

## 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

**ANSWER KEY FOR AIR BRAKES PRACTICE TEST**

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