

## **AIR BRAKES PRACTICE TEST- A**

1. The parking or emergency brake on a heavy vehicle can only be held into position by something that cannot leak away. An example would be?
  - a. Fluid pressure
  - b. Spring pressure
  - c. Air pressure
  - d. Any of the above
  
2. A straight truck or bus air brake system would not leak at a rate of more than how many PSI per minute with the engine off and the brakes released?
  - a. 1 PSI per minute
  - b. 2 PSI per minute
  - c. 3 PSI per minute
  - d. 4 PSI per minute
  
3. Your vehicle has a dual air brake system, if a low air pressure warning comes on for the secondary system what should you do?
  - a. Bring the vehicle to a safe stop and continue only when the system is fixed
  - b. Reduce your speed and test the remaining system while underway
  - c. Reduce your speed and drive to the nearest garage for repairs
  - d. Continue at normal speed if only the secondary system fails
  
4. If your vehicle has an alcohol evaporator, why is it there?
  - a. To rid the wet tank of alcohol that condenses and sets at the bottom
  - b. To eliminate the need for daily tank draining
  - c. To boost the tank pressure in the same way that turbo chargers boost engines
  - d. To reduce the risk of ice in air brake valves in cold weather
  
5. Air braking takes more time than hydraulic braking because
  - a. Air brakes use different brake drums
  - b. Air takes more time to flow through than hydraulic fluid
  - c. Brakes require heavier return springs
  - d. Air is always leaking through air line fittings
  
6. The brake pedal in an air brake system \_\_\_\_\_.
  - a. Controls the speed of the air compressor
  - b. Always needs to be held down half-way during normal driving
  - c. Controls the air pressure applied to put on the brakes
  - d. Is connected to slack adjusters by a series of rods and linkages

7. If your truck or bus has dual parking control valves you can use pressure from a separate tank for what purpose?
- To balance the service brake system when you are parked.
  - To stay parked twice as long without using up the service air pressure.
  - To release the spring emergency and parking brakes to move a short distance.
  - To brake harder if the main tank is getting low.
8. **Air brake systems combine three different systems. They are the service brake system, the parking brake system, and what other?**
- The emergency brake system
  - The foot brake system
  - The S-CAM brake system
  - The drum brake system
9. To check the free play of manual slack adjusters of S-CAM brakes you should park on what kind of grade?
- Park on level ground and apply the parking brake
  - Park on level ground, chock the wheels and release the parking brakes
  - Park on level ground, drain off the air pressure before checking the adjustment
  - Park on a slight grade, release the parking brakes and apply the service brake watching your vehicle movement
10. **Which of these is the most important thing to do when a low air pressure warning comes on.?**
- Stop and safely park as soon as possible
  - Shift to the next higher gear
  - Adjust the brake pedal for more travel
  - Open the air supply control valve
11. What does the air compressor governor do?
- It controls the speed of the air compressor
  - It controls when the brake chambers release pressure
  - It controls the air pressure applied to the brakes
  - It controls when air is pumped into the air tanks
12. The braking power of the spring brakes \_\_\_\_\_.
- Is not affected by the condition of the service brakes
  - Can only be tested by highly trained brake service people
  - Depends on the service brakes being in adjustment
  - Increases when the service brakes are hot
13. All air brake equipped vehicles have \_\_\_\_\_.
- At least one brake heater
  - A hydraulic system in case the air system fails
  - A supply pressure gauge
  - An air use gauge

14. If you must make an emergency stop how should you brake?
- You brake so you can steer hard while braking hard
  - You brake using the full power of the brakes and lock them
  - You brake so you can steer and your vehicle stays in a straight line
  - You brake so you use the hand brake first
15. **What does the application pressure gauge show?**
- It shows you how much air you used during this trip
  - It shows how much pressure you have in the air tanks
  - It shows how much pressure you are applying to the brakes
  - None of the above
16. **If you do not have automatic tank drains, how often should you drain the oil and water from the air storage air tanks?**
- After every four hours of service
  - At the end of each day of driving
  - Once a week
  - Every other week
17. **You know that your brakes are fading when:**
- You have to push harder on the brake pedal to control your speed on a down grade**
  - The brake pedal feels spongy when pressure is applied
  - Pressure on the brake pedal is released and speed increases
  - Less pressure is needed on the brake pedal for each stop
18. If your vehicle has an alcohol evaporator, every day during cold weather what should you do?
- Change the alcohol from a new bottle
  - Clean the air filter with alcohol
  - Check the oil for alcohol content
  - Check and fill the alcohol level
19. Why drain water from compressed air tanks?
- The low boiling point of water reduces braking power
  - Water can freeze in cold weather and cause brake failure
  - Water cools the compressor too much
  - To keep from fouling the air compressor oil
20. **To test service brakes, you should brake firmly while moving slowly forward. The brakes are O.K. if you notice:**
- The vehicle pulls to one side
  - An unusual feel
  - A delayed stopping action
  - None of the above

