ASE B4 Auto Frame Exam Prep

Free Practice Test — 30 Real Exam-Style Questions

with full answer key & explanations

Practice Questions

Try all 30 first, then check the answer key at the back.

1. When preparing to repair a vehicle with significant frame damage, what is the FIRST step a technician should perform?

A. Anchor the vehicle to the frame rack
B. Remove all damaged body panels
C. Disconnect the battery
D. Inspect and document all visible damage

2. What type of frame damage is characterized by the frame rails being closer together at one end than the other when viewed from above?

A. Sidesway
B. Mash
C. Diamond
D. Twist

3. Technician A says that a tram gauge can be used to check for sidesway damage. Technician B says that a tram gauge can be used to check for sag damage. Who is correct?

A. Neither Technician A nor Technician B
B. Technician A only
C. Technician B only
D. Both Technician A and Technician B

4. When using a three-dimensional measuring system on a vehicle with frame damage, what is most important to ensure before taking measurements?

A. The vehicle is properly leveled and anchored
B. All suspension components are removed
C. The battery is disconnected
D. The engine is supported by an external stand

5. A vehicle with frame damage shows uneven gaps at the hood and fenders after a collision. The measuring system indicates that one frame rail is higher than the other. This condition is known as:

A. Sag
B. Diamond
C. Sidesway
D. Twist

6. After repairing a severely damaged frame rail, what should be done to protect against future corrosion?

A. Paint the visible surfaces only
B. Apply wax to the repaired areas
C. Apply appropriate primers, sealers, and anti-corrosion compounds
D. Cover the repair with undercoating only

7. When planning a repair sequence for a vehicle with multiple areas of frame damage, what should be addressed FIRST?

A. Trim and accessory installation
B. Major structural misalignment
C. Cosmetic panel damage
D. Paint preparation

8. What condition exists when a vehicle's frame rail is compressed from the front, causing it to be shorter than specification?

A. Mash
B. Sag
C. Diamond
D. Kickup

9. During frame repair, stress-relieving procedures are performed to:

A. Increase the tensile strength of the metal
B. Reduce the time needed for paint curing
C. Make the metal more flexible for bending
D. Prevent distortion due to stored energy in the metal

10. Technician A says that kickup damage can be identified by measuring a point on the frame that is higher than specification. Technician B says that sag damage can be identified by measuring a point on the frame that is lower than specification. Who is correct?

A. Technician B only
B. Neither Technician A nor Technician B
C. Both Technician A and Technician B
D. Technician A only

11. When inspecting a vehicle after a side impact, the technician notices the frame is shifted to one side. This condition is known as:

A. Diamond
B. Sidesway
C. Mash
D. Twist

12. When mounting a vehicle on a frame rack for structural repairs, what is the MOST important consideration?

A. Securing at manufacturer-recommended anchor points
B. Positioning the vehicle with the engine facing the pulling tower
C. Ensuring all four wheels are removed
D. Setting the parking brake before mounting

13. A damaged vehicle shows measurements indicating the front of the frame has shifted to the left while the rear has shifted to the right. This condition is MOST likely:

A. Sidesway damage
B. Twist damage
C. Kickup damage
D. Diamond damage

14. After frame straightening, what should a technician do to verify the repair meets specifications?

A. Road test the vehicle only
B. Verify suspension alignment only
C. Remeasure all reference points and compare to manufacturer specifications
D. Check that all panels fit properly

15. When replacing a frame rail section on a pickup truck, what is the MOST important consideration regarding the supplemental restraint system (SRS)?

A. Testing the SRS system before delivering the vehicle
B. Identifying and properly restoring SRS sensor mounting locations
C. Disconnecting the battery before beginning work
D. Replacing all SRS components after frame repair

16. What information is MOST important when determining the direction of impact in collision damage analysis?

A. Primary damage location and crush patterns
B. Vehicle color and model year
C. Weather conditions during the accident
D. Driver's description of the accident

17. Technician A says that a laser measuring system must be calibrated before use. Technician B says that computerized measuring systems eliminate the need for manual measurements. Who is correct?

A. Technician B only
B. Both Technician A and Technician B
C. Neither Technician A nor Technician B
D. Technician A only

18. During frame repair on a vehicle with advanced driver assistance systems (ADAS), what should be done with the ADAS sensors?

