

PRACTICE EXAM 5: A5 SIMULATION

— BRAKES

1. A vehicle's brake rotor minimum thickness specification reads 22.0 mm. The current rotor thickness measurement reads 22.3 mm. The MOST appropriate action is:

- A. Resurface the rotor as the most direct repair
- B. Reuse the rotor with new pads
- C. Replace the rotor since further resurfacing would reduce thickness below specification
- D. Apply hard-facing material to the rotor

2. The proper procedure for measuring brake rotor minimum specification is to:

- A. Use a brake rotor micrometer to measure thickness, comparing to the manufacturer's minimum specification stamped on the rotor or in service information
- B. Apply compressed air to the rotor
- C. Replace the rotor as a precaution
- D. Visually inspect for visible damage only

3. A vehicle's brake drum maximum diameter specification reads 256.0 mm. The current drum diameter measurement reads 255.5 mm. The MOST appropriate action is:

- A. Apply compressed air to the drum
- B. Resurface the drum to remove material
- C. Replace the drum as a precaution
- D. The drum is within specification and serviceable

4. The proper procedure for measuring brake drum maximum diameter is to:

- A. Apply compressed air to the drum
- B. Use a brake drum micrometer at multiple points around the drum interior, comparing to the manufacturer's maximum specification stamped on the drum or in service information
- C. Replace the drum as a precaution
- D. Visually inspect for visible damage only

5. A vehicle's brake caliper bolt torque specification reads 110 N·m (81 lb·ft). The MOST appropriate procedure for installing the caliper bolts is to:

- A. Apply compressed air to the bolts
- B. Apply maximum torque to the bolts
- C. Apply hard-facing material to the bolts
- D. Use a calibrated torque wrench to tighten the bolts to the manufacturer's specified torque

6. The proper purpose of using calibrated torque wrenches for brake fasteners is to:

- A. Generate hydraulic pressure for the brake system
- B. Drive the brake pump during operation
- C. Ensure proper clamping force on critical fasteners while preventing damage from over-torque or loose fasteners from under-torque
- D. Filter contaminants from the brake fluid

7. A vehicle equipped with brake bleeders that use threaded valves has been brought in for service. The proper procedure for opening a brake bleeder is to:

- A. Use the proper-sized box wrench, apply gradual force to crack the bleeder loose, and avoid rounding the valve hex

- B. Apply compressed air to the bleeder
- C. Apply maximum force with any tool
- D. Replace the bleeder as a precaution

8. The proper procedure for performing a manual two-person brake bleeding is to:

- A. Apply compressed air to the system
- B. Replace the master cylinder as a precaution
- C. Replace the brakes as a precaution
- D. One person operates the pedal while another opens and closes the bleeder, expelling air with each pedal stroke

9. A vehicle's brake system has been bled using gravity bleeding. The proper procedure for gravity bleeding is to:

- A. Apply compressed air to the system
- B. Open each bleeder, allow gravity to expel old fluid until clear fluid emerges, with proper sequence
- C. Replace the master cylinder as a precaution
- D. Replace the brakes as a precaution

10. The proper procedure for performing pressure bleeding is to:

- A. Apply compressed air to the system
- B. Replace the brakes as a precaution
- C. Use a pressure bleeder to apply controlled pressure to the master cylinder, open each bleeder in sequence to expel air
- D. Replace the brake fluid as the only step

11. A vehicle's brake system has been bled using vacuum bleeding. The proper procedure for vacuum bleeding is to:

- A. Use a vacuum bleeder at each bleeder valve, draw fluid through the system to expel air, in proper sequence
- B. Apply compressed air to the system
- C. Replace the master cylinder as a precaution
- D. Replace the brakes as a precaution

12. A vehicle equipped with ABS has been brought in for brake bleeding. After bleeding, the customer reports that the pedal is firm but ABS warning light is illuminated. The MOST likely cause is:

- A. Apply compressed air to the system
- B. Replace the master cylinder as a precaution
- C. Replace the brakes as a precaution
- D. Air remaining trapped in the ABS hydraulic control unit, requiring scan tool activation during bleeding

