

PRACTICE EXAM 4: A7 SIMULATION

— HEATING AND AIR CONDITIONING

1. A vehicle has been brought in with the following findings: complaint of inadequate A/C cooling, low refrigerant charge, refrigerant leak at the condenser, and worn condenser mounts. The MOST appropriate action is:

- A. Replace only the refrigerant as the most direct repair
- B. Replace the condenser, address the worn mounts, recover and recharge the refrigerant, and verify proper operation
- C. Apply compressed air to the system
- D. Replace the brake fluid as the only step

2. Technician A says addressing only the refrigerant resolves cooling issues. Technician B says all related findings must be addressed for complete repair. Who is correct?

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

3. The proper procedure for verifying complete A/C system service after multi-component repair is to:

- A. Apply compressed air to the system
- B. Replace the system as a precaution

C. Verify all repairs, perform proper evacuation, recharge with proper refrigerant amount, road test, and verify proper performance

D. Replace the brake fluid as the only step

4. A vehicle has been brought in with the following findings: complaint of A/C compressor noise, internal compressor wear verified through inspection, contaminated refrigerant, and worn compressor drive belt. The MOST appropriate action is:

A. Replace the compressor, flush the system, replace the receiver-drier or accumulator, replace the worn belt, evacuate, recharge, and verify operation

B. Apply compressed air to the system

C. Replace only the compressor as the most direct repair

D. Replace the brake fluid as the only step

5. The proper procedure for verifying compressor replacement service is to:

A. Apply compressed air to the system

B. Replace the compressor as a precaution

C. Replace the brake fluid as the only step

D. Verify proper installation, verify clutch engagement, verify proper system pressures and temperatures, and verify proper operation

6. A vehicle has been brought in with the following findings: complaint of inadequate cooling, refrigerant leak at multiple locations, contaminated oil, and inadequate evaporator drainage. The MOST appropriate action is:

A. Apply compressed air to the system

B. Address all findings: repair the leaks, replace the contaminated oil and components, address the drainage, evacuate, recharge, and verify operation

C. Replace the system as a precaution

D. Replace the brake fluid as the only step

7. Technician A says A/C system issues can have multiple coexisting causes. Technician B says addressing all related findings is required for complete repair. Who is correct?

A. Technician A only

B. Technician B only

C. Neither Technician A nor Technician B

D. Both Technician A and Technician B

8. The proper procedure for verifying complete refrigeration system service is to:

A. Verify all repairs, perform proper evacuation, verify the system is leak-free, recharge with proper refrigerant amount, and verify proper performance

B. Apply compressed air to the system

C. Replace the system as a precaution

D. Replace the brake fluid as the only step

9. A vehicle has been brought in with the following findings: complaint of inadequate heating, low engine coolant level, restricted heater core, and worn thermostat. The MOST appropriate action is:

A. Apply compressed air to the heating system

B. Replace the heater core as a precaution

C. Address all findings: refill coolant, replace the heater core, replace the thermostat, bleed the system, and verify proper heating

D. Replace the brake fluid as the only step

10. The proper procedure for verifying complete heating system service is to:

- A. Apply compressed air to the system
- B. Replace the heating system as a precaution
- C. Replace the brake fluid as the only step
- D. Verify all repairs, verify proper coolant level, verify proper coolant flow, road test, and verify proper heating operation

11. A vehicle has been brought in with the following findings: complaint of multiple HVAC system issues, multiple actuator faults, network communication faults, and DTCs across multiple modules. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Verify network communication, identify common causes of multiple module faults, perform required service, clear DTCs, and verify proper operation
- C. Replace the HVAC system as a precaution
- D. Replace the brake fluid as the only step

12. The proper procedure for verifying complete HVAC and network service is to:

- A. Apply compressed air to the system
- B. Replace the HVAC system as a precaution
- C. Replace the brake fluid as the only step
- D. Verify network communication, verify HVAC operation, clear DTCs, road test, and verify proper operation of all systems

13. A vehicle has been brought in with the following findings: complaint of multiple A/C and engine cooling issues, low engine coolant level, restricted radiator, failed cooling fan, and refrigerant leak. The MOST appropriate action is:

