

1. Modern air brake systems combines three different systems. They are the service brakes, the parking brakes and the:

- a. S-S-cam brakes.cam brakes.
- b. Drum brakes.
- c. Foot brakes.
- d. *Emergency brakes.*

2. Oil and water usually collect in compressed air tanks. If you do not have an automatic tank drain, when should you drain the air tanks?

- a. *After every working day.*
- b. After every four hours of service.
- c. Once a week.
- d. Every other week.

3. Why drain water from the compressed air tanks?

- a. To keep from fouling the air compressor oil.
- b. *Water can freeze in cold weather and cause brake failure.*
- c. The low boiling point of water reduces braking power.
- d. Water over cools the compressor.

4. Air brake equipped vehicles must have:

- a. *A supply pressure gauge.*
- b. An air use gauge.
- c. At least two brake heaters.
- d. A backup hydraulic system.

5. What can legally hold a parking or emergency brake in position for a truck, truck tractor or bus?

- a. Fluid pressure
- b. Air pressure
- c. *Spring pressure*
- d. Any of the above

6 Air loss in a straight truck or bus 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*

7 To make an emergency stop with air brakes, using the stab braking method, you should:

- a. Pump the brake pedal rapidly and lightly.
- b. Brake hard until the wheels lock, and then get off the brakes for as much time as the wheels were locked.
- c. *Brake as hard as you can, get off the brakes when the wheels lock, get back on the brakes when the wheels start rolling again.*
- d. Press hard on the brake pedal and apply full hand valve until you stop.

8 You should know that your brakes are fading when:

- a. Pressure on the brake pedal is released and speed increases.
- b. *You have to push harder on the brake pedal to control your speed on a downgrade.*
- c. The brake feels spongy when pressure is applied.
- d. Less pressure is needed on the brake pedal for each stop.

9 To check the free play of manual slack adjusters on s-cam brakes you should:

- a. *Park on level ground, chock the wheels, and release the parking brakes.*
- b. Stop on level ground and apply the parking brakes.
- c. Park on level ground and drain off air pressure before adjusting.
- d. Park on a slight grade, release the parking brake, apply the service brakes, and check for vehicle movement.

10 If the air compressor should develop a leak, what keeps the air in the tanks?

- a. The tractor protection valve
- b. The emergency relay valve
- c. *The one way check valve*
- d. The air compressor

11 When driving down a long steep hill you should:

- a. Use stab braking.
- b. Begin braking when you are 10 M.P.H. above your safe speed.
- c. *Release the brake when you are 5 M.P.H. below your*
- d. Use the trailer brakes.

12 The brake system that applies and releases the brakes when the driver uses the brake pedal is the:

- a. *Service brake system.*
- b. Emergency brake system.
- c. Parking brake system.
- d. None of the above.

13 The most common type of foundation brakes found on heavy vehicles is the:

- a. Disc brakes
- b. Wedge drum
- c. *S-cam drum*
- d. None of the above

14 Vehicles with air brakes must have:

- a. At least two air tanks.
- b. *An air pressure gauge to show the pressure available for braking.*
- c. An air pressure gauge, to show air used by the brake chambers for braking.
- d. None of the above.

15 The driver must be able to see a warning that is given before air pressure in the service air tanks falls below:

- a. 80 psi
- b. 40 psi
- c. 20 psi
- d. *60 psi*

16 Which of the following makes the total stopping distance for air brakes longer than that for hydraulic brakes.

- a. *Brake lag distance.*
- b. Action distance.
- c. Perception distance.
- d. Effective braking distance.

17 Of the choices below, the first thing to do when a low air pressure warning comes on is:

- a. Open the air supply control valve.
- b. Adjust the brake pedal for more travel.
- c. *Stop and safely park as soon as possible.*
- d. Up-shift.

18 The braking power of the spring brakes:

- a. Can only be tested by highly trained brake service people.
- b. *Depends on the adjustment of the service brakes.*
- c. Increases when the service brakes are hot.
- d. Is not affected by the condition of the service brakes.

19 The air compressor governor controls:

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

20 The application pressure gauge shows the driver how much pressure:

- a. Has been used on the trip.
- b. Is in the air tanks.
- c. None of these.
- d. *Is being applied to the brakes.*

21 If your vehicle has an alcohol evaporator, every day during cold weather you should:

- a. Clean the air filter with alcohol.
- b. ***Check and fill the alcohol level.***
- c. Change the alcohol from a new bottle.
- d. Check the oil for alcohol content.

22 During normal driving, spring brakes are usually held back by:

- a. Spring pressure
- b. Bolts or clamps
- c. Centrifugal force
- d. ***Air pressure***

23 Air braking takes more time than hydraulic braking because air brakes:

- a. ***Need to have airflow through the lines to work.***
- b. Use different brake drums.
- c. Require heavier return springs.
- d. All of the above.

24 In air brake vehicles, the parking brakes should be used:

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

25 The brake pedal in an air brake system:

- a. Is to be used as a footrest during normal driving.
- b. Controls the speed of the air compressor.
- c. *Controls the air pressure applied to put on the brakes.*
- d. Is connected to slack adjusters by a series of rods and linkages.

26 If your truck or bus has dual parking control valves it means that you can use pressure from a separate tank to:

- a. Balance the service brake system.
- b. *Release the spring brakes to move a short distance.*
- c. Stay parked without using up service air pressure.
- d. Apply more brake pressure if the main tank is getting low.

27 A straight truck or bus air brake system should not leak at a rate of more than _____ PSI per minute with the engine off and the brakes released.

- a. 4
- b. 3
- c. 2
- d. 1

28 If your vehicle has an alcohol evaporator, it is there to:

- a. *Reduce the risk of ice in air brake valves in cold weather.*
- b. Eliminate the need for daily tank draining.
- c. Rid the wet tank of alcohol that condenses and sits at the bottom.
- d. Boost tank pressure the same way that superchargers boost.

29 If you must make an emergency stop, you should brake so that you:

- a. Use the full power of the brakes and lock them.
- b. Can steer hard while braking hard.
- c. *Stay in a straight line and can steer.*
- d. Use the hand brake first.

30 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?

- a. Reduce your speed and drive to the nearest garage for repairs.
- b. Continue at normal speed and find a garage before the brakes lock.
- c. Reduce your speed and test the remaining system while under way.
- d. *Stop. Safely park, and continue only after the system is fixed.*