13. The proper procedure for verifying complete brake bleeding is to:

- A. Apply compressed air to the system
- B. Verify firm pedal, verify proper pedal travel, verify no air bubbles in the bled fluid, and verify proper braking through a road test
- C. Replace the master cylinder as a precaution
- D. Replace the brakes as a precaution

14. A vehicle has been brought in with a complaint that brake fluid in the reservoir bubbles during normal operation. The MOST likely cause is:

- A. Apply compressed air to the reservoir

- B. Replace the master cylinder as a precaution
- C. Air being introduced through the master cylinder seal, indicating the master cylinder is failing and air is being drawn into the system
- D. Replace the brake fluid as the only step

15. The proper procedure for diagnosing master cylinder air introduction is to:

- A. Verify reservoir level, inspect master cylinder for visible damage, perform a bench test of the master cylinder, and replace if internal leakage or seal damage is verified
- B. Apply compressed air to the master cylinder
- C. Replace the master cylinder as a precaution
- D. Replace the brake fluid as the only step

16. A vehicle equipped with brake-by-wire technology has been brought in for diagnosis. The proper procedure for brake fluid service on brake-by-wire systems is to:

- A. Apply compressed air to the system
- B. Use only the manufacturer-specified brake fluid, perform the manufacturer-specified service procedure (which may include scan tool activation), and verify proper operation
- C. Replace the brakes as a precaution
- D. Replace the master cylinder as a precaution

17. The proper purpose of brake-by-wire technology is to:

- A. Generate hydraulic pressure for the brake system
- B. Drive the brake pump during operation
- C. Filter contaminants from the brake fluid
- D. Replace the mechanical/hydraulic connection between the brake pedal and the brake actuators with electronic control, supporting modern features like regenerative braking

18. A vehicle equipped with hybrid technology has been brought in for brake service. The proper procedure for hybrid brake service includes:

- A. Apply compressed air to the system
- B. Replace the brake fluid as the only step
- C. Use the manufacturer-specified procedure (which may require disabling regenerative braking or activating service mode), service the friction brakes, and verify proper operation
- D. Replace the master cylinder as a precaution

19. The proper purpose of regenerative braking integration with friction brakes is to:

- A. Maximize energy recovery during light braking using regenerative braking only, transitioning to friction brakes during heavier braking
- B. Generate hydraulic pressure for the brake system
- C. Drive the brake pump during operation
- D. Filter contaminants from the brake fluid

20. A vehicle equipped with an electric vehicle (EV) brake system has been brought in for diagnosis. The proper procedure for EV brake service is to:

- A. Apply compressed air to the system
- B. Follow the manufacturer-specified procedure (which may require high-voltage system isolation), service the brake system per specification, and verify proper operation
- C. Replace the master cylinder as a precaution
- D. Replace the brakes as a precaution

21. The proper procedure for high-voltage isolation before EV brake service is to:

- A. Apply compressed air to the system

B. Replace the master cylinder as a precaution

C. Replace the brakes as a precaution

D. Follow the manufacturer-specified isolation procedure (typically including service plug removal), verify zero voltage with proper meter, and use proper PPE

22. A vehicle has been brought in with a complaint of stopping distance that has gradually increased. The MOST likely cause is:

A. Apply compressed air to the brakes

B. Replace the master cylinder as a precaution

C. Worn brake pads, worn rotors, contaminated friction surfaces, or hydraulic system issues reducing braking effectiveness

D. Replace the brake fluid as the only step

23. The proper procedure for diagnosing increased stopping distance is to:

A. Verify all brake components are within specification, inspect for contamination or wear, verify proper hydraulic operation, and identify the specific cause

B. Apply compressed air to the brakes

C. Replace the brakes as a precaution

D. Replace the master cylinder as a precaution

24. A vehicle's brake stopping distance has been measured during a controlled test. The result is significantly longer than the manufacturer's specification. The MOST appropriate action is:

A. Replace the master cylinder as a precaution

B. Replace the brakes as a precaution

C. Apply compressed air to the brakes

D. Inspect all brake components, identify the cause of reduced effectiveness, perform required repairs, and verify proper operation through retest

25. The proper purpose of brake stopping distance specifications is to:

- A. Generate hydraulic pressure for the brake system
- B. Provide a measurable performance standard for braking effectiveness
- C. Drive the brake pump during operation
- D. Filter contaminants from the brake fluid

26. A vehicle has been brought in with a complaint of brake fade during prolonged downhill driving. The MOST likely cause is:

- A. Apply compressed air to the brakes
- B. Replace the master cylinder as a precaution
- C. Brake fluid boiling from sustained heat, pad fade from exceeding temperature limits, or rotor heat saturation
- D. Replace the brake fluid as the only step

27. The proper procedure for preventing brake fade during prolonged downhill driving is to:

- A. Use engine braking when possible, downshift to maintain proper speed, and avoid continuous brake application
- B. Apply compressed air to the brakes
- C. Replace the brakes as a precaution
- D. Replace the master cylinder as a precaution

28. A vehicle's brake fluid DOT specification has been verified. The fluid type is DOT 4. The proper procedure for service is to:

- A. Apply compressed air to the system
- B. Replace the master cylinder as a precaution
- C. Replace the brakes as a precaution
- D. Use only DOT 4 fluid (or DOT 3 if the manufacturer specifies compatibility), avoid mixing with DOT 5 (silicone-based), and follow service intervals

29. The proper purpose of DOT brake fluid classifications is to:

- A. Generate hydraulic pressure for the brake system
- B. Drive the brake pump during operation
- C. Specify minimum boiling point and other performance characteristics for proper brake system operation
- D. Filter contaminants from the brake fluid

30. A vehicle has been brought in with a complaint that brake fluid is being absorbed by the master cylinder seals. The MOST likely cause is:

- A. Apply compressed air to the master cylinder
- B. Mineral oil or non-DOT fluid contamination causing rubber seal swelling, leading to compromised seal integrity
- C. Replace the master cylinder as a precaution
- D. Replace the brakes as a precaution

31. The proper procedure for addressing brake fluid contamination from incompatible fluid is to:

- A. Apply compressed air to the system

B. Replace the master cylinder as a precaution

C. Replace the brakes as a precaution

D. Flush the entire brake hydraulic system, replace contaminated rubber components (seals, hoses, master cylinder if needed), and refill with the correct fluid type

32. A vehicle's brake hydraulic system has been disassembled for service. The technician finds visible swelling of the rubber seals. The MOST likely cause is:

A. Brake fluid contamination from incompatible fluid (mineral oil, motor oil, or non-DOT fluid) causing rubber compatibility issues

B. Apply compressed air to the system

C. Replace the master cylinder as a precaution

D. Replace the brake fluid as the only step

33. The proper procedure for inspecting brake hydraulic component condition during service is to:

A. Apply compressed air to the components

B. Inspect for visible swelling, deterioration, hardening, or contamination of rubber components, and replace any damaged components

C. Replace the master cylinder as a precaution

D. Replace the brakes as a precaution

34. A vehicle equipped with disc brakes has been brought in for caliper bracket bolt torque specification. The proper procedure is to:

A. Apply compressed air to the bolts

B. Apply maximum torque to the bolts

C. Use a calibrated torque wrench to tighten the bracket bolts to the manufacturer's specification, in the proper sequence if specified

D. Apply hard-facing material to the bolts

35. The proper procedure for installing a brake caliper after service is to:

A. Apply compressed air to the caliper

B. Replace the caliper as a precaution

C. Apply hard-facing material to the caliper

D. Verify proper alignment, install with bolts torqued to specification, verify caliper operation, and verify proper bleeding

36. A vehicle has been brought in with a complaint of brake noise that occurs only at the very end of a stop (just before the vehicle comes to rest). The MOST likely cause is:

A. Brake pad chamfer wear, anti-squeal hardware issues, or pad/rotor compatibility producing noise at the very low speed end of the stop