- A. Address all findings: refill coolant, address the radiator restriction, replace the cooling fan, repair the refrigerant leak, evacuate, recharge, and verify operation
- B. Apply compressed air to the system
- C. Replace only the refrigerant as the most direct repair
- D. Replace the brake fluid as the only step

14. The proper procedure for verifying engine cooling and A/C integration service is to:

- A. Apply compressed air to the system
- B. Replace the cooling system as a precaution
- C. Verify all repairs, verify engine cooling operation, verify A/C operation, verify cooling fan operation, road test, and verify resolution
- D. Replace the brake fluid as the only step

15. A vehicle has been brought in with the following findings: complaint of A/C performance issues only at high engine RPM, marginal refrigerant charge, worn compressor drive belt, and worn compressor clutch. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Address all findings: replace the worn belt, replace the worn clutch components, recharge to proper specification, and verify proper operation
- C. Replace only the belt as the most direct repair
- D. Replace the brake fluid as the only step

16. The proper procedure for verifying speed-dependent A/C service is to:

- A. Apply compressed air to the system
- B. Replace the A/C system as a precaution
- C. Replace the brake fluid as the only step
- D. Verify all repairs, verify proper system operation at varied RPMs, road test, and verify resolution

17. A vehicle has been brought in with the following findings: complaint of multiple climate control issues, multiple sensor inaccuracies, multiple actuator faults, and DTCs across the climate control module. The MOST appropriate action is:

- A. Verify each sensor, address each fault, clear DTCs, verify climate control operation, and verify resolution
- B. Apply compressed air to the system
- C. Replace the climate control module as the most direct repair
- D. Replace the brake fluid as the only step

18. The proper procedure for verifying climate control sensor and actuator service is to:

- A. Apply compressed air to the system
- B. Replace the climate control module as a precaution
- C. Verify all repairs, verify sensor accuracy, verify actuator operation, clear DTCs, road test, and verify proper operation
- D. Replace the brake fluid as the only step

19. A vehicle has been brought in with the following findings: complaint of intermittent A/C issues, customer reports the issues began after parking outdoors during heavy weather, water intrusion at the climate control module, and DTCs across multiple modules. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Identify the source of water intrusion, address the cause, address the affected module, perform required service, clear DTCs, and verify proper operation
- C. Replace the climate control module as a precaution
- D. Replace the brake fluid as the only step

20. The proper procedure for diagnosing weather-related HVAC issues is to:

- A. Verify the customer concern, identify the cause (water intrusion, condensation, environmental contamination), address the source, perform required repairs, and verify proper operation
- B. Apply compressed air to the system
- C. Replace the affected systems as a precaution
- D. Replace the brake fluid as the only step

21. A vehicle has been brought in with the following findings: complaint of A/C system that does not engage, low refrigerant charge, faulty low-pressure cutoff switch, and DTCs related to the A/C circuit. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Replace only the cutoff switch as the most direct repair
- C. Replace the climate control module as a precaution
- D. Address all findings: address the low charge (recover, identify and repair leaks, recharge), replace the failed switch, clear DTCs, and verify proper operation

22. The proper procedure for verifying A/C engagement service is to:

- A. Apply compressed air to the system
- B. Replace the A/C system as a precaution
- C. Verify proper system charge, verify proper switch operation, verify proper compressor engagement, clear DTCs, and verify proper operation
- D. Replace the brake fluid as the only step

23. A vehicle has been brought in with the following findings: complaint of A/C system overcharge, refrigerant added by the customer beyond proper amount, system pressures exceeding specification, and DTCs related to high-pressure protection. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Recover the excess refrigerant, weigh and verify the proper charge amount, recharge to specification, clear DTCs, and verify proper operation
- C. Replace only the refrigerant as the most direct repair
- D. Replace the brake fluid as the only step

24. The proper procedure for addressing A/C system overcharge is to:

- A. Apply compressed air to the system
- B. Replace the system as a precaution
- C. Recover all refrigerant, verify the proper charge amount, recharge to specification by weight, and verify proper operation
- D. Replace the brake fluid as the only step

