

CHAPTER 15
COMMERCIAL DRIVER'S LICENSE
(CDL)

COMMERCIAL DRIVER'S LICENSE (CDL)

LESSON TOPIC:

COMMERCIAL DRIVER'S LICENSE (CDL)

OBJECTIVES:

- ❖ The driver will be knowledgeable of the Federally mandated CDL Law.

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p data-bbox="743 191 1000 226"><u>INTRODUCTION</u></p> <p data-bbox="743 254 1490 415">This unit will discuss the various aspects of the federally mandated CDL law, which affect a Kentucky school bus driver.</p> <p data-bbox="743 443 878 478"><u>CLASS A</u></p> <p data-bbox="743 506 1490 793">Any combination of vehicles with a gross vehicle weight rating of more than 26,000 pounds, provided that the vehicle being towed is a semi-trailer with two (2) or more axles or has a gross vehicle weight rating in excess of 10,000 pounds.</p> <p data-bbox="743 821 878 856"><u>CLASS B</u></p> <p data-bbox="743 884 1490 1115">Any single vehicle with a gross vehicle weight rating of more than 26,000 pounds; any such vehicle towing a vehicle that is not in excess of 10,000 pounds; or is a semi-trailer or a trailer with two (2) or more axles.</p> <p data-bbox="743 1142 878 1178"><u>CLASS C</u></p> <p data-bbox="743 1205 1490 1367">Any single vehicle with a gross vehicle weight rating of 26,000 pounds or less or any such vehicle towing a vehicle not in excess of 10,000 pounds that is:</p> <ol data-bbox="829 1394 1490 1682" style="list-style-type: none"><li data-bbox="829 1394 1490 1493">1. designed to transport sixteen (16) or more passengers, including the driver; or<li data-bbox="829 1520 1490 1682">2. used in transportation of hazardous materials requiring the vehicle to be placarded under 49 CFR, Part 172, Sub-Part F. <p data-bbox="743 1709 878 1745"><u>CLASS D</u></p> <p data-bbox="743 1772 1490 1877">Automobiles, pick-up trucks and all other motor vehicles not specified in Class A, B or C.</p>

WHO MUST HAVE A KENTUCKY COMMERCIAL DRIVER'S LICENSE?

If you live in Kentucky and want to drive a commercial motor vehicle on public roads, you must have a Kentucky commercial driver's license unless you are expressly exempt.

COMMERCIAL DRIVER'S INSTRUCTION PERMIT

A commercial driver's instruction permit may be issued to an individual who holds a valid operator's or Class D driver's license who has passed the vision and written tests required for issuance of a commercial driver's license.

The commercial driver's instruction permit may be issued for a period not to exceed six (6) months.

The holder of a commercial driver's instruction permit may drive a commercial motor vehicle on a highway only when accompanied by the holder of a commercial driver's license valid for that type of vehicle and who occupies a seat beside the individual for the purpose of giving instruction or testing.

A commercial driver's instruction permit may only be issued to an individual who is at least eighteen (18) years of age and has held an operator's license for at least two (2) years (must be twenty-one (21) to drive a Kentucky school bus).

The applicant for a commercial driver's instruction permit must also be otherwise qualified to hold a

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p>commercial driver's license.</p> <p><u>APPLICANT RECORD CHECK</u></p> <p>Before issuing a commercial driver's license, the commissioner must obtain driving record information through the commercial driver's license information systems, the National Driver Register, and each state in which the person has been licensed.</p> <p><u>NOTIFICATION OF LICENSE ISSUANCE</u></p> <p>Within ten (10) days after issuing a commercial driver's license, the commissioner shall notify the commercial driver's license information system (CDLIS) of the fact, providing all information required to ensure identification of the person.</p> <p><u>AGE AND FITNESS REQUIREMENTS</u></p> <p>You must be at least eighteen (18) years of age and have two (2) years of experience as a licensed driver to qualify for a commercial driver's license or a commercial driver's instruction permit. Federal Motor Carrier Rules (49CFR, Part 391.41) require that drivers subject to those rules meet specific physical qualification standards and carry evidence of such qualification in the form of a medical certificate.</p> <p>At the time of application for a Kentucky commercial driver's license, you must certify under oath that you either possess such certificates or are not subject to the FMCSR. Should you later become subject to FMCSR and fail to obtain the proper medical certification, your</p>

license may be subject to cancellation. A false statement on your application will also subject your license to cancellation.

NEW RESIDENT AND TRANSFER OF CDL

After establishing residence in Kentucky, anyone who wishes to drive commercial motor vehicles must apply for a Kentucky commercial driver's license within thirty (30) days. If they have a valid out-of-state commercial driver's license, they must pass the vision test if he/she desires a Kentucky commercial driver's license. The Kentucky Department of Transportation, Division of Motor Vehicles, will obtain driving record information through the Commercial Driver's License Information System (CDLIS), the National Driver Register (NDR) and each state which he/she has been licensed. They will also be required to surrender their out-of-state license before a Kentucky commercial driver's license can be issued.

New residents who do not hold a valid commercial driver's license from another state must follow the same procedures as any first-time applicant for a commercial driver's license.