B. Apply compressed air to the brakes

C. Replace the master cylinder as a precaution

D. Replace the brake fluid as the only step

37. The proper procedure for inspecting brake pad chamfers and edges is to:

A. Apply compressed air to the pads

B. Visually inspect the pad surface, edges, and chamfers for wear pattern, contamination, or damage that could contribute to noise

C. Replace the pads as a precaution

D. Apply hard-facing material to the pads

38. A vehicle's brake pad backing plate has been measured for thickness specification. The MOST appropriate action when backing plate thickness is below specification is to:

- A. Apply hard-facing material to the backing plate
- B. Reuse the pad with new friction material
- C. Replace the brake pad with a new component meeting specification
- D. Apply additional friction material to the backing plate

39. The proper purpose of brake pad backing plate thickness specifications is to:

- A. Generate hydraulic pressure for the brake system
- B. Ensure structural integrity of the backing plate to support the friction material and absorb braking forces
- C. Drive the brake pump during operation
- D. Filter contaminants from the brake fluid

40. A vehicle has been brought in with a complaint that brake pad wear sensors have triggered the brake wear warning. The MOST likely cause is:

- A. The brake pads have worn to the wear indicator point, requiring pad replacement
- B. Apply compressed air to the wear sensors
- C. Replace the master cylinder as a precaution
- D. Replace the brake fluid as the only step

41. The proper purpose of brake pad wear sensors is to:

- A. Generate hydraulic pressure for the brake system
- B. Drive the brake pump during operation
- C. Filter contaminants from the brake fluid

D. Provide warning to the driver when brake pads have worn to the replacement specification

42. A vehicle has been brought in with a complaint of brake noise that varies with vehicle speed but only during braking. The MOST likely cause is:

A. Apply compressed air to the brakes

B. Brake pad/rotor compatibility issues, surface deposits, or worn components producing noise that correlates with rotor rotation speed

C. Replace the master cylinder as a precaution

D. Replace the brake fluid as the only step

43. The proper procedure for diagnosing speed-related brake noise is to:

A. Apply compressed air to the brakes

B. Replace the brakes as a precaution

C. Verify the speed range during which noise occurs, inspect rotor surface, inspect pad condition, and identify the specific cause

D. Replace the brake fluid as the only step

44. A vehicle's brake system has been serviced. After service, the customer reports brake fluid spots on the wheel. The MOST likely cause is:

A. Improper bleeder closure, leak from caliper service, or contaminated fluid spilled during service that has not been cleaned

B. Apply compressed air to the wheel

C. Replace the master cylinder as a precaution

D. Replace the brakes as a precaution

45. The proper procedure for cleaning brake fluid contamination from vehicle surfaces is to:

A. Apply compressed air to the surfaces

B. Use brake cleaner or appropriate solvent, wipe thoroughly to remove all fluid contamination, and verify no fluid remains on painted surfaces (which can damage paint)

C. Replace the affected components as a precaution

D. Replace the brakes as a precaution

PRACTICE EXAM 5: A5 SIMULATION

— ANSWER KEY, EXPLANATIONS, AND TASK REMEDIATION

1. C — Replace the rotor since further resurfacing would reduce thickness below specification. A rotor at 22.3 mm with 22.0 mm minimum has only 0.3 mm above minimum. Resurfacing would reduce thickness below specification; replacement is required. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
2. A — Use a brake rotor micrometer to measure thickness, comparing to the manufacturer's minimum specification stamped on the rotor or in service information. Rotor minimum specification is provided by the manufacturer either stamped on the rotor or in service information. The micrometer measurement is compared to that specification. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
3. D — The drum is within specification and serviceable. A drum at 255.5 mm with 256.0 mm maximum is 0.5 mm below the maximum diameter, which is within specification. The drum is serviceable. *ASE Task Reference: A5 Domain B — Drum Brake Diagnosis and Repair. Review subsection 5.2.*
4. B — Use a brake drum micrometer at multiple points around the drum interior, comparing to the manufacturer's maximum specification stamped on the drum or in service information. Drum maximum specification is provided by the manufacturer. Multiple measurements identify out-of-round; comparison to specification determines serviceability. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
5. D — Use a calibrated torque wrench to tighten the bolts to the manufacturer's specified torque. Brake caliper bolts must be torqued to specification with a calibrated torque wrench. Maximum torque or other techniques can damage components or produce loose fasteners. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
6. C — Ensure proper clamping force on critical fasteners while preventing damage from over-torque or loose fasteners from under-torque. Calibrated torque wrenches deliver controlled clamping force that meets the manufacturer's specifications. Over-torque damages components; under-torque produces loose fasteners that can fail. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*