25. A vehicle has been brought in with the following findings: complaint of refrigerant odor in the cabin, evaporator core leak verified through testing, contaminated refrigerant, and worn HVAC ductwork seals. The MOST appropriate action is:

- A. Address all findings: replace the evaporator core, address the contaminated refrigerant, replace the worn seals, evacuate, recharge, and verify operation
- B. Apply compressed air to the system
- C. Replace only the refrigerant as the most direct repair
- D. Replace the brake fluid as the only step

26. The proper procedure for verifying evaporator replacement service is to:

- A. Apply compressed air to the system
- B. Replace the evaporator as a precaution
- C. Replace the brake fluid as the only step
- D. Verify proper installation, verify proper seal integrity, evacuate the system, recharge with proper refrigerant amount, and verify proper operation

27. A vehicle has been brought in with the following findings: complaint of musty odor from vents, microbial growth on evaporator, contaminated cabin air filter, and worn HVAC ductwork. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Address all findings: clean or treat the evaporator, replace the cabin air filter, address ductwork condition, and verify proper operation
- C. Replace the HVAC system as a precaution
- D. Replace the brake fluid as the only step

28. The proper procedure for addressing musty odor in HVAC systems is to:

- A. Identify the source of microbial growth, treat or clean the affected components, replace the cabin air filter, and verify resolution
- B. Apply compressed air to the system
- C. Replace the HVAC system as a precaution
- D. Replace the brake fluid as the only step

29. A vehicle has been brought in with the following findings: complaint of multiple electrical issues affecting the HVAC system, marginal connections at the HVAC module, corroded ground points, and DTCs in multiple modules. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Replace the HVAC module as a precaution
- C. Repair the marginal connections, repair the corroded grounds, clear DTCs, perform required service, and verify proper operation
- D. Replace the brake fluid as the only step

30. The proper procedure for verifying electrical service to the HVAC system 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 all repairs, perform voltage drop testing on critical circuits, verify all HVAC functions, clear DTCs, and verify proper operation

31. A vehicle has been brought in with the following findings: complaint of multiple A/C performance issues, multiple worn components in the system, marginal refrigerant charge, and refrigerant leak at multiple locations. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Address all findings: identify and repair all leaks, replace worn components, recover and recharge with proper refrigerant amount, and verify proper operation
- C. Replace the A/C system as a precaution
- D. Replace the brake fluid as the only step

32. The proper procedure for verifying multi-component A/C service is to:

- A. Verify all repairs, verify the system is leak-free, perform proper evacuation, recharge to specification, road test, and verify proper performance
- B. Apply compressed air to the system
- C. Replace the A/C system as a precaution
- D. Replace the brake fluid as the only step

33. A vehicle has been brought in with the following findings: complaint of A/C performance issues only when the engine is hot, engine cooling fan operating intermittently, condenser cooling marginal, and condenser fins damaged. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Replace the cooling fan as a precaution
- C. Address all findings: address the cooling fan operation, address the condenser fin damage, verify proper airflow, and verify A/C operation under heat conditions
- D. Replace the brake fluid as the only step

34. The proper procedure for verifying heat-related A/C service is to:

- A. Apply compressed air to the system
- B. Replace the A/C system as a precaution
- C. Replace the brake fluid as the only step
- D. Verify all repairs, verify cooling fan operation, verify proper condenser airflow, road test under heat conditions, and verify proper performance

35. A vehicle has been brought in with the following findings: complaint of A/C system that produces inconsistent cooling, marginal refrigerant charge, fault in the variable displacement control, and DTCs related to displacement. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Address the displacement control fault, address the marginal charge, clear DTCs, perform required service, and verify proper operation
- C. Replace the A/C system as a precaution
- D. Replace the brake fluid as the only step

36. The proper procedure for verifying variable displacement compressor service is to:

- A. Verify all repairs, verify proper displacement control through scan tool monitoring, road test, and verify proper performance
- B. Apply compressed air to the system
- C. Replace the compressor as a precaution
- D. Replace the brake fluid as the only step

