

DOT CHEATS and TIPS!

PENNSYLVANIA CDL AIR BRAKE CHEAT SHEET

TIPS FOR GETTING YOUR LICENSE FAST!

IMPORTANT LINKS

Pennsylvania DOT: <http://dri.vg/c2A>

DOT CDL Information: <http://dri.vg/dyA>

DOT Appointments: <http://dri.vg/i6p>

Driver License Office Locations: <http://dri.vg/i6p>

Fees: <http://dri.vg/Rv7>

DOT REQUIREMENTS CHECKLIST

Valid Driver's License

Medical Certificate: <http://dri.vg/t2o>

Proof of Identity Documents:

<http://dri.vg/b5C>

TESTS YOU WILL NEED TO TAKE

General Knowledge

Air Brakes (if applicable)

Pre-Trip Inspection

Basic Skills

CDL Road Test

Vision Exam

Applicable exams for desired endorsements:

- Hazardous Materials
- Tank Vehicles
- Passengers
- School Bus
- Double/Triple Trailers

Practice exam available online at:

www.TestQuestionsAndAnswers.com

1. Dollies manufactured on or after March 1, 1998 are required to have a yellow Antilock Braking Systems (ABS) malfunction lamp:

- On the left side.

5 – Antilock Braking Systems (ABS)

2. If dual air system warning light and buzzer should come on while driving, you should:

- Stop right away, safely park the vehicle, and have the air brakes system fixed.

5 – Dual Air Brake

3. If the air pressure fails, a heavily loaded vehicle will take a long distance to stop because the spring brakes:

- Do not work on all axles.

5 – Low Air Pressure

4. While waiting for air pressure to build up in a dual air system:

- Pay attention to the low air pressure warning light and buzzer.

5 – Dual Air Brake

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5. The manual adjustment of an automatic adjuster to bring a brake pushrod stroke within legal limits is:

- Generally masking a mechanical problem and is not fixing it.

11 – Cab Check/Engine Start

6. Use the parking brakes:

- Whenever you park.

5 – Parking Brake Controls

7. On newer model vehicles, the parking brake will be a:

- Yellow, diamond-shaped knob labeled "parking brakes."

5 – Parking Brakes

8. To reduce the risk of ice in air brake valves and other parts during cold weather:

- Some air brake systems have an alcohol evaporator to put alcohol into the air system.

5 – Alcohol Evaporator

9. When the spring brakes come on, lightly loaded vehicles or vehicles on slippery roads may:

- Skid out of control.

5 – Low Air Pressure

10. If the air brake system has an alcohol evaporator, the tanks should be drained:

- Daily, to get rid of water and oil unless the system has automatic drain valves.

5 – Alcohol Evaporator

11. When only the trailer has ABS, the trailer is less likely to swing out, but if you lose steering control or start a tractor jackknife:

- Let up on the brakes (if you can safely do so) until you gain control.

5 – Braking with Antilock Brakes

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12. In vehicles with Anti-lock Braking Systems (ABS), wheel lock up is avoided by:

- A computer that senses impending wheel lock-up and reducing the braking pressure to a safe level, allowing you to maintain control.

5 – Braking with Antilock Brakes

13. Emergency brakes and parking brakes must be held on by:

- Mechanical force (because air pressure can eventually leak away).

5 – Spring Brakes

14. To determine if your vehicle is equipped with Antilock Braking Systems (ABS):

- Check the certification label for the date of manufacture.

5 – Antilock Braking Systems (ABS)

15. If the compressor has its own oil supply:

- Check the oil level before driving.

5 – Air Compressor

16. Having ABS on only the tractor, only the trailer, or even on only one axle:

- Still gives you more control over the vehicle during braking.

5 – Braking with Antilock Brakes

17. The action of the brakes shoes and linings inside the brake drum:

- Causes friction, which slows the vehicle, and creates heat.

5 – Foundation Brakes

18. Releasing the brakes:

- Lets some compressed air go out of the system, so the air pressure in the tanks is reduced.

5 – The Brake Pedal

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19. On a long and/or steep downgrade, with the vehicle in the proper gear, use the following braking technique:

- Apply the brakes just hard enough to feel a definite slowdown.
- When your speed has been reduced to approximately five mph below your "safe" speed, release the brakes. (this application should last for about three seconds).
- When your speed has increased to your "safe" speed, repeat steps 1 and 2.

