

ROADMASTER DRIVERS SCHOOL STUDY GUIDE FOR THE COMMERCIAL DRIVER'S LICENSE

INTRODUCTION

COMMERCIAL DRIVER LICENSE (CDL) ENDORSEMENT EXAM

COMBINATION VEHICLES

SUPPORTING COMMERCIAL DRIVER LICENSE MANUAL VERSION 2.0
TEXT **SECTION 6**
PUBLISHER: YOUR STATE DEPARTMENT OF DRIVER LICENSING

STUDY GUIDE USE INFORMATION

This Study Guide is designed to help you learn and understand the information necessary to successfully pass the CDL endorsement exam, **COMBINATION VEHICLES**. All persons seeking a “**Class A**” commercial License must take this written test. Refer to the Commercial Driver License Manual to help you understand the correct information. Each question is referenced in the section the correct information can be found.

The study guide consists of 3 major parts. 1. **Key facts you need to know to pass the written test.** 2. **Two practice tests to measure your knowledge of the subject.** 3. **Answer sheets for self-grading the practice tests.**

Study and learn all key facts in the study guide. This is the information you need to know to pass the test. When you feel you have read and understood the key facts, take the first practice test without using the answer sheet. Self-grade your first practice test. Re-study the key facts that refer to the questions you missed. Take the second practice test without using the answer sheet. Self-grade your second practice test. If you missed 3 questions or less, you are ready to challenge the CDL **Combination Vehicle** written Test.

When you believe you have adequately mastered this subject and the other two written endorsement tests required for a **Class A CDL**, you will demonstrate your knowledge by taking the CDL written tests at your local Department of licensing. Your representative will give you directions.

Roadmaster Drivers School has no relationship with the CDL testing facilities. You must pass the **General Knowledge, Air Brakes and Combination Vehicles** test in order to receive a CDL Class A Permit. Once you have the Class A CDL permit, you will be qualified to attend the Skills portion of the Truck Driver Course.

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COMBINATION VEHICLES.

KEY FACTS YOU NEED TO KNOW TO PASS THIS TEST.

Study these key facts until you are sure you know the information. More detailed information can be found in your Commercial Drivers License Manual in Section 6

1. To help prevent a rollover, cargo should be loaded as close to the ground as possible, and go slow around turns.
2. A tractor bob-tailing (no trailer attached) takes longer to stop than a loaded combination vehicle.
3. Hand valves should only be used for testing trailer brakes.
4. You should not use the hand valve during normal driving to try and prevent a jackknife.
5. Never use the hand valve as a parking brake.
6. The trailer air-supply valve supplies air to the trailer air tanks.
7. Color-coded airlines are: Service is blue airline, Emergency is red airline.
8. Glad hands should be hooked together or to dummy couplers to keep water and dirt out of the airlines.
9. Many trailers made before 1975 do not have spring brakes.
10. Trailers and converter dollies built on or after March 1, 1998 are required to have ABS.(antilock brake system)
11. ABS is an addition to your normal brakes. It does not decrease or increase your normal braking capability.
12. ABS only activates when wheels are about to lock up.
13. If the trailer is equipped with ABS, there will be an ABS test light on the front or rear driver's side corner. If no test light, look for the ECU and wires going to wheel speed sensors on brakes.
14. If you cross the air-lines on an old trailer without spring brakes, you could pull the trailer, but will not have trailer brakes.
15. Breaking an emergency air line or both air lines will close the tractor protection valve and cause the trailer brakes to come on.
16. When a service air line breaks or comes off, generally nothing happens until the brakes are applied.
17. A fifth wheel must be kept greased to help prevent steering problems.
18. Always check that the trailer brakes are locked and chocked before backing under a trailer.
19. Always use chock blocks when coupling or un-coupling.

