CDL General Knowledge Study Guide

Study Section 1-3 of the commercial driver handbook. Use the manual for your state to prepare for its tests.

Look for defects before you drive

Check tires, wheels, brakes, lights, coupling equipment and emergency equipment. For commercial tires subject to the federal rule, front tires on a truck or truck tractor need at least 4/32 inch in a major tread groove. Other tires generally need 2/32 inch. 49 CFR 393.75

Know when to recheck your load

For loads subject to the federal inspection rule, recheck cargo and securement within the first 50 miles. Recheck again at a duty-status change or after 3 hours or 150 miles, whichever comes first. Exceptions apply for certain sealed or inaccessible cargo. 49 CFR 392.9

Set up warning devices for the road you are on

Where required, place warning devices as soon as practical and within 10 minutes. Correct distances depend on road layout, curves, hills and traffic direction. Review the federal rule and the diagrams in your handbook. 49 CFR 392.22

50 general knowledge questions and answers

Cover the answers as you review, or take the interactive practice test.

1. What is the minimum tread depth for the front tires of a bus, truck, or truck tractor?
Answer: 4/32 of an inch
The minimum is 4/32 inch in a major tread groove on the front tires, measured away from tie bars, humps, and fillets. The general minimum for other tire positions is 2/32 inch. 49 CFR §393.75(b)–(c)

2. You are driving a 50-foot commercial vehicle at 55 mph on dry pavement with good visibility. What is the minimum safe following distance you should maintain?
Answer: 6 seconds
The CDL manual formula requires 1 second for every 10 feet of vehicle length at speeds under 40 mph (5 seconds for 50 feet), plus 1 additional second when traveling over 40 mph—totaling 6 seconds. CDL Manual §2.7.1, Space Ahead

3. If your commercial vehicle begins to hydroplane on a wet roadway, what is the first corrective action you should take?
Answer: Release the accelerator and push in the clutch (if equipped) without braking
Braking or accelerating during hydroplaning worsens loss of traction. Releasing the accelerator allows the vehicle to slow naturally until the tires regain contact with the road surface. CDL Manual §2.6.2, Hydroplaning

4. When descending a long, steep mountain grade in a heavy commercial vehicle, how should you use your service brakes?
Answer: Use the snub braking technique: brake firmly to 5 mph below safe speed, release, and repeat
Continuous light braking overheats brake drums and causes brake fade. Proper snub braking slows the truck roughly 5 mph below your safe descent speed in a low gear, then releases to let brakes cool. CDL Manual §2.16.4 — Proper Braking Technique on Grades

5. When does the federal cargo inspection rule require you to recheck accessible cargo and tiedowns during a trip?
Answer: Within the first 50 miles, then at a duty status change, 3 hours of driving, or 150 miles, whichever comes first
Inspect accessible cargo and securement devices within the first 50 miles. Recheck when you change duty status, drive 3 hours, or cover 150 miles, whichever happens first. The inspection rule has exceptions for sealed loads you have been ordered not to open and loads that cannot be inspected. 49 CFR §392.9(b)

6. Why should you avoid backing a commercial vehicle toward the passenger (blind) side whenever possible?
Answer: You have less direct visibility of the path behind you
Backing toward the driver's side gives you a better view of the path. Check the area on foot if you cannot see it clearly, and ask a helper to signal from a safe position when available. CDL Manual §2.2.4, Backing Safely

7. When is the safest time to downshift a manual transmission before entering a curve?
Answer: Before entering the curve while moving in a straight line
Downshifting inside a curve can cause a sudden change in drive-wheel torque and trigger a skid. Always slow down and select the proper gear before entering the turn. CDL Manual §2.3.1 — Shifting Gears

8. Under California's headlight rule, within how many feet of an oncoming vehicle must you switch to low beams?
Answer: 500 feet
Under California's rule, dim your high beams within 500 feet of oncoming traffic. Check the law of the state where you are driving. California Vehicle Code §24409(a)

9. If your commercial vehicle breaks down on a divided highway or one-way road, where must you place your three reflective warning triangles?
Answer: 10 feet, 100 feet, and 200 feet behind the vehicle toward approaching traffic
On a one-way road or divided highway, place reflective triangles at 10 feet, 100 feet, and 200 feet behind the vehicle in the direction of approaching traffic. 49 CFR §392.22(b)(2)(v)

10. Why should you report excessive free play in the steering wheel during a pre-trip inspection?
Answer: It can make the vehicle difficult to steer and can indicate a defect in the steering system
Free play is the movement before the front wheels begin to respond. Excess play can make the truck wander. The allowed limit depends on wheel diameter and whether steering is manual or power-assisted. 49 CFR §393.209(b)