5 – Proper Braking Technique

20. If the vehicle has a dual air brake system, there will be a gauge:

- For each half of the system, or;
- A single gauge with two needles.

5 – Supply Pressure Gauges

21. Air storage tanks are used to:

- Hold compressed air.

5 – Air Storage Tanks

22. To use the parking brakes:

- Pull the parking brake control knob out to apply the parking brakes, push it in to release.

5 – Parking Brakes

23. To use a "controlled braking" maneuver:

- Keep steering wheel movements very small.
- If you need to make a larger steering adjustment or if the wheels lock, release the brakes.
- Re-apply the brakes as soon as you can.

5 – Emergency Stops

24. Manual adjustment of slack adjusters is dangerous because:

- It can give the operator a false sense of security about the effectiveness of the braking system.

5 – During Step 5 Walkaround Inspection

25. Tractor and straight truck spring brakes will come fully on when air pressure drops to a range of:

- 20 to 45 psi (typically 20 to 30 psi).

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5 – Spring Brakes

26. The device that drops a mechanical arm into your view when the pressure in the system drops below 60 psi is known as a:

- **Wig wag.**

5 – Low Air Pressure Warning

27. The air compressor is connected to the engine through:

- **Gears or a v-belt.**

5 – Air Compressor

28. To test the parking brake:

- **Stop the vehicle and put the parking brake on.**
- **Gently pull against it in a low gear to test that the parking brake will hold.**

5 – Step 7 Final Air Brake Check

29. To test the Service Brakes:

- **Wait for normal air pressure.**
- **Release the parking brake.**
- **Move the vehicle forward slowly (about five mph).**
- **Apply the brakes firmly using the brake pedal.**
- **Note any vehicle "pulling" to one side, unusual feel, or delayed stopping action.**

5 – Step 7 Final Air Brake Check

30. To check that Spring Brakes come on automatically:

- **Continue to fan off the air pressure by stepping on and off the brake pedal to reduce tank pressure.**
- **The tractor protection valve and parking brake valve should close (pop out) on a tractor-trailer combination vehicle.**
- **The parking brake valve should close (pop out) on other combination and single vehicle types.**
- **When the air pressure falls to the manufacturer's specification (20 – 45 psi). This will cause the spring brakes to come on.**

5 – Step 7 Final Air Brake Check

31. Antilock Braking Systems (ABS) is a computerized system that:

- **Keeps your wheels from locking up during hard brake applications.**

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5 – Antilock Braking Systems (ABS)

32. When you drive a tractor-trailer combination with ABS, you should brake as you always have; in other words:

- Use only the braking force necessary to stop safely and stay in control.
- Brake the same way, regardless of whether you have ABS on the tractor, the trailer, or both.
- As you slow down, monitor your tractor and trailer and back off the brakes (if it is safe to do so) to stay in control.

5 – Braking with Antilock Brakes

33. The amount of air pressure in the tanks is indicated by a:

- Pressure gauge connected to the air tank.

5 – Supply Pressure Gauges

34. The other dual air brake system operates:

- The regular brakes on the front axle (and possibly one rear axle).

5 – Dual Air Brake

35. Drivers behind you are warned that you are applying your brakes through use of:

- An electric switch that works by air pressure that turns on the brake lights when you put on the air brakes.

5 – Stop Light Switch

36. To check air brakes during Step 5 of the walk-around Inspection, check Slack Adjusters on S-cam brakes by:

- Parking on level ground and chocking the wheels to prevent the vehicle from moving.
- Release the parking brakes so you can move the slack adjusters.
- Using gloves, pull hard on each slack adjuster that you can reach.

5 – During Step 5 Walkaround Inspection

37. Letting up on the brake pedal:

- Reduces the air pressure and releases the brakes.

5 – The Brake Pedal

38. Wedge brakes and disc brakes are:

- Less common than s-cam brakes.

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5 – Foundation Brakes

39. Vehicles with Antilock Braking Systems (ABS) have _____ to tell you if something isn't working.

- Yellow malfunction lamps

5 – Antilock Braking Systems (ABS)

40. There is only enough air in the separate tank to:

- Release the spring brakes a few times.

5 – Parking Brake Controls

41. An air compressor governor that does not work properly:

- May not keep enough air pressure for safe driving and needs to be fixed.