RESTRICTED LICENSES

The Kentucky Department of Transportation, Division of Motor Vehicles, is authorized to impose license restrictions to assure the safe operation of motor vehicles. The Department may issue you a restricted license or may indicate restrictions on the regular license form. Operating a motor vehicle in violation of the restriction is

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p>a serious offense and could result in the suspension or revocation of your driving privilege.</p> <p><u>EXPIRATION OF LICENSE</u></p> <p>Commercial driver’s licenses expire four (4) years from the date of issuance.</p> <p>A commercial driver’s license held by someone in the armed forces which expires while the person is on active duty remains valid for thirty (30) days from the date the person re-establishes residence in Kentucky.</p> <p>Any person applying to renew a commercial driver’s license which has been expired for two (2) years or more must follow the procedures for initial issuance of a commercial driver’s license, including testing provisions.</p> <p><u>LICENSE RENEWAL PROCEDURES</u></p> <p>All applicants applying for renewal of a commercial driver’s license must do so thirty (30) days prior to the expiration date on their current license. The applicant must complete the application form, providing updated information and required certifications. If the applicant wishes to retain a hazardous material endorsements, he/she must take and pass the written test.</p> <p><u>CHANGE OF NAME OR ADDRESS</u></p> <p>If you change your name or address, you are required to notify the Kentucky Department of Transportation, Division of Motor Vehicles, in writing, with copies of documents making this change legal. An application for a</p>

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p>change of name or address must be made to the Department of Transportation on a driver's license application form. Since this change is considered as a duplicate or reissuance license, a monetary fee is required.</p> <p><u>ORGAN DONOR PROGRAM</u></p> <p>If you wish to become a organ donor, include this information on the back of your license.</p> <p><u>COMMERCIAL DRIVERS PROHIBITED FROM OPERATING WITH ANY ALCOHOL IN SYSTEM</u></p> <ol style="list-style-type: none"> 1. Notwithstanding any other provision of law, a person with measurable alcohol in his/her system may not drive, operate or be in physical control of a commercial motor vehicle. 2. A person with measurable alcohol in his/her system who drives, operates or is in physical control of a commercial motor vehicle or refuses to take a preliminary breath test to determine blood alcohol level must be placed out-of-service for twenty-four (24) hours. <p><u>IMPLIED CONSENT AND THE CHEMICAL TEST</u></p> <p>Anyone who accepts the privilege of driving in Kentucky is deemed to have given consent, if requested, to taking the designated test to determine body alcohol content. If the driver refuses to take the chemical test, his/her privilege of operating a motor vehicle will be suspended for a period of one (1) year to life.</p>

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p data-bbox="743 191 1492 856">Many people mistakenly think that the Implied Consent Law means that they will be fined or go to jail if they have alcohol on their breath when they are stopped. On the contrary, since the blood alcohol test provides a medically accepted measure of alcohol concentration, the law protects the driver who has not been drinking. The Implied Consent Law protects the public from intoxicated drivers who refuse to be tested for blood alcohol content when arrested. Without this law, some drivers might escape punishment and continue to pose a danger to the public.</p> <p data-bbox="743 890 1206 921"><u>KNOWLEDGE EXAMINATION</u></p> <p data-bbox="743 955 1492 1367">All applicants must take the knowledge test, either written or oral, and pass it with a least an 80% score. Beginning with a general knowledge test, all applicants must pass an air brake test or the commercial driver's license will be restricted to vehicles without air brakes. Endorsement tests can be taken at the same time as the general knowledge test or at a later time.</p> <p data-bbox="743 1400 951 1432"><u>SKILLS TEST</u></p> <p data-bbox="743 1465 1492 1814">The Skills Test, if required, will not be given until you have passed all parts of the written examination. Each section of the Skills Test (i.e., Pre-Trip Inspection, Basic Controls and Road Test) must be passed in sequence in order to proceed to the next section. All Skills Tests will be administered by certified third-party examiners.</p>

DRIVER RESPONSIBILITIES

The driver privilege carries with it many responsibilities. The driver is responsible for their actions. There are a number of areas that the license holder must be aware of in order to maintain the privilege of driving in Kentucky.

No person who operates a commercial motor vehicle is allowed to have more than one (1) driver's license at a time.

Any Kentucky licensed commercial motor vehicle driver who receives an out-of-state violation (other than parking violations) must notify the Kentucky Department of Transportation, Division of Motor Vehicles, within thirty (30) days after the date of the violation.

NOTIFICATION OF SUSPENSIONS, REVOCATIONS, CANCELLATIONS AND EXPIRATIONS

Each driver who has their license suspended, revoked, cancelled or expired by any state, who loses the privilege of driving a commercial motor vehicle in any state for a period or is disqualified from driving a commercial motor vehicle for any period, must notify his/her employer before the end of the business day following the day the driver received notice of that fact.

NOTIFICATION OF PREVIOUS EMPLOYMENT

Anyone who applies to be a commercial motor vehicle driver must provide the employer, at the time of application, with the following information for the ten (10) preceding years:

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<ol style="list-style-type: none"> 1. a list of names and addresses of previous employers for whom the applicant drove a commercial motor vehicle; 2. the dates of such employment; and 3. the reason for termination. <p>Applicants must certify that all information furnished is true and complete. An employer may require an applicant to provide additional information.</p> <p><u>ENDORSEMENTS AND RESTRICTIONS</u></p> <p>“A” restricts the driver to driving only vehicles equipped with automatic transmissions.</p> <p>“H” authorizes the driver to drive a vehicle transporting hazardous materials.</p> <p>“I” restricts the driver to intrastate use only.</p> <p>“J” restricts the driver from operating Class A or B buses.</p> <p>“K” restricts the driver to vehicles not equipped with air brakes.</p> <p>“L” restricts the driver from operating Class A buses.</p> <p>“N” authorizes driving tank vehicles.</p> <p>“P” authorizes driving vehicles carrying passengers.</p> <p>“S” allows the driver to use school buses/mass transit buses/church buses for non-profit use only.</p> <p>“T” authorized driving double and triple trailers.</p> <p>“X” represents a combination of hazardous materials and tank vehicle endorsements.</p>