7. A — Use the proper-sized box wrench, apply gradual force to crack the bleeder loose, and avoid rounding the valve hex. Brake bleeder service requires proper-sized tools and gradual force. The valve hex is delicate and rounds easily; proper technique prevents damage. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
8. D — One person operates the pedal while another opens and closes the bleeder, expelling air with each pedal stroke. Manual two-person bleeding requires coordination between pedal operator and bleeder operator. Each stroke expels air; proper sequence and technique ensures complete bleeding. *ASE Task Reference: A5 Domain A — Hydraulic, Power Assist, and Parking Brake Systems. Review subsection 5.1.*
9. B — Open each bleeder, allow gravity to expel old fluid until clear fluid emerges, with proper sequence. Gravity bleeding uses the natural fluid flow from the elevated reservoir. Each bleeder is opened and gravity expels old fluid; the process continues until clear fluid emerges. *ASE Task Reference: A5 Domain A — Hydraulic, Power Assist, and Parking Brake Systems. Review subsection 5.1.*
10. C — Use a pressure bleeder to apply controlled pressure to the master cylinder, open each bleeder in sequence to expel air. Pressure bleeding applies controlled pressure to the master cylinder via a pressure bleeder. Sequential bleeder operation expels air with the supplied pressure. *ASE Task Reference: A5 Domain A — Hydraulic, Power Assist, and Parking Brake Systems. Review subsection 5.1.*
11. A — Use a vacuum bleeder at each bleeder valve, draw fluid through the system to expel air, in proper sequence. Vacuum bleeding draws fluid through the system using vacuum at each bleeder. The technique is effective for individual wheel bleeding but requires proper sequence. *ASE Task Reference: A5 Domain A — Hydraulic, Power Assist, and Parking Brake Systems. Review subsection 5.1.*
12. D — Air remaining trapped in the ABS hydraulic control unit, requiring scan tool activation during bleeding. ABS warning after bleeding indicates trapped air in the HCU. Standard bleeding cannot reach this air; scan tool activation of the HCU solenoids is required. *ASE Task Reference: A5 Domain E — Electronic Brake, Traction, and Stability Control Systems. Review subsection 5.5.*
13. B — Verify firm pedal, verify proper pedal travel, verify no air bubbles in the bled fluid, and verify proper braking through a road test. Brake bleeding verification requires multiple checks. Firm pedal, proper travel, air-free fluid, and operational verification together confirm complete bleeding. *ASE Task Reference: A5 Domain A — Hydraulic, Power Assist, and Parking Brake Systems. Review subsection 5.1.*
14. C — Air being introduced through the master cylinder seal, indicating the master cylinder is failing and air is being drawn into the system. Reservoir bubbling during operation is the diagnostic signature of master cylinder seal failure. The failed seal allows air to be drawn into the system

during normal operation. *ASE Task Reference: A5 Domain A — Hydraulic, Power Assist, and Parking Brake Systems. Review subsection 5.1.*