5 – Step 7 Final Air Brake Check

42. The second dual airbrake system is called the:

- "Secondary" system.

5 – Dual Air Brake

43. The wig wag type of warning system will drop a mechanical arm into your view when pressure in the system falls below:

- 60 psi.

5 – Low Air Pressure Warning

44. When air pressure to the brake system is removed:

- The brakes are applied through spring pressure.

5 – Spring Brakes

45. To test the air leakage rate:

- Charge the air system fully (typically 125 psi),
- Turn off the engine
- Release the parking brake, and time the air pressure drop.

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- Apply 90 psi or more with the brake pedal.
- After the initial pressure drop, if the air pressure falls more than three psi in one minute for single vehicles (more than four psi for combination vehicles), the air loss rate is too much.

5 – Step 7 Final Air Brake Check

46. A warning signal you can see must come on before the air pressure in the tanks falls below:

- 60 psi. or;
- One half the compressor governor cutout pressure on older vehicles.

5 – Low Air Pressure Warning

47. The amount of air pumped into the storage tanks is controlled by the:

- Governor.

5 – Air Compressor Governor

48. One of the dual parking control valves is a push-pull type and is used to:

- Put on the spring brakes for parking.

5 – Parking Brake Controls

49. If you always drive a straight truck or combination with working ABS on all axles:

- You can fully apply the brakes in an emergency stop.

5 – Braking with Antilock Brakes

50. If a slack adjuster moves more than about _____ where the push rod attaches to it, it probably needs adjustment.

- One inch

5 – During Step 5 Walkaround Inspection

51. Brake drums are located:

- On each end of the vehicle's axles.

5 – Foundation Brakes

52. Pushing the brake pedal down when the spring brakes are on:

- Could damage the brakes by the combined forces of the springs and the air pressure.

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5 – Parking Brake Controls

53. Before driving a vehicle with a dual air system, allow time for the air compressor to build up a minimum of:

- **100 psi pressure in both the primary and secondary systems.**

5 – Dual Air Brake

54. To check Air Compressor Governor Cut-out pressures:

- **Check the manufacturer's specifications (generally the compressor should start pumping at 100 psi and stop at 125 psi).**
- **Run the engine at fast idle.**
- **Watch the air pressure gauge.**
- **The governor should cut out at about the manufacturer's specifications and the air pressure shown by the gauge will stop rising.**

5 – Step 7 Final Air Brake Check

55. The _____ should only be used as a temporary measure to correct the adjustment in an emergency situation as it is likely the brake will soon be back out of adjustment since this procedure usually does not fix the underlying adjustment problem.

- **Manual adjustment of an automatic adjuster**

5 – During Step 5 Walkaround Inspection

56. The first dual air brake system is called the:

- **"Primary" system.**

5 – Dual Air Brake

57. If the brakes are not adjusted properly:

- **Neither the regular brakes nor the emergency/parking brakes will work right.**

5 – Spring Brakes

58. A leak in the air brake system which causes all the air to be lost:

- **Will also cause the springs to put on the brakes.**

5 – Spring Brakes

59. Don't use the parking brakes if:

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- The brakes are very hot (from just having come down a steep grade), or;
- The brakes are very wet in freezing temperatures.

5 – Parking Brakes

60. The _____ pumps air into the air storage tanks (reservoirs).

- Air compressor

5 – Air Compressor

61. Brakes out of adjustment will _____ before those that are in adjustment.

- Stop doing their share

5 – Brake Fading or Failure

62. The most common type of foundation brake is the:

- S-cam drum brake.

5 – Foundation Brakes

63. A gauge that shows how much air pressure you are applying to the brakes is called an:

- Application gauge.

5 – Application Pressure Gauge

64. Water and oil in the air brake system tend to collect:

- In the bottom of the air tank.

5 – Air Tank Drains

65. Brake fade results from:

- Excessive heat causing chemical changes in the brake lining, which reduce friction, and also causing expansion of the brake drums.

5 – Brake Fading or Failure

66. All vehicles built since _____ have automatic slack adjustors.

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- 1994

5 – During Step 5 Walkaround Inspection

67. In vehicles equipped with air brakes, brake lag is:

- The time required for the brakes to work after the brake pedal is pushed.

5 – Stopping Distance

68. Brake linings (friction material) must not be:

- Loose.
- Soaked with oil or grease.
- Dangerously thin.