DISQUALIFICATION AND CANCELLATION

A driver will be:

1. Disqualified from driving a commercial motor vehicle for a period of not less than one (1) year if convicted of a first violation of:
 - a. driving a commercial motor vehicle under the influence of alcohol or a controlled substance;
 - b. driving a commercial motor vehicle while his/her blood or breath alcohol concentration is 0.04 or more;
 - c. refusal to submit to a test to determine his/her alcohol concentration while driving a commercial motor vehicle; and/or
 - d. using a commercial motor vehicle in the commission of any felony, as defined in this article.
2. Disqualified, as an operator of any vehicle, for conviction of any of the following offenses (for a period of not less than three (3) years if the violations occurred while transporting a hazardous material required to be placarded):
 - a. manslaughter or negligent homicide resulting from operation of a motor vehicle;
 - b. driving while license is suspended or revoked; or

- c. perjury or making a false affidavit or false statement under oath to the Division of Motor Vehicles.
3. Disqualified for life if convicted of two (2) or more violations or any of the offenses specified in “Subsection A” of this section or any combination of those offenses arising from two (2) or more separate violations.
4. **Under the new CDL Regulations (2003) any holder of a commercial drivers license will be held accountable for any and all tickets, infractions, etc., received while operating his/her personal vehicle. These infractions may result in the suspension of the driver’s CDL. All districts should require, by board policy, drivers to report any and all infractions incurred.**

This section will discuss the skills needed to safely operate a commercial motor vehicle. A school bus driver must have a comprehensive knowledge of the procedures used in operating a commercial vehicle safely.

BASIC CONTROL OF YOUR VEHICLE

Safe operation of a commercial vehicle calls for skills in:

1. ACCELERATING
 - a. Partly engage clutch before taking your foot off of the brake.

- b. Use the parking brake to keep from rolling back and release only when you have enough power to keep you from rolling back.

2. STEERING

- a. Hold steering wheel firmly with both hands, either in the 9-3 or 10-2 positions.
- b. Hands should be on opposite sides of the wheel.

3. BACK UP SAFELY

- a. Back up slowly.
- b. Use the mirrors.
- c. Correct drift of a bus by turning the top of the steering wheel in the direction that the rear of the bus is drifting.
- d. Pull forward to reposition the vehicle as needed.
- e. Use a helper and hand signals.
- f. Back and turn to the driver's side when possible.
- g. Avoid backing, when you can.

SHIFTING GEARS

Correct shifting of gears is necessary for control of your vehicle.

- 1. Many manual transmissions (stick-shifts) for heavy vehicles must be double-clutched.

2. Downshift before going down a hill.
3. Downshift before entering a curve.

SCANNING

Seeing what is around you is important.

1. Look ahead the distance the vehicle would travel in twelve to fifteen (12-15) seconds (at highway speeds that is about ¼ mile) for:
 - a. traffic;
 - b. road conditions; and
 - c. signs.
2. Look to the sides and rear, using mirrors for:
 - a. checking traffic;
 - b. checking your vehicles and tires; and/or
 - c. lane changes, turns, merges and tight moves.
3. Check mirrors quickly and return attention to road ahead.
4. Curved mirrors, as well as convex mirrors, make things seem farther away than they are.
5. There are blind spots that your mirrors cannot show you.

COMMUNICATING

Signaling what you will do is very important for safety.

1. Signal early before you turn or change lanes.
2. Cancel your signal after the turn or lane change.

3. Flash the brake lights to warn other drivers that you will need to slow down for a hazard or stop.
4. Use the four-way emergency flashers when moving slowly or when you are parked, when appropriate.
5. Don't signal others to pass as it could cause an incident.
6. Brake early and slow gradually for tight turns.

In communicating your presence to others:

1. Don't assume that others can see you.
2. At night, flash lights to high beam, then back to low beam when you are about to pass a vehicle.
3. Use low beam headlights so you can be seen easier.
4. When passing, tap the horn lightly or flash the high beams.
5. Use the horn only when needed; otherwise, it can startle other drivers.
6. When parked on the side of the road:
 - a. turn on four-way emergency flashers;
 - b. place reflective triangles within ten (10) minutes after stopping; and;
 - c. when putting out the triangles, hold them between yourself and the oncoming traffic for your safety.

NOTE: ON A HILL OR CURVE, THE REAR TRIANGLE SHOULD BE MOVED UP TO FIVE HUNDRED FEET (500') TO PROVIDE ADEQUATE WARNING.

CONTROLLING SPEED (STOPPING)

You may have to change your speed because of traffic, hills, weather conditions and curves.

1. Stopping distance includes:
 - a. the distance the vehicle goes from the time your eyes see a problem to the time your brain knows it – perception distance;
 - b. the distance traveled from the time your brain tells your foot to move from the accelerator until your foot pushes the brake – reaction distance; and
 - c. the distance it takes to stop once the brakes are applied – braking distance.

At 55 mph, it will take about six (5) seconds to stop. Your vehicle will travel about the distance of a football field.