11. If your drive wheels begin to spin and lose traction on ice, creating a drive-wheel skid, what should you do?
Answer: Step off the accelerator and push in the clutch to let the wheels roll freely
When drive wheels skid from excess power or engine braking, taking your foot off the accelerator and disengaging the clutch removes the torque so the tires can regain grip. CDL Manual §2.19, Skid Control and Recovery

12. When approaching a railroad-highway grade crossing with a low-clearance trailer (such as a lowboy or car carrier), what is your biggest hazard?
Answer: The trailer landing gear or frame can hang up on raised tracks
Humped or raised railroad crossings can trap low-slung trailers directly on the tracks. Always check ground clearance and never attempt to cross if clearance is doubtful. CDL Manual §2.15, Railroad-Highway Crossings

13. You discover an engine compartment fire while driving. Why should you keep the hood closed if possible when using a fire extinguisher?
Answer: Opening the hood feeds fresh oxygen to the fire and can cause a flare-up
Opening the hood supplies oxygen that intensifies an engine fire. Shoot the extinguishing agent through louvers, the radiator, or from underneath the vehicle whenever possible. CDL Manual §2.21, Fires

14. What blood alcohol concentration is disqualifying when operating a commercial motor vehicle under federal CDL rules?
Answer: 0.04%
A BAC of 0.04% or higher while operating a CMV can trigger CDL disqualification. Any detectable alcohol while on duty or operating a CMV can also result in a 24-hour out-of-service order under the applicable federal rule. 49 CFR §383.51, Table 1

15. Under the general federal rule, how many tiedowns are needed for a 22-foot article that is not blocked against forward movement?
Answer: 4 tiedowns
For an article longer than 10 feet, use two tiedowns for the first 10 feet. Add one for each additional 10 feet or fraction of 10 feet. A 22-foot article needs four under this rule. 49 CFR §393.110(b)(3)

16. When entering a curve in a commercial vehicle with a high center of gravity, when should you slow down to a safe speed?
Answer: Before entering the curve
Heavy vehicles have a high center of gravity and can roll over even at the posted advisory speed if entered too fast. Always brake to a safe speed before entering the curve. CDL Manual §2.6.3, Speed and Curves

17. Where are the major blind spots around a tractor-trailer?
Answer: Directly ahead, behind the trailer, and along both sides
The zones vary with vehicle and mirror setup. Check mirrors frequently and allow for cars hidden alongside you, especially on the right side. FMCSA, Safe Driving Around Commercial Motor Vehicles

18. About how much does braking distance change when you double your speed on the same surface?
Answer: It takes about four times the braking distance
Braking distance increases roughly with the square of speed when conditions are unchanged. Total stopping distance also includes the distance traveled while you perceive and react to the hazard. CDL Manual §2.6.1, Stopping Distance

19. If a front steering tire blows out at highway speed, what should you do first?
Answer: Grip the steering wheel firmly, stay off the brake, and let the vehicle slow down gradually
Braking forcefully during a front tire blowout transfers weight onto the blown tire and can wrench the steering wheel out of your hands. Hold the wheel steady and coast down until you have full control. CDL Manual §2.17.4, Tire Failure

20. Which road surface condition is typically the most slippery?
Answer: Wet ice near the freezing point (32 F) with a thin film of water
Ice right at 32 F develops a thin layer of liquid water on top, making it significantly more slippery than cold, dry ice below freezing. CDL Manual §2.6.2, Matching Speed to the Road Surface

21. During a vehicle inspection, what indicates a leaking wheel seal or loose lug nuts on a wheel hub?
Answer: Rust trails around lug nuts or wet oil streaks on the tire sidewall/rim
Rust streaks radiating from lug nuts indicate they are loose and moving, while oil/grease streaks on the inner rim or tire indicate a leaking hub or axle seal. CDL Manual §2.1.3 — Wheels and Rims

22. Under federal FMCSA regulations, which mobile phone action is permitted while operating a commercial motor vehicle?
Answer: Using a single-button press on a hands-free mounted device to initiate or end a call
Federal rules prohibit handheld phone use while driving a CMV, including while temporarily stopped in traffic. A phone within easy reach can be used hands-free, such as with one button or a voice command. 49 CFR §392.82, Using a Hand-Held Mobile Telephone

23. When should you flash your brake lights lightly to warn drivers behind you?
Answer: Before slowing down suddenly for a hazard ahead that behind-drivers cannot see
Tapping your brake pedal lightly several times flashes your brake lights and alerts following drivers before you make an unexpected slowdown. CDL Manual §2.5, Communicating