20. Always line up directly in front of a trailer before backing under it.
21. When backing under a trailer, the height is correct when the trailer rises only slightly to relieve the pressure off the trailer landing gear.
22. Trailer air lines are to be connected before backing under a trailer.
23. After pushing in the trailer supply valve, wait until the air system is at normal pressure before moving the tractor.
24. Make sure the trailer brakes are working by applying and releasing them.
25. After pressurizing the trailer air tanks, set the trailer brakes again before backing under the trailer.
26. Make sure air flows to all trailers when checking doubles and triples trailers
27. If more than one trailer, make sure all air valves are open except the valves at the rear of the last trailer. Crack the air valve at the rear of the last trailer to check if air is coming through the system to all trailers. Close to operate.
28. Make sure the trailer is not too high or too low for the tractor fifth wheel before backing and hooking.
29. After hooking, pull gently on the kingpin with the trailer brakes locked.
30. Always visually check the coupling of combination units.
31. If the fifth wheel locking lever did not lock, the coupling is bad and must be fixed before moving the unit.
32. The fifth wheel safety latch must be over the locking lever for a correct coupling.
33. There should be no space between the trailer plate and the tractor fifth wheel plate.
34. Fifth wheel jaws should always close around the kingpin shank.
35. Trailer supports or dollies should always be raised fully and the crank handle secured before moving.
36. There must be adequate clearance between the tractor tires and the nose of the trailer.
37. Landing gear and its supports must clear the tractor frame.
38. There are three parts to the trailer kingpin; the head, the shank and the base.

INSTRUCTIONS

NOW THAT YOU KNOW ALL THE KEY FACTS IN SECTION 6, TAKE THE PRACTICE TEST NUMBER 1 WITHOUT REFERRING TO THE ANSWER SHEET. SELF-GRADE YOUR TEST AND RE-STUDY THE MISSED QUESTIONS. (That is if you have any missed questions) YOU MAY WANT TO PUT YOUR ANSWERS ON A SEPARATE SHEET OF PAPER SO YOU CAN TAKE THE TEST MORE THAN ONCE. IF YOU DON'T UNDERSTAND THE QUESTION, GO TO YOUR CDL MANUAL AND REVIEW THE SECTION THAT IS REFERENCED AT EACH QUESTION. YOU CAN FIND THE CORRECT INFORMATION IN THE REFERENCED SECTIONS.

COMBINATION VEHICLES

PRACTICE TEST # 1

Read each question and all the answers carefully. Select the most correct answer. After answering all questions in the practice test, check them with the answer sheet for correctness. You can also check your answers for correctness by reading the Commercial Drivers License Manual, section 6. The questions listed are only similar to the ones that you can expect to find on the actual CDL written test. By studying this guide, you will be able to determine the most correct answer when you take the CDL written Combination vehicles Test.

When taking the CDL written test, follow these basic test-taking rules:

- 1. Read the entire question and all answers before selecting your answer. Remember there maybe more than one correct answer and you need to select the best correct answer.**
- 2. Do not read words into the questions that are not there.**
- 3. Watch for words that may change the meaning of the question, i.e. (NOT, EXCEPT, etc.)**
- 4. Follow all instructions, oral or written.**

SECTION 6 – COMBINATION VEHICLES

1. There are two things that a driver can do to prevent a rollover. They are 1. Keep the cargo as close the ground as possible and 2. ? (6.1)
 - A. Make sure the brakes are adjusted properly.
 - B. Keep both hands firmly on the steering wheel.
 - C. Reduce speed before entering a turn.
 - D. Keep the fifth wheel free-play loose.
2. Which of these statements is true? (6.1.1)
 - A. The longest combination vehicles are the least likely to turn over.
 - B. A sudden steering movement can result in a roll over rear trailer.
 - C. Due to off tracking, it is easier to stop a triple bottom rig than it is to stop a 5 axle tractor semi-trailer (45 foot trailer).
 - D. Rearward amplification is the only thing that prevents the crack-the-whip effect from turning over all trailers.
3. Which part of the kingpin should the locking jaws close around? (6.4)
 - A. The shank.
 - B. The head.
 - C. The base
 - D. It does not matter.