PERCEPTION DISTANCE

+

REACTION DISTANCE

+ BRAKING DISTANCE

= TOTAL STOPPING DISTANCE

2. If you double your speed, it will take you about four (4) times the distance to stop your vehicle.
3. Brakes on heavy vehicles are made to work better if your vehicle is loaded. Empty trucks require greater stopping distance because an empty vehicle has less traction. This may cause bouncing and wheel lockup. The heavier a vehicle is, the more work the brakes must do to stop. This makes the brakes hotter.
4. Match your speed to the road surface:
 - a. Slippery roads make the vehicle harder to turn and cause you to take longer to stop. Slow down gradually and allow much more space than is needed for ideal driving conditions.
 - b. On wet roads allow for double stopping distance. Reduce speed by one third (55 mph to 35 mph).
 - c. On packed snow, reduce speed by one-half or more.
 - d. On ice, stop driving as soon as you can safely do so.
 - e. Hydroplaning may happen to a vehicle when it travels on wet roads. Tires lose road contact and have little or no traction.

5. Speed and curves:
 - a. Adjust speed for curves.
 - b. Downshift before you enter a curve.
 - c. Braking in a curve may cause skidding.
 - d. Vehicles with a high center of gravity can roll over at the speed limit posted for a curve.
6. Be able to stop within the distance you can see ahead.
7. Generally, the safest speed in heavy traffic is the speed of other vehicles.
8. Speed on downgrades – shift to a lower gear before starting down a grade or hill.

VEHICLE SPATIAL AWARENESS

1. Space Behind
 - a. Stay to the right so faster vehicles may pass.
 - b. Deal with tailgaters safely by:
 - avoiding quick lane changes;
 - increasing your following distance;
 - not speeding up; and/or
 - turning on tail lights or tapping brakes lights.
2. Space to the Sides
 - a. Stay in the center of the lane.

- b. Avoid traveling next to other vehicles especially when coming out of tunnels. Strong winds may make it difficult to stay in your lane.
3. Space Overhead – Check to be sure you always have overhead clearance.
- a. Don't assume that the heights posted are correct.
 - b. If your vehicle tilts it could hit an object near the side of the road, drive closer to the center of the road.
4. Space Below
- NOTE:** Most drivers forget about the clearance under the vehicles.
5. Space for Turns
- NOTE:** Because of wide turning and off-tracking, large vehicles can hit other vehicles or objects during turns.
- a. Rights Turns
 - Turn slowly to give yourself and others more time to avoid problems.
 - Turn wide as you complete the turn.
 - Don't turn wide to the left at the beginning of the turn unless necessary.

- b. Left Turns
 - Reach the center of the intersection before you start the turn.
 - Use the right-hand turn lane if there are two (2) turning lanes.
- 6. Crossing or Entering Traffic
 - a. Be sure of the size and weight of your bus.
 - b. You need a larger gap than a car to enter traffic.
 - c. Allow more room if your bus is heavily loaded.
 - d. Be sure you can get all the way across before traffic reaches you.

DRIVING AT NIGHT

Driver factors causing problems when driving at night are:

1. Vision – People can't see as sharply at night.
2. Glare – You may be blinded for a short time by bright lights. Don't look directly at bright lights.
3. Being tired and sleepy.

ROADWAY FACTORS:

1. Poor lighting
2. Drunk drivers

VEHICLE FACTORS:

1. Headlights – Low beams let you see two hundred and fifty feet (250') ahead. High beams let you see three hundred and fifty to five hundred feet (350'-500').
2. Dirty or broken vehicle lights.
3. Dirty windshield and/or mirrors.

NIGHT DRIVING:

1. Be rested and alert.
2. Don't blind others with high beams. Dim your lights when following or approaching another vehicle within five hundred feet (500').
3. Avoid looking directly at lights of oncoming vehicles.
4. Use high beams when conditions allow.
5. Drive slowly enough to be able to stop within the range of your headlights.
6. Stop driving and rest at the nearest safe place if you get sleepy or tired.
7. Slow down.

DRIVING IN WINTER WEATHER

Winter pre-trip inspections should include:

1. antifreeze in your vehicle;
2. windshield wiper fluid in your vehicle;
3. defrosters and heaters are working properly;
4. windshield wipers are working properly; tire chains;

5. radiator shutters are working properly; and
6. that there are no exhaust system leaks which could allow poisonous carbon monoxide to leak into your vehicle.

DRIVING

1. Start engine and accelerate slowly to get the feel of the road.
2. Make turns as gently as possible.
3. Adjust speed to conditions.
4. Adjust space to conditions.
5. Avoid getting brakes wet, use lower gear and increase RPMs.
6. Gently put on brakes when going through any water. Maintain light pressure on brakes for a short distance to heat them up in order to dry them out.

DRIVING IN HOT WEATHER

During pre-trip inspections:

1. Inspect tires every two (2) hours or one hundred (100) miles. Tire tread may separate in hot weather.
2. Check proper oil level and pressure – oil helps keep the engine cool.
3. Check proper engine coolant level.

