not normal operation, a camera calibration error, or a radar-aim effect. The absent activity signals a bus problem.

14. C — Battery voltage on a low-voltage data line indicates a short to voltage on that signal circuit. It is not normal idle, an open-ground float, or a calibration fault. The elevated signal voltage points to a short to power.

15. B — DTCs should be cleared only after diagnosing and repairing the underlying fault. Clearing before diagnosis, replacing blindly, or releasing to monitor are improper. Repair-then-clear preserves diagnostic integrity.

16. A — Voltage sag to 9 volts during cranking matters because it can reset modules or interrupt calibration. It does not raise radar range, set white-balance, or demagnetize tone rings. Low cranking voltage threatens calibration stability.

17. A — A wire shorting a signal circuit to chassis is a short to ground, pulling the circuit voltage toward zero. It is not a short to voltage, a normal open, or a calibration fault. The chassis short drags the signal low.

18. B — Disconnecting modules methodically while monitoring the bus systematically isolates the offending module. Replacing all modules, calibrating each, or clearing codes do not localize the fault. Selective disconnection finds the culprit.

19. C — An "implausible signal" DTC indicates the reported value conflicts with expected or cross-checked data. It does not mean lost power, a flash-only fix, or loose fasteners by itself. The data conflict defines the code.

20. B — The wiring diagram is consulted to identify correct test points, wire colors, and circuit functions before probing. It does not set white-balance, radar frequency, or ultrasonic range. Accurate test points come from the schematic.

21. D — Terminal corrosion adds resistance that can cause voltage drop and intermittent faults. It does not improve the connection, affect only appearance, or raise radar range. Corrosion-induced resistance degrades the circuit.

22. D — CAN-High and CAN-Low shorted together collapse the differential signal, causing loss of communication. The lines are not meant to be connected, the short does not speed the bus, and it is not a camera-only fault. The collapsed differential kills communication.

23. A — A bi-directional command activates the actuator on demand for testing without driving. A resistance reading, a calibration routine, or code clearing do not actuate it. Bi-directional control verifies actuator response.

24. A — Communication loss only when the harness is flexed points to an intermittent open or loose connection in that harness. A speed-activated file, radar aim, or software mismatch do not respond to flexing. The mechanical disturbance reveals the open.

25. D — Infinite resistance where continuity is expected indicates an open circuit, such as a broken wire or disconnected terminal. It is not a short to ground, a short to voltage, or a healthy circuit. The open breaks the path.

26. A — A fused jumper or current-limited source protects the circuit and components from damage during bypass testing. It does not raise radar range, reset the steering zero-point, or calibrate the camera. Fused testing prevents accidental damage.

27. B — A current DTC that resets immediately after clearing indicates an active, ongoing fault still present. It is not resolved history, an immature pending code, or a calibration-only issue. The instant reset confirms a live fault.

28. B — With power and ground verified good but no data output, the fault lies in the sensor or module itself. The supply was confirmed good, the battery powers all modules, and calibration affects aim, not signal generation. Verified circuits point to the device.

29. D — A single CAN termination resistor measures about 120 ohms, the standard value. Zero, infinite, or 60 ohms would indicate a short, open, or the parallel bus value. The 120-ohm reading confirms one healthy resistor.

30. C — A "voltage too low" DTC directs the technician first to the module's power supply and ground circuits for integrity. Calibration memory, sensor aim, and termination resistors are not the voltage-supply path. Power and ground are checked first.

31. D — Recording live data before and after a repair verifies the values changed in the expected direction. It does not aim radar, set the steering zero-point, or define ultrasonic range. Before-and-after data confirms the repair's effect.

32. B — Two modules offline that share one harness branch point to a fault in that shared branch. A single module's processor, a camera offset, or the steering zero-point do not explain the paired dropout. The common harness is the suspect.

33. C — A freeze frame records the operating conditions present when the fault occurred, aiding diagnosis. It does not aim radar, calibrate the camera, or set the steering zero-point. The captured conditions support analysis.

34. D — Internal corrosion under intact insulation is best detected by a voltage-drop test across the wire under load. Visual inspection, unloaded continuity, or a disconnected resistance reading can miss it. Loaded voltage-drop testing exposes hidden resistance.

35. C — A suspect terminal should be de-pinned and inspected when intermittent contact or terminal damage is suspected there. A replaced module with persisting fault, a successful calibration, or tire pressure are not the trigger. Suspected terminal damage warrants inspection.

36. A — A noisy signal with erratic spikes on a scope most likely indicates electrical interference, a poor connection, or a circuit fault. It is not a clean signal, a calibration error, or a radar-aim effect. The noise signals an electrical problem.

37. D — Confirming a power-circuit repair requires repeating the voltage-drop test under load to verify normal values. Clearing codes, replacing the module, or calibrating do not confirm the electrical fix. The loaded retest proves the repair.

38. C — The wiring diagram is used to trace the referenced circuit's path, connectors, and test points for diagnosis. It does not set white-balance, radar frequency, or ultrasonic range. The schematic guides circuit tracing.

39. D — A 1.5-volt drop across a ground under load indicates excessive resistance in the ground path that needs repair. It is not a clean ground, a short to voltage, or normal for the application. The voltage drop reveals a bad ground.

40. A — Disconnecting the battery per OEM procedure prevents circuit damage and unintended module activation during certain repairs. It does not raise radar range, set the steering zero-point, or calibrate the camera. Safe power-down protects the systems.

41. C — A lamp that returns after a drive cycle following code clearing means the underlying fault remains and reset the code. Clearing did not repair it, replacement is not yet justified, and it is not a lost-calibration issue. The returning code signals an unresolved fault.

42. B — A quick valid CAN check is to verify modules report data and check bus voltages or resistance. White-balance, radar aiming, and steering zero-point are unrelated to bus communication. Data and bus measurements confirm communication.

43. D — A melted, overheated connector most likely results from high resistance or excessive current causing heat at the connection. It is not normal, a calibration fault, or a radar-aim effect. Heat at the connection indicates a resistance or current problem.

44. C — Tapping and flexing the harness while monitoring live data provokes the intermittent fault so its electrical source can be found. It does not aim radar, set the steering zero-point, or calibrate the camera. Provoking the fault localizes it.

45. B — A code that sets only under specific conditions and is currently inactive is best described as a history or intermittent code. It is not currently active, permanent, or calibration-specific. The intermittent record reflects a non-active fault.

46. B — Correct supply with a poor ground most likely causes erratic operation or no communication due to the bad ground path. It does not add range, trigger auto-recalibration, or re-aim radar. The poor ground disrupts module function.

47. A — The OEM-specified procedure specifies the correct test points, values, and steps for that circuit. It is not chosen merely for speed, nor does it waive power/ground checks or post-repair testing. OEM steps ensure accurate diagnosis.

48. B — A connector not fully seated most likely causes intermittent or lost communication from the incomplete connection. It does not improve performance, add range, or trigger auto-recalibration. The loose connector disrupts the circuit.

49. C — Voltage on only one side of a fuse indicates an open (blown) fuse interrupting the circuit there. A healthy fuse would pass voltage through, and a downstream short or calibration fault would present differently. The one-sided voltage reveals the open fuse.

50. B — The best verification of a restored network is a post-scan confirming all modules communicate and no DTCs remain. Clearing and releasing, blanket recalibration, or a lamp check do not confirm full communication. The post-scan validates network restoration.