

Air Brakes Practice Test

Directions: Read each question carefully and select the answer that best answers the question.

NOTE: This test must be taken by all CDL applicants desiring to operate equipment with air brakes.

1. Which of the following is okay to find in the air brake system?
 - A. Oil
 - B. Air
 - C. Water
 - D. All of the above

2. Air loss in a single vehicle (not a combination unit) should not be more than _____ with the engine off and the brakes on.
 - A. 1 psi in 30 seconds
 - B. 1 psi in one minute
 - C. 2 psi in 45 seconds
 - D. 3 psi in one minute

3. The vehicle must have a warning device which comes on when the air pressure in the service air tanks falls below:
 - A. 40 psi
 - B. 50 psi
 - C. 60 psi
 - D. 80 psi

4. If the air system should develop a leak, what will keep air in the air tanks?
 - A. The governor
 - B. The tractor protection valve
 - C. The emergency relay valve
 - D. The one-way check valve

5. Which brake system applies and releases the brakes when the driver uses the brake pedal?
- A. The emergency brake system
 - B. The service brake system
 - C. The parking brake system
 - D. None of the above
6. When using the parking brakes or emergency brakes, what type of pressure is being used?
- A. Fluid pressure
 - B. Spring pressure
 - C. Air pressure
 - D. Any of the above
7. The air loss rate for a straight truck or bus with the engine off and the brakes applied should not be more than:
- A. 1 psi in 60 seconds
 - B. 1 psi in one minute
 - C. 2 psi in 45 seconds
 - D. 3 psi in one minute
8. Air brake equipped vehicles must have:
- A. At least three air tanks
 - B. A hydraulic braking system, in case the air system fails
 - C. An air pressure gauge, to show the pressure available for braking
 - D. An air application gauge, to show air used by the brake chambers for braking
9. Which of the following statements about brakes is true?
- A. The heavier a vehicle or the faster it is moving, the more heat the brakes have to absorb to stop it
 - B. Brakes have more stopping power when they get very hot
 - C. Brake drums cool very quickly
 - D. All of the above
10. Three different systems are found on modern air brake systems; service brakes, parking brakes, and:
- A. Emergency brakes
 - B. Foot brakes
 - C. S-cam brakes
 - D. Drum brakes

11. The purpose of engine retarders is to:

- A. Provide emergency brakes
- B. Help slow the vehicle while driving and reduce brake wear
- C. Apply extra braking power to the non-drive axles
- D. Help prevent skids and slides

12. To use the stab braking technique during emergency braking, you:

- A. Pump the brake pedal rapidly and lightly
- B. Brake hard with the pedal until the wheels lock, then get off the brakes until the wheels begin to roll again
- C. Brake hard with the pedal until the wheels lock, then get off the brakes for as long as the wheels were locked
- D. Brake hard with the pedal and hand valve until you stop

13. If your vehicle has an alcohol evaporator, it's there to:

- A. Get rid of alcohol that condenses in the air tanks
- B. Let the driver skip the daily tank draining
- C. Increase tank pressure the way superchargers boost engines
- D. Reduce the risk of ice in the air brake valves in cold weather

14. If your vehicle is equipped with an alcohol evaporator, every day during the winter you should:

- A. Check the alcohol level and fill if necessary
- B. Change the alcohol with a new bottle
- C. Oil the system with 5 wt. oil
- D. Drain any alcohol that has accumulated

15. The air supply pressure gauge shows the driver how much pressure:

- A. Has been used in this trip
- B. Is available in the air tanks
- C. Is being sent to the brake chambers
- D. None of the above

16. The most common type of foundation brake found on heavy commercial motor vehicles is:

- A. Disc
- B. Wedge and drum
- C. S-cam drum
- D. None of the above

17. A straight truck or bus air brake system cannot leak more than how many psi per minute with the engine off and the brakes released?

- A. 1 psi
- B. 2 psi
- C. 3 psi
- D. 4 psi

18. How do you check the free-play in manual slack adjusters?

- A. Stop on level ground and apply the emergency brakes
- B. Park on level ground, chock wheels, release the parking brakes and pull slack adjusters
- C. Park on level ground and drain off air pressure before making adjustments
- D. Apply the service brakes by hand at the brake chambers and watch the slack adjusters move

19. Which of the following answers is most correct about brake use on a long and steep downgrade?

- A. Use the braking effects of the engine, and when the vehicle speed reaches the "safe" speed, apply brakes firmly until vehicle speed is reduced to approximately 5 mph below "safe" speed
- B. Use stab braking
- C. Use only the trailer brakes to maintain "safe" speed
- D. Apply brakes when the vehicle speed reaches 5 mph over "safe" speed and then release when speed of vehicle is back at the "safe" speed

20. When a failure occurs in the service brake system, the system you need to use to stop the vehicle is the:

- A. Parking brake system
- B. Emergency brake system
- C. Drum brake system
- D. Hand brake system

21. If your truck or bus has dual parking control valves, you can use pressure from a separate tank to:

- A. Release the emergency brakes to move a short distance
- B. Apply more brake pressure for stopping if the main tank is getting low
- C. Stay parked without using up service air pressure
- D. Balance the service brake system while you drive

22. The air compressor governor controls:

- A. The RPMs of the air compressor
- B. Whether the compressor is in good condition
- C. Air pressure applied to the brakes
- D. When the compressor will pump air into the storage tanks

23. When you have to make a quick emergency stop, you should brake in a way that allows you to:

- A. Steer hard while braking hard
- B. Use the full power of the brakes and lock them
- C. Continue in a straight line and maintain steering control
- D. Burn up the hand brake first

24. What turns on the electrical stop light switch in an air brake system?

- A. Spring pressure
- B. Hydraulic pressure
- C. Air pressure
- D. The driver

25. In air brake equipped vehicles, you use the parking brakes when?

- A. Slowing down
- B. As little as possible
- C. Whenever you park the vehicle
- D. Only during pre-trip and post-trip inspections

26. What will determine how effectively the spring emergency brakes or the parking brakes work?

- A. The condition of the service brakes
- B. This can only be tested by trained brake service professionals
- C. The adjustment of the service brakes
- D. Braking power will increase when the service brakes are hot

27. A combination vehicle air brake system cannot leak more than how many psi per minute with the engine off and the brakes released?

- A. 1 psi
- B. 2 psi
- C. 3 psi
- D. 4 psi

28. The brake pedal:

- A. Is the main control in the system
- B. Can be a foot rest during normal driving
- C. Controls the air pressure applied to operate the brakes
- D. Exerts force on the slack adjusters by rods and connectors

29. During normal operations, the parking and emergency brakes are usually held back by:

- A. Air pressure
- B. Spring pressure
- C. Centrifugal force
- D. Bolts or clamps

30. Why should you not fan the brakes on and off during long downgrades?

- A. Air usage is less when fanning
- B. Brake linings do not get hot when fanning
- C. The short time off the brakes does not allow for brake cooling
- D. None of the above

Air Brakes Practice Test Answer Key

- | | | | | |
|------|-------|-------|-------|-------|
| 1. B | 7. D | 13. D | 19. A | 25. C |
| 2. D | 8. C | 14. A | 20. B | 26. C |
| 3. C | 9. A | 15. B | 21. A | 27. C |
| 4. D | 10. A | 16. C | 22. D | 28. C |
| 5. B | 11. B | 17. B | 23. C | 29. A |
| 6. B | 12. B | 18. B | 24. C | 30. C |