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p>4. Make sure engine coolant has antifreeze. Antifreeze helps the engine in hot weather as well as cold. Never take off the radiator cap or any part of pressurized system until the engine has completely cooled.</p> <p>5. Make sure belts are tight to avoid overheating.</p> <p>6. Make sure coolant hoses are not cracked or dry-rotted.</p> <p style="text-align: center;">DRIVING</p> <p>1. Watch for bleeding tar on the road.</p> <p>2. High speeds will increase tire problems and make tires and engine hotter.</p> <p>3. Never check air pressure in hot tires. If tire is too hot to touch, remain stopped until tire cools.</p> <p style="text-align: center;">MOUNTAIN DRIVING</p> <p>1. Be in correct gear before going down steep grades.</p> <p style="padding-left: 40px;">a. Older vehicles – Choose same gear you would use to go up the grade.</p> <p style="padding-left: 40px;">b. Newer vehicles – Choose a gear lower than you would use to go up the grade.</p> <p>2. Brake properly.</p> <p style="padding-left: 40px;">a. Go slow enough down a grade that light use of the brakes will keep your speed from increasing.</p>

- b. Brakes that get hot may fade.
 - c. Use on again-off again braking with a target speed. Refer to the Commercial Driver License Manual (Revised 1994), Chapters 2-39.
3. Know escape ramp locations on the route. Escape ramps are made to safely stop runaway vehicles as well as to avoid damage and prevent injury to drivers, passengers and vehicles.

SEEING HAZARDS

A hazard is any road condition or road user that is a possible danger.

- 1. Seeing hazards lets you be prepared.
- 2. Learn to recognize hazards.

Slow down and drive with care if any of the following road hazards are in evidence:

- 1. Work zones – drive slowly and use four-way flashers or brake lights to warn others.
- 2. Drop-offs – Don't drive too near edge of road.
- 3. Foreign objects – Try to avoid them without making sudden or unsafe moves.
- 4. Off/On ramps:
 - a. Posted off-ramp speeds may not be safe for larger vehicles or heavily loaded vehicles.
 - b. Braking and turning at the same time is dangerous.

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p data-bbox="889 191 1490 289">c. Slow down before the curved part of an off-ramp or on-ramp.</p> <p data-bbox="792 317 1162 348">Be aware of hazards such as:</p> <ol data-bbox="829 384 1490 1367" style="list-style-type: none"> <li data-bbox="829 384 1235 415">1. drivers with blocked vision; <li data-bbox="829 447 1105 478">2. distracted drivers; <li data-bbox="829 510 971 541">3. talkers; <li data-bbox="829 573 992 604">4. children; <li data-bbox="829 636 992 667">5. workers; <li data-bbox="829 699 1105 730">6. disabled vehicles; <li data-bbox="829 762 1003 793">7. incidents; <li data-bbox="829 825 1003 856">8. shoppers; <li data-bbox="829 888 1101 919">9. confused drivers; <li data-bbox="829 951 1045 982">10. slow drivers; <li data-bbox="829 1014 1105 1045">11. drivers in a hurry; <li data-bbox="829 1077 1097 1108">12. impaired drivers; <li data-bbox="829 1140 1490 1241">13. slow vehicles (identified with red triangle with an orange center); and <li data-bbox="829 1272 1490 1367">14. if there is movement inside a parked car which could mean someone is about to get out. <p data-bbox="743 1398 1003 1430">Always have a plan:</p> <p data-bbox="829 1461 1490 1560">Driver body movement may be a clue for a turn or lane change.</p> <ol data-bbox="829 1591 1490 1877" style="list-style-type: none"> <li data-bbox="829 1591 1490 1692">1. Watch for other drivers who can't decide which way to go. <li data-bbox="829 1724 1490 1822">2. Look for hazards to have time to plan before an emergency. <li data-bbox="829 1854 1422 1877">3. Be ready to act based on emergency plans.

EMERGENCIES

An example of a traffic emergency is when two (2) or more vehicles might crash.

Vehicle emergencies can happen when tires, brakes or vehicle parts fail.

REMEMBER: A VEHICLE MAY BE ABLE TO TURN MORE QUICKLY THAN TO STOP.

Steer to avoid a crash:

1. Stopping is not always the best thing to do.
 - a. A quick turn can be made safely if the driver:
 - doesn't apply brakes when turning;
 - avoids braking until the vehicle speed is less than 20 mph; and
 - keeps both hands on steering wheel.
 - b. "Counter-steer" (turn wheel back in other direction) once you have passed the danger.
2. Steer to the right if an upcoming car has drifted into your lane. Don't turn any more than necessary to clear what is in your way.
3. Leave the road if necessary.
 - a. Brake gently to avoid skidding.
 - b. Keep one (1) set of wheels on the pavement, when possible.
 - c. Stay on the shoulder if possible.

- d. If the driver must return to the road before stopping:
 - reduce speed or even stop if safe to do so;
 - turn enough to get back on the road; and
 - counter-steer immediately when front tires are on the road.

STOPPING QUICKLY AND SAFELY

1. Controlled Braking:
 - a. Apply brakes as hard as possible without locking the wheels.
 - b. If wheels lock, release brakes.
 - c. Use brakes again, as soon as possible.
2. Stab Braking:
 - a. Apply brakes all the way.
 - b. Release brakes when wheels lock up.
 - c. As soon as wheels start rolling again fully apply brakes.
3. Don't jam on the brakes. If the wheels are skidding, you cannot control the vehicle.
4. Never disable or unhook steering axle brakes.