A. Replace all sensors after frame repair
B. Disable the ADAS system permanently
C. Remove before repair, reinstall in precise locations, and recalibrate per manufacturer specifications
D. Leave the sensors installed during repair

19. A full-frame vehicle has been in a front-end collision. The frame shows downward vertical displacement at the front. This type of damage is called:

A. Twist
B. Sag
C. Kickup
D. Mash

20. When preparing to pull a frame straight, what is the purpose of applying heat to specific areas?

A. To relieve internal stresses and make the metal more pliable
B. To strengthen the metal before pulling
C. To identify hidden cracks in the frame
D. To speed up the repair process

21. When replacing a windshield with rain sensors, which step is MOST critical to ensure proper system operation?

A. Using a stronger adhesive than normally specified
B. Allowing additional curing time beyond manufacturer recommendations
C. Applying extra primer to the entire perimeter of the glass
D. Ensuring correct alignment of the sensor according to manufacturer specifications

22. Which condition would most likely prevent proper adhesion when installing stationary glass?

A. Following the specified cure time
B. Applying primer to prepared surfaces
C. Contamination of the pinch weld surface
D. Using the manufacturer's recommended urethane

23. Technician A says that heated backglass requires special handling during removal to prevent damage to the heating elements. Technician B says that the heating elements in the glass can be repaired if damaged during removal. Who is correct?

A. Neither Technician A nor Technician B
B. Technician A only
C. Technician B only
D. Both Technician A and Technician B

24. When preparing a pinch weld for stationary glass installation, what is the proper procedure for treating exposed bare metal areas?

A. Apply corrosion protection primer according to manufacturer specifications
B. Leave the bare metal exposed to ensure better urethane adhesion
C. Apply body filler to level any uneven surfaces
D. Cover with masking tape until the adhesive is applied

25. What is the primary purpose of the 'safe drive-away time' specified by adhesive manufacturers?

A. To prevent water leakage into the passenger compartment
B. To allow the electronic components to synchronize with vehicle systems
C. To prevent thermal expansion damage to the glass
D. To ensure the adhesive has cured enough to maintain structural integrity during a collision

26. When installing a windshield with an integrated antenna, what must a technician verify before completing the installation?

A. Window defogger operates at maximum temperature
B. Adhesive is colored to match the vehicle exterior
C. Proper electrical connections for the antenna system
D. Glass tint level meets state requirements

27. What tool is MOST appropriate for removing urethane adhesive from a pinch weld when preparing for new glass installation?

A. Plastic body filler spreader
B. Urethane cutting tool
C. Angle grinder with sanding disc
D. Propane torch

28. After replacing a windshield with embedded ADAS (Advanced Driver Assistance System) components, what is required before returning the vehicle to the customer?

A. Calibration of the ADAS system according to manufacturer procedures
B. Replacing the factory window tint
C. Updating the vehicle's software system
D. Testing the windshield wipers at maximum speed

29. When stationary glass is being replaced, what is the MOST important consideration regarding supplemental restraint systems?

A. Glass thickness has no effect on airbag sensors
B. The glass must be tinted to prevent airbag sensor interference
C. Airbag modules should be disconnected permanently after glass replacement
D. Proper glass installation is critical for airbag deployment

30. Which of these conditions would require a technician to replace rather than reuse the existing molding when installing a new windshield?

A. The vehicle is less than two years old
B. The glass is being installed during humid conditions
C. The vehicle manufacturer specifies one-time-use moldings
D. The molding is black in color

Answer Key & Explanations

1. D — Inspect and document all visible damage
Before beginning any frame repair, a proper inspection and documentation of all damage is critical. This helps identify the extent of damage, plan the repair sequence, and provides necessary documentation for insurance and quality control purposes.

2. C — Diamond
Diamond damage is characterized by the frame rails being closer together at one end than the other when viewed from above, forming a diamond or parallelogram shape rather than a rectangle.

3. B — Technician A only
A tram gauge can identify sidesway by measuring diagonal measurements from side to side, but cannot effectively measure vertical sag damage, which requires height measurements.

4. A — The vehicle is properly leveled and anchored
The vehicle must be properly leveled and securely anchored before taking measurements with a three-dimensional measuring system to ensure accurate readings and comparisons to specification data.

5. D — Twist
When one frame rail is higher than the other, creating uneven gaps at the hood and fenders, this indicates twist damage where the frame has rotated around its longitudinal axis.

6. C — Apply appropriate primers, sealers, and anti-corrosion compounds
After frame repair, it's essential to restore corrosion protection by applying appropriate primers, sealers, and anti-corrosion compounds to protect the repaired areas from future rust and corrosion.

7. B — Major structural misalignment
Major structural damage should be addressed first in the repair sequence as it establishes the base alignment for all subsequent repairs and ensures proper restoration of the vehicle's structure.