21. **What is the correct braking technique for driving on long downhill grades?**

- a. **Reduce your speed to 5 MPH below your safe speed**
- b. **Release the brakes**
- c. **When your speed has increased to your safe speed, repeat a and b**
- d. **All of the above**

22. **The driver must be able to see or hear a warning before air pressure in the storage tanks falls below what pressure?**

- a. 40 PSI
- b. 50 PSI
- c. 60 PSI
- d. 80 PSI

23. During normal driving, spring brakes are usually held back by \_\_\_\_\_.

- a. Bolts
- b. Air Pressure
- c. Spring Pressure
- d. Centrifugal force

24. In air brake vehicles the parking brakes should be used how?

- a. As little as possible
- b. Anytime the vehicle is parked
- c. To hold your speed when going downhill
- d. Only during pre-trip and post-trip inspections

25. Emergency stab braking is when you \_\_\_\_\_.

- a. Press hard on the brake pedal and apply full hand valve until you stop
- b. Apply the hand valve for one second, then push hard on the pedal
- c. Use light, steady pressure on the brake pedal
- d. **Brake as hard as you can, release the brakes when the wheels lock; and when the wheels start rolling press the brakes fully**

1 - (b) 6 - (c) 11 - (d) 16 - (b) 21 - (d) ADD FROM TEST B #3,

2 - (b) 7 - (c) 12 - (c) 17 - (a) 22 - (c)

3 - (a) 8 - (a) 13 - (c) 18 - (d) 23 - (b)

4 - (d) 9 - (b) 14 - (c) 19 - (b) 24 - (b)

5 - (b) 10 - (a) 15 - (c) 20 - (d) 25 - (d)

## **AIR BRAKES PRACTICE TEST- B**

1. The air loss rate for a straight truck or bus, with the engine off and the brakes on, should not be more than what?
  - a. 1 PSI in 30 seconds
  - b. 1 PSI in 1 minute
  - c. 2 PSI in 45 seconds
  - d. 3 PSI in 1 minute
  
2. Your brakes are fading when \_\_\_\_\_.
  - a. You have to push harder on the brake pedal to control your speed on a downgrade.
  - b. The brake pedal feels spongy when you apply pressure.
  - c. You release pressure on the brake pedal and speed increases.
  - d. Less pressure is needed on the brake pedal for each stop.
  
3. What does the supply pressure gauge show?
  - a. It shows how much pressure you have used in this trip.
  - b. It shows how much pressure is in the air tanks.
  - c. It shows how much pressure is going to the brake chambers.
  - d. It shows how much pressure the air can take.
  
4. The brake system that supplies and releases the brakes when the driver uses the brake pedal is called what brake system?
  - a. The emergency brake system
  - b. The service brake system
  - c. The parking brake system
  - d. None of the above
  
5. If your vehicle has an alcohol evaporator, every day during cold weather what should you do?
  - a. Check and fill the alcohol level
  - b. Change the alcohol from a new bottle
  - c. Clean the air filter with alcohol
  - d. Check the oil for alcohol content
  
6. Why should you drain water from compressed air tanks?
  - a. The boiling point reduces braking power.
  - b. Water can freeze in cold weather causing brake failure.
  - c. Water-cools the compressor too much.
  - d. You should drain water to make room for the oil that should be in the compressed air tank.
  
7. To test air service brakes you should brake firmly when moving slowly forward. What tells you that the brakes are O.K.?
  - a. A delayed stopping action.
  - b. An unusual feel.
  - c. The vehicle pulls to the right.
  - d. None of the above.