BRAKE FAILURE

1. Brake failures are caused by:
 - a. loss of hydraulic pressure; and/or

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<ul style="list-style-type: none"> b. brake fade from overheating. <ul style="list-style-type: none"> 2. When brakes fail: <ul style="list-style-type: none"> a. downshift; b. pump the brakes; c. use the parking brake; d. find an escape route; and e. use escape ramp if available. <p style="text-align: center;">TIRE FAILURE</p> <ul style="list-style-type: none"> 1. Recognize a tire failure by: <ul style="list-style-type: none"> a. sound; b. vibration; and/or c. feel. 2. Hold the steering wheel firmly. 3. Stay off the brake until the vehicle slows down. 4. After stopping, check all the tires. <p><u>SKID CONTROL AND RECOVERY</u></p> <p>Five (5) main causes of skids are:</p> <ul style="list-style-type: none"> 1. over-braking; 2. over-steering; 3. over-accelerating; 4. driving too fast for road conditions; or 5. not enough weight on front axle. <p style="text-align: center;">DRIVE WHEEL SKIDS</p> <ul style="list-style-type: none"> 1. Drive wheel skids caused by acceleration can be stopped easily by taking your foot off the accelerator.

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p>2. Drive wheel braking skids can be corrected by:</p> <ol style="list-style-type: none"> a. stopping braking; b. turning quickly in the direction of the skid; and/or c. counter-steering. <p style="text-align: center;">FRONT-WHEEL SKIDS</p> <ol style="list-style-type: none"> 1. Front wheel skids are caused by driving too fast for the conditions. 2. The front end tends to go in a straight line no matter how much you turn the steering wheel. 3. Slow down as quickly as possible without skidding. <p><u>INCIDENT PROCEDURES</u></p> <ol style="list-style-type: none"> 1. Protect the area. <ol style="list-style-type: none"> a. Get the vehicle to the side of the road. b. Park away from the incident if stopping to help. c. Put your flashers on. d. Set out reflective triangles. 2. Notify authorities. <p>Use two-way radio to notify authorities before leaving the vehicle if possible.</p> <ol style="list-style-type: none"> a. Protect area, then telephone or send someone for help.

3. Care for the injured.
 - a. If a qualified person is at the incident scene and helping the injured, stay out of the way unless asked to help.
 - b. Don't move a severely injured person unless the danger of fire passing traffic or additional danger makes it necessary.
 - c. Stop bleeding by applying direct pressure to the wound.
 - d. Keep the injured person warm.
4. Collect information on the incident.

FIRES

Some causes of fires are:

1. spilled fuel after an incident;
2. under-inflated tires or dual tires that touch;
3. electrical system short-circuits;
4. improper fueling, loose connections or driver smoking;
5. flammable cargo, improperly loaded with poor ventilation; or
6. the improper use of flares.

Fire prevention involved:

- pre-trip inspections (see "Care and Maintenance");
- a. inspection of vehicle at stops during the trip;
 - b. following safety procedures; and

- c. monitoring vehicle gauges and mirrors to check cargo and vehicle.

FIREFIGHTING

1. Pull off the road.
 - a. For engine fires, turn off the engine as soon as possible. Don't open the hood.
 - b. For cargo fires, keep cargo doors shut.
2. Keep the fire from spreading.
3. Use the fire extinguisher.
4. Extinguish the fire.
 - a. Don't use water on an electrical or gasoline fire.
 - b. Burning tires must be cooled with water.

STAY ALERT AND FIT TO DRIVE

Stay alert by:

1. getting enough sleep;
2. scheduling trips during hours you are normally awake and can remain alert;
3. not taking medicine that has a label warning against operating vehicles;
4. keeping cool; and/or
5. taking short breaks before you feel drowsy.

When sleepy:

1. stop driving;
2. sleep or take a nap; and/or
3. avoid taking drugs to keep you awake.

**NOTE: ONLY SLEEP CAN OVERCOME
BEING TIRED.**

ALCOHOL AND DRIVING

1. Alcohol in your body is measured by blood alcohol concentration (BAC).
2. The alcohol in drinks affects human performance.
 - a. It first affects a person's good judgement and self-control.
 - b. It then affects muscle control, vision and coordination, which can cause serious driving errors and increase the possibilities of incidents due to:
 - increased reaction time;
 - driving too fast or too slow;
 - weaving;
 - straddling lanes;
 - quick, jerky starts;
 - not signaling;
 - running stop signs and red lights; and/or
 - improper passing.

OTHER DRUGS

1. Possession or use of many drugs while on duty is forbidden.
2. Don't take over-the-counter drugs which warn of side affects.
3. Use of drugs can lead to traffic incidents, arrest, fines and/or jail sentences.

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p data-bbox="829 191 1490 352">4. Possession and use of prescription drugs is permitted if the doctor informs the driver that it will not affect safe driving ability.</p> <p data-bbox="829 384 1341 415"><u>NOTE: DON'T DRIVE WHEN ILL.</u></p> <p data-bbox="743 447 1081 478"><u>AIR BRAKE SYSTEMS</u></p> <p data-bbox="800 510 1430 541">An air brake system is made up of three (3) parts.</p> <ol data-bbox="829 573 1490 1115" style="list-style-type: none"> <li data-bbox="829 573 1490 730">1. The service brake system applies and releases the brakes when you use the brake pedal when driving. <li data-bbox="829 762 1490 919">2. The parking brake system applies and releases the parking brake when you use the parking brake control. <li data-bbox="829 951 1490 1115">3. The emergency brake system uses parts of the service and parking systems to stop the vehicle if the service brake system fails. <p data-bbox="743 1146 1490 1241">Air brakes use compressed air to make the brakes work.</p> <p data-bbox="743 1272 1490 1367">Air brakes are a safe way of stopping large vehicles if the brakes are well kept and used correctly.</p> <p data-bbox="743 1398 1304 1430"><u>PARTS OF THE AIR BRAKE SYSTEM</u></p> <p data-bbox="743 1461 1490 1619">The air compressor pumps air into the air storage tanks. If the compressor has its own oil supply, check the oil level before driving.</p> <p data-bbox="743 1650 1490 1808">The air compressor governor turns the air compressor on and off and controls the air being pumped into the tanks.</p>

The air storage tanks hold compressed air-enough air to let the brakes be used several times even if the air compressor stops working.