15. A — Verify reservoir level, inspect master cylinder for visible damage, perform a bench test of the master cylinder, and replace if internal leakage or seal damage is verified. Master cylinder air introduction diagnosis requires systematic verification including bench testing. Replacement is required when seal damage is verified. *ASE Task Reference: A5 Domain A — Hydraulic, Power Assist, and Parking Brake Systems. Review subsection 5.1.*
16. B — Use only the manufacturer-specified brake fluid, perform the manufacturer-specified service procedure (which may include scan tool activation), and verify proper operation. Brake-by-wire fluid service requires manufacturer-specified fluid and procedure. Scan tool activation may be required for proper service. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
17. D — Replace the mechanical/hydraulic connection between the brake pedal and the brake actuators with electronic control, supporting modern features like regenerative braking. Brake-by-wire eliminates the direct mechanical/hydraulic connection. Electronic control enables modern features that traditional systems cannot support. *ASE Task Reference: A5 Domain E — Electronic Brake, Traction, and Stability Control Systems. Review subsection 5.5.*
18. C — Use the manufacturer-specified procedure (which may require disabling regenerative braking or activating service mode), service the friction brakes, and verify proper operation. Hybrid brake service often requires special procedures to handle the regenerative braking integration. Manufacturer specifications govern the proper service approach. *ASE Task Reference: A5 Domain E — Electronic Brake, Traction, and Stability Control Systems. Review subsection 5.5.*
19. A — Maximize energy recovery during light braking using regenerative braking only, transitioning to friction brakes during heavier braking. Regen-friction integration optimizes energy recovery while maintaining braking performance. Regenerative braking handles light braking; friction brakes handle heavier braking and emergency stops. *ASE Task Reference: A5 Domain E — Electronic Brake, Traction, and Stability Control Systems. Review subsection 5.5.*
20. B — Follow the manufacturer-specified procedure (which may require high-voltage system isolation), service the brake system per specification, and verify proper operation. EV brake service requires high-voltage safety procedures and manufacturer specifications. Both are critical for safe and proper service. *ASE Task Reference: A5 Domain E — Electronic Brake, Traction, and Stability Control Systems. Review subsection 5.5.*
21. D — Follow the manufacturer-specified isolation procedure (typically including service plug removal), verify zero voltage with proper meter, and use proper PPE. EV high-voltage isolation requires the manufacturer's procedure, voltage verification with proper meter, and PPE. Each step is critical for technician safety. *ASE Task Reference: A5 Domain E — Electronic Brake, Traction, and Stability Control Systems. Review subsection 5.5.*

22. C — Worn brake pads, worn rotors, contaminated friction surfaces, or hydraulic system issues reducing braking effectiveness. Increased stopping distance has multiple potential causes. Wear, contamination, or hydraulic issues each reduce braking effectiveness over time. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
23. A — Verify all brake components are within specification, inspect for contamination or wear, verify proper hydraulic operation, and identify the specific cause. Stopping distance diagnosis requires comprehensive inspection of all systems. Each component contributes to total braking effectiveness. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
24. D — Inspect all brake components, identify the cause of reduced effectiveness, perform required repairs, and verify proper operation through retest. Long stopping distance requires complete inspection and repair. Retest verifies the repairs have restored proper braking effectiveness. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
25. B — Provide a measurable performance standard for braking effectiveness. Stopping distance specifications give technicians and customers an objective standard to evaluate braking performance. Compliance with specification confirms proper system operation. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
26. C — Brake fluid boiling from sustained heat, pad fade from exceeding temperature limits, or rotor heat saturation. Brake fade during prolonged downhill driving is the diagnostic signature of heat-related issues. Each cause produces fade as the system temperature exceeds design limits. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
27. A — Use engine braking when possible, downshift to maintain proper speed, and avoid continuous brake application. Brake fade prevention during downhill driving requires using alternative speed control. Engine braking and downshifting reduce reliance on the friction brakes, preventing heat buildup. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
28. D — Use only DOT 4 fluid (or DOT 3 if the manufacturer specifies compatibility), avoid mixing with DOT 5 (silicone-based), and follow service intervals. DOT 4 fluid service requires the correct fluid type and avoidance of incompatible types. DOT 3 may be specified as compatible; DOT 5 is silicone-based and incompatible. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
29. C — Specify minimum boiling point and other performance characteristics for proper brake system operation. DOT classifications define the minimum performance requirements for brake fluid. Higher DOT numbers generally indicate higher boiling points and performance. *ASE Task*

Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.