4. Which of these statements is true? (6.1.3)
- A. The brake and suspension systems of combination vehicles work best with a light load.
 - B. Always delay breaking a heavy vehicle until you have no other choice.
 - C. Light vehicles need more braking power to stop than heavy ones.
 - D. Bobtail tractors can take longer to stop than a combination vehicle loaded to maximum gross weight.
5. There are several types of vehicle skids, and they require somewhat different actions to respond to them. However, there is one rule that is important for all skids. It is? (6.1.5)
- A. Accelerate.
 - E. Counter-steer.
 - F. Restore traction to the tires.
 - C. Use stab or controlled breaking.
6. If you cannot complete a turn without entering another traffic lane, you should turn wide as you: (6.1.6)
- A. Enter the turn.
 - B. Get to the middle of the turn.
 - C. Complete the turn.
 - D. Any of the above, it does not matter.
7. In normal driving, some drivers use the trolley (hand) valve before the brake pedal in order to prevent trailer skids. Which of these statements is true? (6.1.5)
- A. It should never be done.
 - B. It results in less skidding than using the brake pedal.
 - C. It lets the driver steer with both hands.
 - D. It is the best way to brake in a straight line.
8. The hand valve should be used to park a combination vehicle when? (6.2.1)
- A. You park at a loading dock.
 - B. Park for less than one hour.
 - C. When parked on a steep hill.
 - D. Never.
9. The hand valve should be used: (6.2.1)
- A. Only with the foot brake.
 - B. To test the trailer brakes.
 - C. As a parking brake.
 - E. Only when the trailer is fully loaded.

10. Air lines on a combination vehicle are often color coded to keep them from getting mixed up. The emergency line is _____? (6.2.4)
- A. Red.
 - B. Black.
 - C. Blue.
 - D. Orange.
11. Air lines on a combination vehicle are often color coded. The service line is _____? (6.2.4)
- A. Red.
 - B. Black.
 - C. Blue.
 - D. Orange.
12. You are driving a combination vehicle when the trailer breaks away and pulls apart the air lines. You would expect the trailer brakes to apply and: (6.2.3)
- A. The tractor to lose all air pressure.
 - B. The tractor brakes to keep working properly.
 - C. The trailer supply valve to stay open.
 - D. Tractor brakes to lock up.
13. Your emergency air line breaks or gets pulled apart while you are driving. The loss of pressure will cause the? (6.2.4)
- A. Tractor's air to dump into the trailer tank through the service line.
 - B. Emergency trailer brakes to come on.
 - C. Air compressor to unload instead of pumping air.
 - D. Trailer supply valve to stay open.
14. What will happen if the air lines are crossed when you hook up to an old trailer? (6.2.5)
- A. The hand valve will apply the tractor brakes instead of the trailer brakes.
 - B. The brake pedal will work the trailer spring brakes instead of the air brakes.
 - C. If the trailer has no spring brakes, you could drive away, but you would not have trailer brakes.
 - D. The brake lights will not come on when you press the brake pedal.
15. Semi-trailers made before 1975 that are equipped with air brakes: (6.2.8)
- A. Are easier to brake because they are heavier.
 - B. Usually need a glad hand converter.
 - C. Often do not have spring brakes.
 - D. All of the above.

16. Why should you lock the tractor glad hands to each other or to dummy couplers when you are not hooked to a trailer? (6.2.5)
- A. The air circles back around, getting cleaner with each cycle.
 - B. The connected brake circuit becomes a back up air tank.
 - C. It will keep dirt and water out of the air lines.
 - D. If you didn't, you could never build system air pressure.
17. Why should you grease the fifth wheel plate? (6.4.1)
- A. To ensure good electrical connections.
 - B. To prevent steering problems.
 - C. To keep the brake system in balance.
 - D. To reduce heat and noise.
18. ABS (Antilock Brakes System) will (6.3.2)
- A. Increase speed
 - B. Shorten stopping distance
 - C. Help keep the vehicle under control
 - D. Increase stopping distance
19. When driving an ABS equipped Tractor Trailer combination you should (6.3.2)
- A. use only the braking force necessary to stop safely
 - B. Brake as you always would
 - C. As you slow down, monitor your tractor and trailer and back off the brakes.
 - D. All of the above
20. You have a major leak in the service line and you put on the brakes. Service air pressure will escape and cause the: (6.2.8)
- A. Trailer emergency brakes to come on.
 - B. Trailer tank pressure to be lost.
 - C. Tractor spring brakes to lock on.
 - D. Trailer's tank pressure to go to the tractor's system.
21. If the service line disconnects while you are driving, what will happen right away? (6.2.8)
- A. The emergency tractor brakes will come on.
 - B. The trailer's air tank will exhaust through the open line.
 - C. The emergency trailer brakes will come on.
 - D. Nothing is likely to happen until you try the brakes.