AIR TANK DRAINS

1. Compressed air has some water and oil in it.
 - a. Water and compressor oil tend to collect in the bottom of the air tank.
 - b. Water can freeze in parts of the brake system, making the brakes fail.
2. Drain valves let you drain the unwanted oil and water that collects in the bottom of the tank.
 - a. Tanks with manual valves must be drained by hand after each day of driving.
 - b. Tanks with automatic valves drain the water and oil by themselves.

ALCOHOL EVAPORATOR

(FOUND ON SOME VEHICLES)

1. The alcohol evaporator puts alcohol into the air system.
 - a. Alcohol helps keep ice from forming in air brake valves and parts.
 - b. Ice can make the brakes stop working.

Check the alcohol container every day during cold weather and fill when needed.

2. Drain air tanks daily if tank has a manual valve (see your local district procedure on this).

SAFETY VALVE

The safety valve protects the tank and the rest of the system from too much pressure.

1. The brake pedal controls pressure to the brakes.
2. Pushing the pedal down harder applies more air pressure.

FOUNDATION BRAKES

1. The foundation brakes are the brakes at each wheel.
2. The most common type is the S-cam drum brake.
3. Other types are wedge and disc brakes.

SUPPLY PRESSURE GAUGE

The supply pressure gauge tells how much pressure is in the air tanks. All vehicles have a supply pressure gauge.

APPLICATION PRESSURE GAUGE

1. The application pressure gauge shows how much air pressure you are supplying to the brakes.
2. The need to apply more pressure to hold the same speed when going down steep grades:
 - a. means the brakes are fading –
 - slow down and
 - look and listen for air leaks;

- b. can also be caused by
 - brakes that are out of adjustment;
 - air leaks; or
 - mechanical problems.

LOW AIR PRESSURE WARNING SIGNAL

The low air pressure warning signal:

1. is required on vehicles with air brakes;
2. must come on before the air pressure falls below 60 psi;
3. is usually a red light; and
4. means, when it comes on, that you should stop right away and park your vehicle safely.

STOP LIGHT SWITCH

The stop light switch turns on the brake lights when you put on the air brakes to warn drivers behind you.

SPRING BRAKES

Spring brakes:

1. hold emergency and parking brakes on;
2. are held back by air pressure when driving;
3. put the brakes on with their very powerful springs if the air pressure is removed; and
4. depend, for their braking power, on brakes being in adjustment.

PARKING BRAKE CONTROLS

1. The park brake valve is used to apply the spring brakes slowly if service brakes fail.

2. Dual parking control valves consist of:
 - a. one (1) valve used to put on the spring brakes for parking; and
 - b. another valve using pressure from a separate tank to release the spring brakes so you can move the vehicle in an emergency.

INSPECTING AIR BRAKE SYSTEMS

1. Check air compressor drive belt.
2. Check manual slack adjusters on S-cam brakes with the vehicle parked on level ground, wheels chocked (held in place by blocks) and parking brake off.
3. Check brake drums (or discs), linings and hoses.
4. Test low-pressure warning signal.
5. Check that spring brakes are activated automatically.
6. Test air leakage rate:
 - a. Loss rate should be less than 2 psi in one (1) minute for single vehicles with engine off, brakes released.
 - b. Loss rate should be less than 3 psi in one (1) minute for single vehicles with the service brake on.

INSTRUCTOR GUIDELINES/NOTES	CONTENT
	<p>7. Check air compressor governor cut-in and out pressure.</p> <p>8. Test parking brake.</p> <p>9. Test service brakes:</p> <ol style="list-style-type: none"> a. Move the vehicle forward slowly and apply the brakes firmly. b. Note any vehicle “pulling” to one side, unusual feel or delayed stopping action. <p><u>USING AIR BRAKES</u></p> <p>For a normal stop, use brake pedal to control the pressure so the vehicle comes to a smooth, safe stop.</p> <p>For emergency stops, brake so you can steer safely and the vehicle stays in a straight line.</p> <ol style="list-style-type: none"> 1. Controlled braking requires you to: <ol style="list-style-type: none"> a. firmly apply brakes; b. release brakes if wheels slide; and c. reapply brakes. 2. Stab braking requires that you: <ol style="list-style-type: none"> a. press the brake pedal as hard as you can; b. release the brakes when the wheels lock up; and c. put the brakes on again when the wheels start rolling.

STOPPING DISTANCE FOR VEHICLES**WITH AIR BRAKES**

1. Air brakes, unlike hydraulic brakes, take time to work after the brake pedal is pushed.
 - a. It takes one-half of a second or more for the air to flow through the lines to the brakes.
 - b. On dry pavement, the air brake lag distance at 55 mph is about thirty-two feet (32').
2. Stopping distance is the total of four factors:

PERCEPTION DISTANCE

+

REACTION

+

EFFECTIVE BRAKING DISTANCE

+

BRAKE LAG DISTANCE

=

STOPPING DISTANCE

BRAKING ON DOWNGRADES

1. When you try to slow down from a high speed, often or quickly, the brakes get too hot.
2. Brakes will fade when they get too hot and you will have to push harder to get the same stopping force.
3. Use a low gear. On again-off again techniques with a target speed is the approved downhill braking procedure.