24. How should you use the service brakes to stop a vehicle equipped with ABS?
Answer: Brake normally and use the force needed to stop safely
ABS manages pressure at the equipped wheels to help prevent lockup. Monitor the tractor and trailer as you brake. Use extra care if only one unit has ABS. CDL Manual §2.18, Anti-Lock Braking Systems

25. What should you check regarding leaf springs and suspension components during a walk-around inspection?
Answer: Missing, shifted, cracked, or broken leaves, and cracked spring hangers
Any cracked, broken, shifted, or missing leaf springs—or leaking air suspension bags—is a serious safety defect that can cause loss of vehicle control. CDL Manual §2.1.3 — Suspension System

26. How far ahead should you scan the road in city traffic versus on the open highway?
Answer: 1 block (about 12-15 seconds) in the city; 1/4 mile (12-15 seconds) on the highway
Looking 12 to 15 seconds ahead translates to roughly one city block in urban traffic and about a quarter-mile at highway speeds, giving you time to react smoothly. CDL Manual §2.4.1, Seeing Ahead

27. What is overdriving your headlights?
Answer: Driving so fast that your stopping distance exceeds the distance illuminated by your headlights
Braking distance and the distance you travel before reacting both matter. Slow to a speed that lets you stop within the area you can see. CDL Manual §2.11, Driving at Night

28. What happens when cargo is loaded with a high center of gravity?
Answer: The risk of rolling over in curves or sudden lane changes increases dramatically
Top-heavy loads raise the vehicle's center of gravity, making it far more prone to tipping over on curves, highway ramps, and evasive maneuvers. CDL Manual §3.2.1 — Weight and Balance

29. What is off-tracking (cheating) when turning a long commercial vehicle?
Answer: The rear wheels follow a tighter, shorter path than the front steering wheels
Rear tires cut inside the front tires' path in a turn. Watch the trailer in your mirrors and plan enough clearance. On a right turn, avoid swinging left as you start the turn. CDL Manual §2.7.6, Space for Turns

30. If your vehicle's wheels drop off the paved edge onto a soft shoulder, what is the safest recovery procedure?
Answer: Hold the wheel firmly, slow gradually, and return to the pavement when you have room
Stay on the shoulder until you have slowed and can return safely. Avoid hard braking off the pavement when possible. Keep both hands on the wheel as the front tires cross back onto the road. CDL Manual §2.17.1, Steering to Avoid an Accident

31. Which symptom is an early warning sign of carbon monoxide poisoning from a leaking exhaust system?
Answer: Drowsiness, headache, dizziness, and nausea
Carbon monoxide is colorless and odorless; exhaust leaks into the cab cause headache, dizziness, fatigue, and impaired judgment. Stop immediately and ventilate the cab if suspected. CDL Manual §2.1.3 — Exhaust System

32. Why should you never let air out of hot tires to reduce high tire pressure during a summer trip?
Answer: As the tires cool down later, pressure will drop too low, causing overheating and blowout
Air expands when heated by highway friction. Releasing air from a hot tire leaves it dangerously underinflated once it cools, which causes excessive flexing and tire failure. CDL Manual §2.14, Driving in Very Hot Weather

33. When approaching a passive railroad crossing (no gates or flashing lights), how should you cross once you confirm no train is approaching?
Answer: Select a low gear before crossing and do not shift gears while on the tracks
Never shift gears while crossing railroad tracks—a missed shift could stall your vehicle directly in the path of a train. CDL Manual §2.15, Railroad-Highway Crossings

34. What is the purpose of header boards (headache racks) on flatbed trailers?
Answer: To protect the driver and cab from forward-shifting cargo during hard braking or a crash
Front-end structures (header boards) prevent heavy cargo like pipe, steel, or lumber from sliding forward into the cab during sudden deceleration. CDL Manual §3.3, Securing Cargo

35. During the 7-step inspection method, why is it important to follow the exact same sequence every single day?
Answer: So you are less likely to forget checking a critical safety component
Using a consistent, repeatable inspection order builds muscle memory and prevents overlooking vital items like slack adjusters, steering linkage, or coupling locks. CDL Manual §2.1.4 — Seven-Step Inspection Method

36. If a tailgater is following dangerously close behind your commercial vehicle, what is the best way to handle the situation?
Answer: Increase your following distance ahead of you so you can brake gradually if needed
Opening a larger space cushion in front of your truck lets you slow down smoothly rather than slamming on the brakes, preventing a rear-end collision. CDL Manual §2.7.2, Space Behind