30. B — Mineral oil or non-DOT fluid contamination causing rubber seal swelling, leading to compromised seal integrity. Incompatible fluid contamination causes rubber seal damage. Mineral oil and non-DOT fluids damage the rubber compounds used in DOT-compatible systems. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
31. D — Flush the entire brake hydraulic system, replace contaminated rubber components (seals, hoses, master cylinder if needed), and refill with the correct fluid type. Incompatible fluid contamination requires complete system flush, replacement of damaged rubber components, and refill with correct fluid. Each step is required for safe operation. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
32. A — Brake fluid contamination from incompatible fluid (mineral oil, motor oil, or non-DOT fluid) causing rubber compatibility issues. Visible seal swelling is the diagnostic signature of incompatible fluid contamination. The rubber compound has absorbed incompatible fluid, causing the swelling. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
33. B — Inspect for visible swelling, deterioration, hardening, or contamination of rubber components, and replace any damaged components. Hydraulic component inspection during service requires checking rubber components for damage. Damaged components must be replaced; reuse is not safe. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
34. C — Use a calibrated torque wrench to tighten the bracket bolts to the manufacturer's specification, in the proper sequence if specified. Caliper bracket bolt installation requires calibrated torque, manufacturer specification, and proper sequence if specified. Each element ensures proper clamping. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*
35. D — Verify proper alignment, install with bolts torqued to specification, verify caliper operation, and verify proper bleeding. Caliper installation after service requires alignment, torque, operational verification, and bleeding. Each step ensures proper post-service operation. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
36. A — Brake pad chamfer wear, anti-squeal hardware issues, or pad/rotor compatibility producing noise at the very low speed end of the stop. End-of-stop brake noise is the diagnostic signature of low-speed friction characteristics. Pad chamfer, hardware, and compatibility issues each contribute to this specific symptom. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*

37. B — Visually inspect the pad surface, edges, and chamfers for wear pattern, contamination, or damage that could contribute to noise. Pad inspection requires comprehensive visual examination including chamfers and edges. Wear patterns reveal operating conditions and potential causes of noise. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
38. C — Replace the brake pad with a new component meeting specification. Backing plate thickness below specification indicates structural issue with the pad. Replacement is required; the backing plate cannot be repaired. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
39. B — Ensure structural integrity of the backing plate to support the friction material and absorb braking forces. The backing plate must be structurally sound to support the friction material and transmit forces. Specifications ensure adequate strength for safe operation. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
40. A — The brake pads have worn to the wear indicator point, requiring pad replacement. Wear sensors trigger the warning when pads reach the replacement specification. The warning is the system's intended function; pad replacement is required. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
41. D — Provide warning to the driver when brake pads have worn to the replacement specification. Wear sensors are the active warning system that alerts the driver to required service. The warning prevents continued operation with insufficient friction material. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
42. B — Brake pad/rotor compatibility issues, surface deposits, or worn components producing noise that correlates with rotor rotation speed. Speed-related brake noise is the diagnostic signature of issues that scale with rotor rotation. Compatibility, deposits, or wear each produce noise correlated with speed. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
43. C — Verify the speed range during which noise occurs, inspect rotor surface, inspect pad condition, and identify the specific cause. Speed-related brake noise diagnosis requires verification of conditions, surface inspection, pad inspection, and cause identification. Each step provides different diagnostic information. *ASE Task Reference: A5 Domain C — Disc Brake Diagnosis and Repair. Review subsection 5.3.*
44. A — Improper bleeder closure, leak from caliper service, or contaminated fluid spilled during service that has not been cleaned. Brake fluid on the wheel after service indicates either residual contamination or a service-related leak. Each cause requires identification and correction. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*

45. B — Use brake cleaner or appropriate solvent, wipe thoroughly to remove all fluid contamination, and verify no fluid remains on painted surfaces (which can damage paint). Brake fluid removal requires proper cleaner and thorough wiping. Painted surface protection is critical because brake fluid damages paint. *ASE Task Reference: A5 Domain F — Brake Tools, Fluids, and Service Specifications. Review subsection 5.6.*