4. Brake system adjustments must be balanced to give the same braking to each wheel.

PARKING BRAKE

Use the parking brake any time you park the vehicle (or load/unload students).

1. Let hot brakes cool before applying parking brakes (chock wheels).
2. Before using parking brakes in freezing weather, be sure to dry brakes that are wet (drive with brakes lightly applied).
3. Parking brakes must be held by mechanical force.
4. Drain air tanks of water and oil after each working day (see your local district procedures before doing this).

LOADING THE BUS

NOTE: All bus drivers must have a commercial driver's license with a passenger endorsement.

Any item transported on a school bus must:

1. be stored in the undercarriage of the bus. The driver is the only person who shall store or retrieve items from undercarriage.
2. fit in the lap of the student and shall not infringe upon the space of other riders.
3. be placed on the floor of bus and held by the student and shall not infringe upon other riders space.

4. any item that cannot be secured by the above means must be secured using approved webbing or straps that meet all applicable federal and state standards.

RIDERS

Riders:

1. may not stand forward of the rear of the driver's seat; and
2. must remain behind the standee line.

There should be not standees on a Kentucky school bus.

Remind riders to take carry-ons with them as they are getting off the bus.

ON THE ROAD

Supervise passengers:

1. While driving, scan the inside of the bus as well as the road ahead.
2. Remind riders about rules, if needed.
3. Follow LEA rules for handling drunk or rude drivers.
4. Remind riders to watch their step when leaving the bus.
5. Never drive with an open emergency exit door or window.

SPEED MANAGEMENT AND BRAKING

1. Whenever you double your speed, it takes approximately four (4) times as much stopping distance.
2. Slow down before curves. Although the posted speed is safe for cars, it may be too high for buses.
3. Stop fifty feet (50') before a drawbridge that does not have a signal light or traffic attendant.
4. Adjust your speed by slowing down when going from high beams to low beams.
5. Slow down and look:
 - a. at street car crossings;
 - b. where a policeman or flagman is directing traffic; and
 - c. at crossings marked "exempt crossings."

FOLLOWING DISTANCE

1. Use one (1) second for every ten feet (10') of vehicle length up to 40 mph.
2. Add one (1) second over 40 mph.
3. When driving on a slippery road, allow much more space for following distances.

Other measures to prevent having an incident are:

1. Use caution at intersections.
2. Know the space your bus needs to merge with traffic:

- a. Never assume other drivers will brake to give you room.
 - b. Avoid traveling next to other vehicles.
 - c. Lane changes – you need to check your mirrors to make sure no one is alongside you or about to pass you. Check mirrors:
 - before you start to change lanes;
 - after you have signaled your intentions;
 - immediately after starting the change; and
 - after the change is completed.
3. Be cautious at railroad crossings.
 - a. Stop between fifteen and fifty-feet (15-50') from railroad crossings, set parking brake.
 - b. Listen and look both ways for trains.
 - c. If one train has passed, look both ways again to make sure another train isn't coming.
 - d. Never change gears while crossing railroad tracks.
 4. See ahead.
 - a. All drivers look ahead, but many drivers don't look far enough.
 - b. Recognize hazards such as an ice cream truck, blind intersections or a driver signaling a turn.

AFTER-TRIP INSPECTION

1. Inspect your bus after every shift.
2. Report any damage or mechanical problems.

PROHIBITED PRACTICES

1. Don't do anything that distracts you from driving.
2. Don't tow or push a bus with riders on it unless getting passengers off would be dangerous.
3. Don't refuel a bus when riders are on board.
4. Don't use brake interlocks when safety requires use of a parking brake.

NAME: _____ DATE: _____

COMMERCIAL DRIVERS LICENSE (CDL)
TEST

****PLEASE ANSWER TRUE OR FALSE****

1. _____ An "L" restriction on your license means you can drive on interstate highways only.
2. _____ You should look ahead of your bus 12-15 seconds.
3. _____ One use of your mirrors is to check the condition of your tires.
4. _____ Stopping distance includes: perception distance, reaction and braking distance.
5. _____ Wet roads will triple your stopping distance.
6. _____ You should slow down before entering a curve, then speed up as you exit the curve.
7. _____ High beam headlights allow you to see 500-750 feet in front of you.
8. _____ In hot weather, you should check your tires every 3 hours or 150 miles.
9. _____ The use of brakes on a long steep downgrade is only a supplement to the braking effect of the engine.
10. _____ A hazard is any road condition or road user that is a possible danger.
11. _____ Most accidents are caused by driving too fast for road conditions.
12. _____ You must have your parking brake off to properly check your slack adjuster.
13. _____ Front tires may be recapped.
14. _____ The driver's seat belt must be worn when transporting students only.
15. _____ When using the on again off again braking technique, the brake applications phase should last about 5 seconds.

INSTRUCTOR'S SIGNATURE: _____

COMMERCIAL DRIVERS LICENSE (CDL)
TEST
****PLEASE ANSWER TRUE OR FALSE****

KEY

F The answer key is only released to KDE endorsed trainers.