22. You are coupling a semi-trailer to your tractor, but have not yet backed under. The trailer is at the right height when? (6.4.1)

- A. The kingpin is about 1 ¼ inches above the fifth wheel.
- B. The end of the kingpin is even with the top of the fifth wheel.
- C. It will be raised slightly when the tractor is backed under it.
- D. Its front supports are fully extended.

23. After you supply air to the trailer, make sure the airlines are not crossed and the trailer brakes are working. This is done by? (6.4.1)

- A. Lifting the brake pedal.
- B. Turning on the parking brake from the cab.
- C. Watching your mirrors to see if the trailer lights come on.
- D. Applying and releasing the trailer brakes and listening for brake action sounds.

24. When you get ready to back under a semi-trailer, you should line up: (6.4.1)

- A. Directly in front of the trailer.
- B. About 12 degrees off line of the trailer.
- C. The left rear outer dual wheel with the kingpin.
- D. The kingpin with the edge of the driver's side locking jaw.

25. How do you supply air to the air tank on the trailer? Air is supplied by: (6.4.1)

- A. Pushing in the trailer air supply valve.
- B. Pulling out the trailer air supply valve.
- C. Connecting the emergency line glad hand.
- D. Applying the trolley valve.

26. The fifth wheel locking lever is not locked after the jaws close around the kingpin. This means that: (6.4.1)

- A. The trailer will not swing on the fifth wheel.
- B. You cannot set the fifth wheel for the proper weight distribution.
- C. The hand valve is released and you may drive away.
- D. The coupling is not correct and should be corrected before driving the coupled unit.

27' The safety catch for the fifth wheel locking lever must be _____ for a coupling to be complete: (6.4.1)

- A. Over the locking lever.
- B. Under the locking lever.
- C. Straight up.
- D. Through the locking lever.

“CONGRATULATIONS”

**YOU HAVE COMPLETED COBINATION VEHICLE PRACTICE TEST NUMBER 1. SELF-GRADE
YOU TEST AND RE-STUDY THE QUESTIONS YOU MISSED. TAKE PRACTICE TEST NUMBER
TWO NEXT.**

**COMBINATION VEHICLE
PRACTICE TEST # 2**

Use the same instructions from practice test number 1 to complete practice test number 2. If you scored 3 or less wrong, you are ready to challenge the CDL written test, COMBINATION VEHICLES.

GOOD LUCK

1. There are two things a driver can do to prevent a rollover. They are, keep the weight in your vehicle as close to the floor as possible and: (6.1.1)
 - A. Make sure that the brakes are properly adjusted.
 - B. Keep both hands firmly on the steering wheel.
 - C. Go slow around corners and turns.
2. A device that allows the service brakes to be applied more quickly is? (6.2.4)
 - A. Quick release valve.
 - B. Relay valve.
 - C. Front wheel limiting valve.
3. Why should you be sure that the fifth wheel has enough grease? (6.4.1)
 - A. To prevent steering problems.
 - B. To keep the brakes in place.
 - C. To reduce heat and noise.
4. You are coupling a tractor to a trailer and have backed up to it but are not under it. What should you hook up before backing under the trailer? (6.4.1-3)
 - A. The electric line.
 - B. The emergency and service air lines.
 - C. Nothing. Back up and lock the fifth wheel.
5. What part of the kingpin should the locking jaws close around? (6.4.1)
 - A. The shank.
 - B. The head.
 - C. The base.
6. Why should you lock the glad-hands or dummy couplers to each other when you are not coupled to a trailer? (6.2)
 - A. The air cycles back getting cleaner each cycle.
 - B. The connected brake circuit becomes a backup air tank.
 - C. This will keep dirt and water out of the lines.