5 – During Step 5 Walkaround Inspection

69. To use the “stab braking” maneuver:

- Apply your brakes all the way.
- Release brakes when wheels lock up.
- As soon as the wheels start rolling, apply the brakes fully again.

5 – Emergency Stops

70. Most heavy-duty vehicles use _____ for safety.

- Dual air brake systems

5 – Dual Air Brake

71. With a modulating valve lever:

- The more you move the control lever, the harder the spring brakes come on so you can control the spring brakes if the service brakes fail.

5 – Parking Brake Controls

72. Let hot brakes cool before:

- Using the parking brakes.

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5 – Parking Brakes

73. All trucks, truck tractors, and buses must be equipped with:

- **Emergency brakes and parking brakes.**

5 – Spring Brakes

74. The parts of an air brake system include:

- **Service brake system.**
- **Parking brake system.**
- **Emergency brake system.**

5 - Air Brakes

75. To prevent oil and water damage to the air brake system:

- **The driver must drain the air tanks completely.**

5 – Air Tank Drains

76. If the brakes are wet:

- **Use the brakes lightly while driving in a low gear to heat and dry them.**

5 – Parking Brakes

77. The dual air system warning light and buzzer should come on before the air pressure drops below:

- **60 psi in either system.**

5 – Dual Air Brake

78. Any time you park:

- **Use the parking brakes (unless they are very hot).**

5 – Parking Brakes

79. Vehicles equipped with a front brake limiting valve usually have a control marked:

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- "Normal" and "Slippery."

5 – Front Brake Limiting Valve

80. Increased application pressure to hold the same speed could be caused by:

- Brakes out of adjustment.
- Air leaks.
- Mechanical problems.

5 – Application Pressure Gauge

81. If the pressure in the air brake system gets too low:

- The brakes won't work.

5 – The Brake Pedal

82. Even though automatic slack adjusters _____, they must be checked.

- Adjust themselves during full brake applications

5 – During Step 5 Walkaround Inspection

83. If your vehicle is equipped with a front brake limiting valve:

- Make sure the control is in the "normal" position to have normal stopping power, even in icy conditions.

5 – Front Brake Limiting Valve

84. If your vehicle does not have automatic air tank drains:

- Drain your air tanks at the end of each working day to remove moisture and oil; otherwise, the brakes could fail.

5 – Parking Brakes

85. When brakes equipped with automatic adjusters are found to be out of adjustment:

- Take the vehicle to a repair facility as soon as possible to have the problem corrected.

5 – During Step 5 Walkaround Inspection

86. Each dual air brake system has:

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- Its own air tanks, hoses, lines, etc.

5 – Dual Air Brake

87. There are two types of air tank drain valves:

- Manually operated.
- Automatic.

5 – Air Tank Drains

88. On older model vehicles, the parking brake may be a:

- Round blue knob or some other shape (including a lever that swings from side to side or up and down).

5 – Parking Brakes

89. Antilock Braking Systems (ABS) do not necessarily:

- Shorten your stopping distance but it does help you keep the vehicle under control during hard braking.

5 – Antilock Braking Systems (ABS)

90. Pushing the pedal down harder:

- Applies more air pressure to the brakes.

5 – The Brake Pedal

91. Parking brakes allow the driver to:

- Let the air out of spring brakes allowing the spring to hold the brakes.

5 – Spring Brakes

92. Pressing and releasing the pedal unnecessarily can:

- Let air out faster than the compressor can replace it.

5 – The Brake Pedal

93. Tests have shown front wheel skids from braking are:

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- **Not likely, even on ice.**

5 – Front Brake Limiting Valve

94. In cold weather the air brake alcohol evaporator must be checked and refilled:

- **Every day.**

5 – Alcohol Evaporator

95. On older vehicles, the parking brakes may be controlled by:

- **A lever.**

5 – Parking Brake Controls

96. Both dual air brake systems supply air to:

- **The trailer (if there is one).**

5 – Dual Air Brake

97. The air brake lag distance at 55 mph on dry pavement adds about:

- **32 feet.**

5 – Stopping Distance

98. Water in the air brake system can:

- **Freeze in cold weather and cause brake failure.**

5 – Air Tank Drains

99. Each air tank is equipped with a drain valve:

- **In the bottom of the tank.**

5 – Air Tank Drains