8. A — Mash
Mash damage occurs when a frame rail is compressed from a collision, resulting in the rail being shorter than specification due to the compression force.

9. D — Prevent distortion due to stored energy in the metal
Stress-relieving procedures are performed during frame repair to prevent distortion that could occur when the metal attempts to return to its original shape due to the stored energy from the collision.

10. C — Both Technician A and Technician B
Both technicians are correct. Kickup damage is identified when a point on the frame is higher than specification, while sag damage is identified when a point is lower than specification.

11. B — Sidesway
Sidesway damage occurs when the frame is shifted laterally (to one side) from its centerline, typically resulting

from a side impact collision.

12. A — Securing at manufacturer-recommended anchor points
The most important consideration when mounting a vehicle on a frame rack is securing it at manufacturer-recommended anchor points to ensure proper alignment and prevent further damage during the repair process.

13. D — Diamond damage
When the front of the frame has shifted in one direction while the rear has shifted in the opposite direction, the vehicle has diamond damage, creating a parallelogram shape when viewed from above.

14. C — Remeasure all reference points and compare to manufacturer specifications
After frame straightening, the technician should remeasure all reference points and compare to manufacturer specifications to ensure the repair was successful and the frame is properly aligned.

15. B — Identifying and properly restoring SRS sensor mounting locations
When replacing frame rail sections, it's critical to identify and properly restore SRS sensor mounting locations to ensure correct airbag deployment in future collisions.

16. A — Primary damage location and crush patterns
Identifying primary damage location and crush patterns is most important when determining direction of impact, as these directly indicate how the collision forces were applied to the vehicle.

17. D — Technician A only
Technician A is correct that laser measuring systems require calibration before use to ensure accuracy. However, computerized systems do not eliminate the need for manual verification measurements in some cases.

18. C — Remove before repair, reinstall in precise locations, and recalibrate per manufacturer specifications
ADAS sensors must be properly removed before frame repair to prevent damage, then reinstalled in their precise locations and recalibrated according to manufacturer specifications to ensure proper system function.

19. B — Sag
Sag damage refers to downward vertical displacement of the frame, which often occurs in front-end collisions when the frame is pushed downward below specification height.

20. A — To relieve internal stresses and make the metal more pliable
Heat is applied during frame straightening to relieve internal stresses in the metal, which makes it more pliable and reduces the risk of cracking or tearing during the pulling process.

21. D — Ensuring correct alignment of the sensor according to manufacturer specifications
Proper alignment of rain sensors during installation is critical for the system to function correctly. The sensor must be positioned precisely according to manufacturer specifications to detect moisture on the glass surface.

22. C — Contamination of the pinch weld surface
Contaminants on the pinch weld surface (such as oils, old adhesive, or debris) will prevent proper bonding of new urethane adhesive, leading to potential leaks or glass failure.

23. B — Technician A only
Heated backglass requires special care during removal to prevent damaging the heating elements, which cannot be repaired if broken. Once heating elements are damaged, the entire glass assembly must be replaced.

24. A — Apply corrosion protection primer according to manufacturer specifications
Exposed bare metal on pinch welds must be treated with proper corrosion protection (primer) to prevent rust formation that could compromise the glass bond and vehicle structural integrity.

25. D — To ensure the adhesive has cured enough to maintain structural integrity during a collision
The safe drive-away time ensures the adhesive has cured sufficiently to provide proper structural integrity and restraint system support, preventing glass displacement in the event of a collision.

26. C — Proper electrical connections for the antenna system
Before completing installation of a windshield with an integrated antenna, the technician must verify proper electrical connections to ensure radio reception functions correctly.

27. B — Urethane cutting tool
A urethane cutting tool (cold knife or power tool with specific cutting blade) is designed to effectively remove old urethane without damaging the pinch weld surface, providing a proper base for new adhesive application.

28. A — Calibration of the ADAS system according to manufacturer procedures
ADAS systems (like forward collision warning, automatic emergency braking) that use cameras or sensors mounted to the windshield require calibration after glass replacement to ensure they function correctly and safely.

29. D — Proper glass installation is critical for airbag deployment
The windshield is a structural component that supports proper deployment of airbags, particularly passenger-side airbags. Proper installation and adhesive curing is critical for the SRS to function correctly in a collision.

30. C — The vehicle manufacturer specifies one-time-use moldings
Many modern vehicles use one-time-use moldings that are designed to work with specific adhesion properties and dimensions. Once removed, these moldings lose their shape and adhesive properties and must be replaced according to manufacturer specifications.

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