7. If you are towing a trailer which blocks your view to the rear. The law requires that you have mirrors:(6.2)
- A. On both left and right hand outside.
 - B. On the left outside only.
 - C. On the right outside only.
8. The front trailer supports are up and the trailer is resting on the tractor. Make sure: (6.4.1)
- A. There is enough clearance between the tops of the tractor tires and the nose of the trailer.
 - B. There is enough clearance between the tractor frame and the landing gear.
 - C. Neither A or B is correct.
 - D. Both A and B are correct.
9. After coupling a semi-trailer, you should crank up the front trailer supports how? (6.4.1)
- A. Raised $\frac{1}{2}$ way with the crank handle secured.
 - B. Raised $\frac{3}{4}$ way with the crank handle secured.
 - C. Fully raised with the crank handle secured.
 - D. 3 turns off the top with the crank handle secured in its bracket.
10. Using the trailer hand valve before the brake pedal to prevent tractor skids in normal driving. (6.2.1)
- A. Should not be done.
 - B. Results in the least skidding.
 - C. Is the best method of straight line braking?
11. You are coupling a tractor and trailer and you have connected the airlines. Before backing under the trailer, what should you do?(6.4.1)
- A. Pull ahead to check the glad hands connections.
 - B. Supply air to the trailer brake system, and then pull out the trailer air supply knob to lock the trailer brakes.
 - C. Make sure the trailer brakes are off.
 - D. Apply the brakes twice to alert others.
12. After you lock the kingpin into the fifth wheel, how do you check the connection? (6.4.1)
- A. Pulling forward 50 feet, turning left and right.
 - B. By backing up with the trailer brakes released.
 - C. By pulling the tractor ahead sharply to release the trailer brakes.
 - D. By pulling the tractor ahead gently with the trailer brakes locked.

13. How much space should be between the upper and lower fifth wheel? (6.4.1)
- A. At least one half inch.
 - B. About one quarter of an inch.
 - C. Just enough to see light through it.
 - D. No space at all.
14. You have pushed in the trailer air supply valve; you should not move the tractor until what happens? (6.4.1)
- A. Until the whole air system is empty.
 - B. Until the whole air system is at normal pressure.(100 – 125 psi)
 - C. Until the air system is flushed of all moisture.
 - D. Until the air system is between 60 and 80 psi.
15. What will happen if the service air line between the tractor and the trailer comes apart? (6.2)
- A. Nothing.
 - B. Nothing until the service brakes are applied, then a rapid air loss will occur.
 - C. The brakes will lock up as soon as the line comes apart.
16. What will happen if the emergency air line between the tractor and the trailer comes apart? (6.2)
- A. The trailer brakes will not work.
 - B. The tractor brakes will come on immediately.
 - C. The trailer brakes will come on as soon as the airlines come apart.
17. What should you always use when disconnecting from a trailer without spring brakes? (6.2.8)
- A. A helper.
 - B. A set of wheel chocks.
 - C. A set of dolly converter wheels.
 - D. The system needs flushed.
18. After you have coupled a tractor to a trailer, you should always do which of the following?(6.4)
- A. Make sure that the trailer brakes are working by pulling forward and pull out the trailer air supply valve to make sure that the trailer brakes come on.
 - B. Make sure that the jaws have locked around the kingpin, by releasing the tractor parking brake and pulling against the trailer.
 - C. Both of the above answers are correct.