8. On long downhill grades, experts recommend using a low gear and light, steady pedal pressure instead of on-again, off-again braking. Why is that?
- Because air usage is less when you have light steady pressure.
  - Because brake linings do not heat up as much with light steady pressure.
  - Because you can keep vehicle speed constant in a low gear with light, steady pressure.
  - All the above.
9. Your truck or bus has a dual air brake system, if a low air pressure warning comes on for only one system, what should you do?
- Reduce your speed and drive to the nearest garage for repair.
  - Reduce your speed and test the remaining system while underway.
  - Continue at normal speed. No action is needed if only one system fails.
  - Stop right away and safely park, continue only after the system is fixed.
10. During normal driving, spring brakes are usually held back by what?
- Air pressure
  - Spring pressure
  - Centrifugal force
  - Bolts or clamps
11. Total stopping distance for air brakes is longer than that for hydraulic brakes, due to what distance?
- Perception distance
  - Reaction distance
  - Brake lag distance
  - Effective braking distance
12. The most common type of foundation brake found on heavy vehicles is what?
- The disc brake
  - The wedged drum brake
  - The S-CAM system
  - None of the above
13. With air brake vehicles the parking brakes should be used when?
- Whenever you leave the vehicle unattended.
  - To hold the speed when going downhill.
  - As little as possible.
  - Only during pre-trip and post-trip inspections.
14. What is emergency stab braking?
- Pump the pedal lightly and rapidly
  - Press on the brake pedal as hard as you can, then release the brakes when the wheels lock; and when the wheels start rolling put the brakes on fully again.
  - Brake hard until the wheels lock, then get off the brakes for as much time as the wheels were locked.
  - Press hard on the brake pedal and apply full hand valve until you come to a stop.

15. Parking or emergency brakes of trucks and buses are held on by what kind of pressure?
- Spring pressure
  - Fluid pressure
  - Air pressure
  - Atmospheric pressure
16. The driver must be able to see a low air pressure warning, which comes on before pressure in the service air tanks falls below how many PSI?
- 20 PSI
  - 40 PSI
  - 60 PSI
  - 80 PSI
17. If your vehicle has an alcohol evaporator, why is it there?
- To rid the wet tank of alcohol that condenses and sets at the bottom
  - To eliminate the need for daily tank draining
  - To boost the tank pressure in the same way that turbo chargers boost engines
  - To reduce the risk of ice in air brake valves in cold weather
18. The brake pedal in an air brake system \_\_\_\_\_.
- Controls the speed of the air compressor
  - Is seldom used compared to hydraulic systems
  - Controls the air pressure applied to put on the brakes
  - Is connected to slack adjusters by a series of rods and linkages
19. If your truck or bus has dual parking control valves then you can use pressure from a separate tank for what purpose?
- To balance the service brake system when you are parked.
  - To stay parked twice as long without using up the service air pressure.
  - To release the spring emergency and parking brakes to move a short distance.
  - To brake harder if the main tank is getting low.
20. If you must make an emergency stop than you should brake how?
- So that you use the hand brake before the brake pedal
  - So that you do not need to worry about steering
  - So you can steer and so your vehicle stays in a straight line
  - So you can use the full power of the brakes to lock the wheels
21. To check the free play of manual slack adjusters of S-CAM brakes you should park on what kind of grade?
- Level ground and apply the parking brake
  - Park on level ground, chock the wheels and release the parking brakes
  - Park on level ground, drain off the air pressure before checking the adjustment
  - Park on a slight grade, release the parking brakes and apply the service brake watching your vehicle movement

22. The most important thing to do when a low air pressure warning comes on is what?

- a. Up shift
- b. Downshift
- c. Adjust the brake pedal for more travel
- d. Stop and safely park as soon as possible

23. What does the air compressor governor control?

- a. The speed of the air compressor
- b. Air pressure applied to the brakes
- c. Air pumped into the air tanks
- d. When the brake chambers release pressure

24. What describes the braking power of the spring brakes?

- a. It increases when the service brakes are hot
- b. It depends on the service brakes being in adjustment
- c. It is not affected by the condition of the service brakes
- d. It can only be tested by highly trained brake service people