37. A vehicle has been brought in with the following findings: complaint of multiple refrigerant leaks throughout the system, multiple worn O-rings, corroded refrigerant lines, and contamination in the refrigerant. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Replace only the refrigerant as the most direct repair
- C. Address all findings: replace worn O-rings, replace corroded lines, address contamination, evacuate, recharge with proper refrigerant amount, and verify operation
- D. Replace the brake fluid as the only step

38. The proper procedure for verifying multi-leak A/C service is to:

- A. Apply compressed air to the system
- B. Verify the system is leak-free through proper testing, perform proper evacuation, recharge to specification, road test, and verify proper performance
- C. Replace the A/C system as a precaution
- D. Replace the brake fluid as the only step

39. A vehicle has been brought in with the following findings: complaint of inadequate heating and A/C, low engine coolant level, restricted heater core, marginal refrigerant charge, and contaminated refrigerant. The MOST appropriate action is:

- A. Address all findings: refill coolant, replace the heater core, address the contaminated refrigerant (recover, evacuate, recharge with proper amount), and verify proper operation of both systems
- B. Apply compressed air to the system
- C. Replace the heating and A/C systems as a precaution
- D. Replace the brake fluid as the only step

40. The proper procedure for verifying combined heating and A/C service is to:

- A. Apply compressed air to the system
- B. Replace the heating and A/C systems as a precaution
- C. Replace the brake fluid as the only step
- D. Verify all repairs, verify proper heating operation, verify proper A/C operation, road test under varied conditions, and verify proper performance

41. A vehicle has been brought in with the following findings: complaint of multiple HVAC issues following a battery replacement, multiple actuator relearns required, DTCs in the climate control module, and HVAC system not operating properly. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Identify required relearn procedures, perform each manufacturer-specified relearn, clear DTCs, and verify proper operation of all HVAC functions
- C. Replace the climate control module as a precaution
- D. Replace the brake fluid as the only step

42. The proper procedure for verifying post-battery-replacement HVAC service is to:

- A. Apply compressed air to the system
- B. Replace the climate control module as a precaution
- C. Verify all relearn procedures completed, verify all HVAC functions, clear DTCs, road test, and verify proper operation
- D. Replace the brake fluid as the only step

43. A vehicle has been brought in with the following findings: complaint of multiple HVAC issues following a software update, multiple module faults, DTCs across multiple modules, and HVAC system not operating properly. The MOST appropriate action is:

- 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 for the appropriate response, perform recommended service, and verify proper operation
- D. Replace the brake fluid as the only step

44. The proper procedure for verifying post-update HVAC service is to:

- A. Verify all repairs, verify successful update or rollback, verify all HVAC functions, clear DTCs, road test, and verify proper operation
- B. Apply compressed air to the system
- C. Replace the affected modules as a precaution
- D. Replace the brake fluid as the only step

45. A vehicle has been brought in with the following findings: complaint of A/C performance issues, refrigerant identifier shows mixed refrigerant contamination, multiple worn components, and DTCs related to A/C operation. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Replace only the refrigerant as the most direct repair
- C. Replace the A/C system as a precaution
- D. Recover the contaminated refrigerant per the manufacturer's procedure, address the contamination cause, replace the worn components, evacuate, recharge with proper refrigerant, and verify operation

46. The proper procedure for verifying refrigerant contamination service is to:

- A. Apply compressed air to the system
- B. Verify the system is properly serviced, verify the proper refrigerant type, verify proper performance, clear DTCs, and verify resolution
- C. Replace the A/C system as a precaution
- D. Replace the brake fluid as the only step

47. A vehicle has been brought in with the following findings: complaint of multiple HVAC issues, multiple worn components across the HVAC system, multiple service items required across A/C, refrigeration components, HVAC distribution, electronic controls, and refrigerant handling. The MOST appropriate action is:

- A. Apply compressed air to the system
- B. Replace components individually as each symptom is identified
- C. Address all findings comprehensively: repair each component requiring service, perform proper service procedures, clear DTCs, road test, and verify all symptoms resolved
- D. Replace the brake fluid as the only step

48. The proper procedure for verifying complete HVAC service after multi-domain repair is to:

- A. Apply compressed air to the system
- B. Replace the HVAC system as a precaution
- C. Replace the brake fluid as the only step
- D. Verify all repairs, perform proper service procedures, clear DTCs, road test under varied conditions, and verify all symptoms resolved