19. Another name for the trailer hand valve is: (6.2.1)
- A. Johnson bar.
 - B. Trolley valve.
 - C. Both are correct.
20. What is the name of the coupler at the end of the air hoses that connect between the tractor and the trailer? (6.2.5)
- A. Dummy couplers.
 - B. Glad-hands.
 - C. Deadends.
 - D. Hose clamps.
21. The air line that connects the emergency air brakes system to the trailer is what color? (6.2.4)
- A. Yellow.
 - B. Red.
 - C. Blue.
 - D. Green.
22. The air line that connects the service air brake system to the trailer is what color? (6.2.4)
- A. Blue.
 - B. Red.
 - C. Yellow.
 - D. Green.
23. When inspecting the glad hands before connecting them together, you should check? (6.2.5)
- A. The rubber grommets are in place, not split or cracked.
 - B. The drive shaft to make sure that the air lines will not hit it while driving.
 - C. The front of the glad-hands to make sure that the wooden chock is in place.
24. What is a semi trailer? (6.1)
- A. A trailer that is attached to the rear of the second or third trailer behind the powered unit.
 - B. A trailer that is attached directly to the powered unit.
 - C. A trailer that is attached to a dolly.
 - D. A power unit attached to several trailers.

25. The tractor protection valve is an in-cab valve that: (6.2.2)
- A. Limits the air supply to the steering axle.
 - B. Keeps the air supply in the tractor or truck should the trailer break away or develop a bad leak.
 - C. Releases the sliding fifth wheel locks.
 - D. Releases the tractor parking brakes.
26. What is one important thing to do to prevent a rollover?(6.1.1)
- A. Drive Slowly
 - B. Enter curves with Caution
 - C. Load cargo as close to the ground as possible
 - D. Accelerate in curves
27. Air brake equipped trailers that were made before 1975: (6.2)
- A. Cannot be operated on an interstate highway
 - B. Usually require a glad hand converter
 - C. Are easier to stop than newer trailers
 - D. Usually don't have spring brakes
28. What is one thing a driver can do to prevent a rollover (6.1.1)
- A. Keep the 5th wheel well lubricated
 - B. Slow down before entering a turn
 - C. Keep both hands on the wheel
 - D. Make sure the brakes are adjusted properly
29. What is one thing you should do before backing under a trailer? (6.4.1)
- A. Make sure the trailer brakes are locked
 - B. Make sure the tractor protection valve is normal
 - C. Make sure the air brakes are off
 - D. Make sure the trailer on stable ground
30. The rear wheels of the trailer will off-track the most. 6.1.6
- A. True
 - B. False
31. If you start into a skid, you should (6.1.5)
- A. Step on the brake hard
 - B. Release the brake to get traction
 - C. Use the trailer hand valve

32. You are bob tailing and have a major air leak in the service brake line and you put on the brakes. Service air pressure will escape and cause the (6.2.8)
- A. Trailer tank pressure to be lost
 - B. Trailer emergency brakes to activate
 - C. The tractor spring brakes to come on when the pressure drops below 40PSI.
33. What is off-tracking? (6.1.6)
- A. When the tractor is going in a straight line the trailer turns by itself.
 - B. The track that the rear wheels of the trailer make in relation to the steering tires.
 - C. The difference between the size of the steering tires and the trailer tires
34. What type of trailer is most likely to hang up on a railroad crossing? (6.1.4)
- A. A dry van with the landing gear all the way up.
 - B. A low boy trailer
 - C. A single axel flat bed trailer
35. How could the driver tell if the trailer is equipped with anti-lock brakes (ABS) (6.3)
- A. There is a sign on the front of the trailer
 - B. It will be in the operating manual
 - C. The trailer will have a yellow test light on the front or rear of the trailer on the driver's side.

“CONGRATULATIONS”, YOU HAVE COMPLETED PRACTICE TEST NUMBER 2. IF YOU MISSED 3 OR LESS YOU ARE READY TO TAKE THE CDL WRITTEN TEST, COMBINATION VEHICLES.

**COMBINATION VEHICLES
PRACTICE TEST # 1
ANSWER SHEET**

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

**COMBINATION VEHICLES
PRACTICE TEST # 2
ANSWER SHEET**

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