25. All air brake equipped vehicles have what?

- a. An air use gauge
- b. A supply pressure gauge
- c. At least one brake heater
- d. A back-up hydraulic system

1 - (d) 6 - (b) 11 - (c) 16 - (c) 21 - (b)  
2 - (a) 7 - (d) 12 - (c) 17 - (d) 22 - (d)  
3 - (b) 8 - (d) 13 - (a) 18 - (c) 23 - (c)  
4 - (b) 9 - (d) 14 - (b) 19 - (c) 24 - (b)  
5 - (a) 10 - (a) 15 - (a) 20 - (c) 25 - (b)



**AIR BRAKES - FACT SHEET**  
**CDL**

1. The air loss rate for a straight truck or bus with the engine off and the brakes on should not be more than 3 PSI in one minute.
2. Your brakes are fading when you have to push harder on the brake pedal to control your speed on a downgrade.
3. The supply pressure gauge shows how much pressure is in the air tanks.
4. The brake system that applies and releases the brakes when the driver uses the brake pedal is the service brake system.
5. If your vehicle has an alcohol evaporator, every day during cold weather you should check and fill the alcohol level.
6. You should drain the water from compressed air tanks because water can freeze in cold weather and cause brake failure.
7. **To test service brakes**, you should brake firmly when moving slowly forward. The brakes are O.K. if you do not notice a delayed stopping action, an unusual feel, or the vehicle “pulls” to one side.
8. **On long downhill grades, apply the brakes just enough to feel a slowdown. When your speed has been reduced to approximately five miles per hour below your “safe” speed, release the brakes. When your speed has increased to your safe speed, repeat steps one and two. Repeat this until you have reached the end of the downhill grade.**
9. Your truck or bus has a dual air brake system. If a low air pressure warning comes on for only one system, what should you do? Stop right away and safely park. Continue only after the system is fixed.
10. During normal driving, spring brakes are usually held back by air pressure.
11. **Total stopping distance for air brakes is longer than that for hydraulic brakes due to brake lag.**
12. **The most common type of foundation brake found on heavy vehicles is the S-CAM brake system.**
13. With air brake vehicles, the parking brake should be used whenever you leave the vehicle unattended.
14. **For emergency stab braking, you should press on the brake pedal as hard as you can, release the brakes when the wheels lock, and when the wheels start rolling press the brakes fully again.**
15. **Parking or emergency brakes on trucks and buses can be held on by spring pressure.**
16. **The driver must be able to see a low air pressure warning, which comes on when pressure in the air tanks fall below 60 PSI.**
17. **If your vehicle has an alcohol evaporator, it is there to reduce the risk of ice in air brake valves in cold weather.**
18. The brake pedal in an air brake system controls the air pressure applied to put on the brakes.
19. **If your truck or bus has dual parking control valves, you can use pressure from a separate tank to release the emergency/parking brakes to move a short distance.**

20. To check the free play of manual slack adjusters of S-CAM brakes, you should park on level ground, chock the wheels, and release the parking brake.
21. The most important thing to do when a low air pressure warning comes on is stop and safely park as soon as possible.
22. The air compressor governor controls when air is pumped into the air tanks.
23. The braking power of the spring brakes depends on the service brakes being in adjustment.
24. All air brake equipped vehicles have a supply pressure gauge.
25. If you must make an emergency stop, you should brake so you can steer and so your vehicle stays in a straight line.
26. The parking or emergency brake on a heavy vehicle can only be held in position by something that cannot leak away, like spring pressure.
27. A straight truck or bus air brake system should not leak at a rate of more than 2 PSI per minute with the engine off and the brakes released.
28. Your vehicle has a dual air brake system. If a low air pressure warning comes on for the secondary system, you should bring the vehicle to a safe stop and continue only when the system is fixed.
29. Air braking takes more time than hydraulic braking because air takes more time to flow through the lines than hydraulic fluid.
30. **Air brake systems combine three different systems. They are the service, parking, and the emergency brake systems.**
32. The application pressure gauge shows how much air pressure you are applying to the brakes.
33. **If you do not have automatic tank drains, you should drain the oil and water from the air storage tanks at the end of each day of driving.**