37. What is the only effective cure for driver fatigue?
Answer: Getting adequate restorative sleep
Caffeine and cold air only mask fatigue temporarily. Sleep is the only physiological remedy that restores alertness and reaction time. CDL Manual §2.22, Staying Alert and Fit to Drive

38. How much should you reduce your speed on a wet road compared to dry pavement?
Answer: By about one-third (e.g., from 55 mph down to ~35 mph)
The CDL manual advises reducing speed by roughly one-third on wet roads and by one-half or more on packed snow. CDL Manual §2.6.2, Matching Speed to the Road Surface

39. When should you use your vehicle's 4-way emergency flashers while driving?
Answer: When driving slowly up a steep hill or when your vehicle is a hazard to other traffic (where permitted by law)
Use 4-way flashers when traveling well below traffic speed on steep grades or approaching a traffic hazard to warn faster vehicles approaching from behind. CDL Manual §2.5, Communicating

40. Why is steering around a sudden obstacle at highway speed often safer than trying to brake to a complete stop?
Answer: A truck can usually steer clear of a hazard in less distance than it takes to stop, without locking the wheels
Heavy vehicles require a long distance to stop. A controlled evasive steer (without braking hard while turning) can clear an obstacle much faster than full stopping distance. CDL Manual §2.17.1 — Steering to Avoid a Crash

41. What should you check on hydraulic brakes during the in-cab brake check?
Answer: Pump the brake pedal three times, hold firm pressure for 5 seconds, and verify the pedal does not sink
For hydraulic brake systems, pumping three times and holding firm pressure for 5 seconds tests for internal master-cylinder or line leaks; a sinking pedal indicates a leak. CDL Manual §2.1.4, Seven-Step Inspection

42. Why can a bridge clearance sign posted last year be inaccurate today?
Answer: Repaving the road surface underneath may have reduced the actual vertical clearance
Adding new layers of asphalt during road resurfacing raises the roadway and reduces the actual clearance below the posted height. Always slow down if clearance looks tight. CDL Manual §2.7.4, Space Overhead

43. Why do bridges and overpasses freeze before the rest of the roadway?
Answer: Cold air circulates both above and below the bridge deck, cooling it faster
Unlike regular roads insulated by the earth beneath them, bridge decks lose heat from both top and bottom surfaces, forming black ice first. CDL Manual §2.6.2, Matching Speed to the Road Surface

44. What is the aggregate working load limit (WLL) requirement for tiedowns securing a load?
Answer: At least 50% (one-half) of the weight of the cargo being secured
Under FMCSA cargo securement rules (49 CFR §393.106), the sum of working load limits of all tiedowns must equal at least one-half (50%) of the cargo's total weight. 49 CFR §393.106(d)

45. If you must drive through dense fog, which lights should you use?
Answer: Low-beam headlights and fog lights
High beams reflect off water droplets in fog and create blinding glare back at the driver. Always use low beams and fog lights. CDL Manual §2.12, Driving in Fog

46. What happens if you coast downhill with the transmission in neutral or the clutch depressed?
Answer: You lose engine braking control and may not be able to re-engage a gear as speed builds
Coasting in neutral is illegal in most states and dangerous because you lose engine retardation and can fail to match RPMs when trying to shift back into gear. CDL Manual §2.16, Mountain Driving

47. Which of the following is an acceptable condition for brake linings/pads during a pre-trip inspection?
Answer: Free of oil or grease and not dangerously worn thin (above minimum thickness)
Brake linings must be dry, free from oil or grease contamination, and within safe thickness limits (typically at least 1/4 inch on air drum shoes). CDL Manual §2.1.3 — Brake System

48. If another motorist cuts you off aggressively or exhibits road rage, what is the safest response?
Answer: Slow down, give them extra space, avoid eye contact, and do not retaliate
Professional drivers de-escalate aggressive traffic by yielding space, staying calm, and never competing for lane position. CDL Manual §2.10, Aggressive Drivers and Road Rage

49. When making a right turn in a long tractor-trailer, why should you keep the rear of your vehicle close to the right curb until you begin turning?
Answer: To prevent passenger cars from sneaking up on your right side between your truck and the curb
Swinging left before turning right invites cars to pass on your right blind side, leading to a squeeze crash. Keep the rear close to the curb and swing wide as you enter the cross street. CDL Manual §2.7.6, Space for Turns

50. What should you do if your vehicle stalls on a railroad crossing and a train is approaching?
Answer: Exit the cab immediately and run away from the tracks at a 45-degree angle toward the approaching train
Running toward the approaching train at a 45-degree angle keeps you clear of flying debris, which is thrown forward and outward in the direction the train is traveling. CDL Manual §2.15, Railroad-Highway Crossings