49. A vehicle has been brought in for routine HVAC inspection. The technician finds multiple components past the manufacturer's typical service interval and showing signs of wear. The MOST appropriate action is:

- A. Inform the customer of all findings, document the wear pattern, provide recommendations based on the manufacturer's interval and the customer's expected use
- B. Apply compressed air to the system
- C. Replace all worn components as a precaution
- D. Replace the brake fluid as the only step

50. The proper procedure for documenting HVAC inspection findings is to:

- A. Apply compressed air to the components
- B. Inspect all relevant components, measure relevant specifications, record findings, identify required service, document actual service performed, and provide recommendations to the customer
- C. Replace the components as a precaution
- D. Replace the brake fluid as the only step

PRACTICE EXAM 4: A7 SIMULATION

— ANSWER KEY, EXPLANATIONS, AND TASK REMEDIATION

1. B — Replace the condenser, address the worn mounts, recover and recharge the refrigerant, and verify proper operation. Multiple A/C findings each contribute to the symptoms. Comprehensive repair addresses each cause; partial repair leaves issues unresolved. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*
2. D — Technician B only. A/C issues with multiple findings require comprehensive repair. Component wear progresses together; addressing only one leaves other contributing causes unresolved. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
3. C — Verify all repairs, perform proper evacuation, recharge with proper refrigerant amount, road test, and verify proper performance. A/C system service verification requires comprehensive approach. Each step verifies different aspects of proper operation. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
4. A — Replace the compressor, flush the system, replace the receiver-drier or accumulator, replace the worn belt, evacuate, recharge, and verify operation. Compressor failure with multiple findings requires comprehensive system service. Each step addresses different aspects of the repair. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*
5. D — Verify proper installation, verify clutch engagement, verify proper system pressures and temperatures, and verify proper operation. Compressor service verification requires comprehensive approach. Each step confirms a different aspect of proper operation. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*
6. B — Address all findings: repair the leaks, replace the contaminated oil and components, address the drainage, evacuate, recharge, and verify operation. Multiple A/C system findings each contribute to the symptoms. Comprehensive repair addresses each cause. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
7. D — Both Technician A and Technician B. A/C system issues can have multiple coexisting causes (correct), and addressing all related findings is required for complete repair (correct). Both

observations describe accurate principles. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*

8. A — Verify all repairs, perform proper evacuation, verify the system is leak-free, recharge with proper refrigerant amount, and verify proper performance. Refrigeration system service verification requires comprehensive approach including leak verification. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
9. C — Address all findings: refill coolant, replace the heater core, replace the thermostat, bleed the system, and verify proper heating. Multiple heating system findings each contribute to the symptoms. Comprehensive repair addresses each cause. *ASE Task Reference: A7 Domain C — Heating, Ventilation, Engine Cooling, and A/C Air Distribution. Review subsection 7.3.*
10. D — Verify all repairs, verify proper coolant level, verify proper coolant flow, road test, and verify proper heating operation. Heating system service verification requires comprehensive approach including operational verification. *ASE Task Reference: A7 Domain C — Heating, Ventilation, Engine Cooling, and A/C Air Distribution. Review subsection 7.3.*
11. B — Verify network communication, identify common causes of multiple module faults, perform required service, clear DTCs, and verify proper operation. Multiple HVAC and network issues require systematic approach addressing common causes. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
12. D — Verify network communication, verify HVAC operation, clear DTCs, road test, and verify proper operation of all systems. HVAC and network service verification requires comprehensive approach. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
13. A — Address all findings: refill coolant, address the radiator restriction, replace the cooling fan, repair the refrigerant leak, evacuate, recharge, and verify operation. Multiple cooling and A/C findings each contribute to symptoms. *ASE Task Reference: A7 Domain C — Heating, Ventilation, Engine Cooling, and A/C Air Distribution. Review subsection 7.3.*
14. C — Verify all repairs, verify engine cooling operation, verify A/C operation, verify cooling fan operation, road test, and verify resolution. Cooling and A/C integration service verification requires comprehensive approach. *ASE Task Reference: A7 Domain C — Heating, Ventilation, Engine Cooling, and A/C Air Distribution. Review subsection 7.3.*
15. B — Address all findings: replace the worn belt, replace the worn clutch components, recharge to proper specification, and verify proper operation. Multiple speed-dependent A/C findings each contribute to symptoms. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*
16. D — Verify all repairs, verify proper system operation at varied RPMs, road test, and verify resolution. Speed-dependent A/C service verification requires verification across operating

conditions. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*

17. A — Verify each sensor, address each fault, clear DTCs, verify climate control operation, and verify resolution. Multiple climate control findings each contribute to symptoms. Each sensor and actuator must be verified. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
18. C — Verify all repairs, verify sensor accuracy, verify actuator operation, clear DTCs, road test, and verify proper operation. Climate control service verification requires comprehensive approach including sensors and actuators. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
19. B — Identify the source of water intrusion, address the cause, address the affected module, perform required service, clear DTCs, and verify proper operation. Weather-related HVAC issues require source elimination plus comprehensive repair. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
20. A — Verify the customer concern, identify the cause (water intrusion, condensation, environmental contamination), address the source, perform required repairs, and verify proper operation. Weather-related HVAC diagnosis requires source identification and comprehensive repair. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
21. D — Address all findings: address the low charge (recover, identify and repair leaks, recharge), replace the failed switch, clear DTCs, and verify proper operation. Multiple A/C engagement findings each contribute to symptoms. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
22. C — Verify proper system charge, verify proper switch operation, verify proper compressor engagement, clear DTCs, and verify proper operation. A/C engagement service verification requires comprehensive approach. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
23. B — Recover the excess refrigerant, weigh and verify the proper charge amount, recharge to specification, clear DTCs, and verify proper operation. A/C overcharge requires proper refrigerant management. Weighing ensures proper charge. *ASE Task Reference: A7 Domain E — Refrigerant Recovery, Recycling, Handling, and Retrofit. Review subsection 7.5.*
24. C — Recover all refrigerant, verify the proper charge amount, recharge to specification by weight, and verify proper operation. Overcharge correction requires complete recovery and proper recharging by weight. *ASE Task Reference: A7 Domain E — Refrigerant Recovery, Recycling, Handling, and Retrofit. Review subsection 7.5.*
25. A — Address all findings: replace the evaporator core, address the contaminated refrigerant, replace the worn seals, evacuate, recharge, and verify operation. Multiple evaporator-related

findings each contribute to symptoms. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*

26. D — Verify proper installation, verify proper seal integrity, evacuate the system, recharge with proper refrigerant amount, and verify proper operation. Evaporator replacement verification requires comprehensive approach. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*
27. B — Address all findings: clean or treat the evaporator, replace the cabin air filter, address ductwork condition, and verify proper operation. Musty odor with multiple findings requires comprehensive approach. *ASE Task Reference: A7 Domain C — Heating, Ventilation, Engine Cooling, and A/C Air Distribution. Review subsection 7.3.*
28. A — Identify the source of microbial growth, treat or clean the affected components, replace the cabin air filter, and verify resolution. Musty odor service requires source identification and comprehensive repair. *ASE Task Reference: A7 Domain C — Heating, Ventilation, Engine Cooling, and A/C Air Distribution. Review subsection 7.3.*
29. C — Repair the marginal connections, repair the corroded grounds, clear DTCs, perform required service, and verify proper operation. Multiple electrical findings affecting HVAC each contribute to symptoms. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
30. D — Verify all repairs, perform voltage drop testing on critical circuits, verify all HVAC functions, clear DTCs, and verify proper operation. Electrical service verification for HVAC requires comprehensive approach. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
31. B — Address all findings: identify and repair all leaks, replace worn components, recover and recharge with proper refrigerant amount, and verify proper operation. Multiple A/C performance findings each contribute to symptoms. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
32. A — Verify all repairs, verify the system is leak-free, perform proper evacuation, recharge to specification, road test, and verify proper performance. Multi-component A/C service verification requires comprehensive approach. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
33. C — Address all findings: address the cooling fan operation, address the condenser fin damage, verify proper airflow, and verify A/C operation under heat conditions. Heat-related A/C findings each contribute to symptoms. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*
34. D — Verify all repairs, verify cooling fan operation, verify proper condenser airflow, road test under heat conditions, and verify proper performance. Heat-related A/C service verification

requires testing under heat conditions. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*

35. B — Address the displacement control fault, address the marginal charge, clear DTCs, perform required service, and verify proper operation. Multiple variable displacement findings each contribute to symptoms. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*
36. A — Verify all repairs, verify proper displacement control through scan tool monitoring, road test, and verify proper performance. Variable displacement service verification requires scan tool monitoring. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*
37. C — Address all findings: replace worn O-rings, replace corroded lines, address contamination, evacuate, recharge with proper refrigerant amount, and verify operation. Multiple leak findings each contribute to symptoms. *ASE Task Reference: A7 Domain B — Refrigeration System Component Diagnosis and Repair. Review subsection 7.2.*
38. B — Verify the system is leak-free through proper testing, perform proper evacuation, recharge to specification, road test, and verify proper performance. Multi-leak service verification requires comprehensive testing. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
39. A — Address all findings: refill coolant, replace the heater core, address the contaminated refrigerant (recover, evacuate, recharge with proper amount), and verify proper operation of both systems. Multiple heating and A/C findings each contribute to symptoms. *ASE Task Reference: A7 Domain C — Heating, Ventilation, Engine Cooling, and A/C Air Distribution. Review subsection 7.3.*
40. D — Verify all repairs, verify proper heating operation, verify proper A/C operation, road test under varied conditions, and verify proper performance. Combined heating and A/C service verification requires verification of both systems. *ASE Task Reference: A7 Domain C — Heating, Ventilation, Engine Cooling, and A/C Air Distribution. Review subsection 7.3.*
41. B — Identify required relearn procedures, perform each manufacturer-specified relearn, clear DTCs, and verify proper operation of all HVAC functions. Multiple HVAC findings after battery replacement require relearn procedures. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
42. C — Verify all relearn procedures completed, verify all HVAC functions, clear DTCs, road test, and verify proper operation. Post-battery-replacement HVAC service verification requires comprehensive approach. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*

43. C — Verify the update was completed successfully, contact the manufacturer for the appropriate response, perform recommended service, and verify proper operation. Post-update HVAC issues require manufacturer guidance. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
44. A — Verify all repairs, verify successful update or rollback, verify all HVAC functions, clear DTCs, road test, and verify proper operation. Post-update HVAC service verification requires comprehensive approach. *ASE Task Reference: A7 Domain D — Operating Systems and Related Controls. Review subsection 7.4.*
45. D — Recover the contaminated refrigerant per the manufacturer's procedure, address the contamination cause, replace the worn components, evacuate, recharge with proper refrigerant, and verify operation. Refrigerant contamination service requires comprehensive approach. *ASE Task Reference: A7 Domain E — Refrigerant Recovery, Recycling, Handling, and Retrofit. Review subsection 7.5.*
46. B — Verify the system is properly serviced, verify the proper refrigerant type, verify proper performance, clear DTCs, and verify resolution. Refrigerant contamination service verification requires comprehensive approach. *ASE Task Reference: A7 Domain E — Refrigerant Recovery, Recycling, Handling, and Retrofit. Review subsection 7.5.*
47. C — Address all findings comprehensively: repair each component requiring service, perform proper service procedures, clear DTCs, road test, and verify all symptoms resolved. Multi-domain HVAC findings require comprehensive approach. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
48. D — Verify all repairs, perform proper service procedures, clear DTCs, road test under varied conditions, and verify all symptoms resolved. Multi-domain HVAC service verification requires comprehensive approach. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
49. A — Inform the customer of all findings, document the wear pattern, provide recommendations based on the manufacturer's interval and the customer's expected use. HVAC inspection recommendations should be based on findings, intervals, and customer expectations. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*
50. B — Inspect all relevant components, measure relevant specifications, record findings, identify required service, document actual service performed, and provide recommendations to the customer. HVAC inspection documentation requires comprehensive recording. *ASE Task Reference: A7 Domain A — A/C System Diagnosis and Repair. Review subsection 7.1.*