STATE OF CALIFORNIA

Department of Motor Vehicles®

COMMERCIAL DRIVER'S LICENSE HANDBOOK

Supplement for Modernized Version

January 2023

DL 650 X (NEW 1/2023) **WWW**

This material is based upon work supported by the Federal Motor Carrier Safety Administration under Cooperative Agreement No. DTFH61-97-X-00017. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the Author(s) and do not necessarily reflect the view of the Federal Motor Carrier Safety Administration.

© Copyright, Department of Motor Vehicles 2023

All rights reserved

This work is protected by U. S. Copyright Law. DMV owns the copyright of this work. Copyright law prohibits the following: (1) reproduction of the copyrighted work; (2) distribution of copies of the copyrighted work; (3) preparation of derivative works based upon the copyrighted work; (4) displaying the copyrighted work publicly; or (5) performing the copyrighted work publicly. All requests for permission to make copies of all or any part of this publication should be addressed to:

Department of Motor Vehicles
Legal Office, MS C128
PO Box 932382
Sacramento, CA 94232-3820

SECTION 11M — VEHICLE INSPECTION TEST

This Section Covers

11M.1 – Internal Inspection (All Vehicles)

11M.2 – Passenger and School Bus Only

11M.3 – School Bus Only

11M.4 – Lights Operations Check (All Vehicles)

11M.5 – External Inspection (All Vehicles)

11M.6 – Combination Vehicles

Federal and jurisdictional laws require that CDL drivers inspect their vehicle to determine if it is safe to drive. A vehicle inspection will help you find problems or defects that can cause a breakdown or, even worse, a crash. It is important to inspect all vehicle components for proper working order.

During your CDL Vehicle Inspection test, your inspection will focus on the safety critical items for the operation. During this inspection, you must show you have the knowledge to determine the vehicle is safe to drive. During the test, you will only be required to inspect one vehicle axle, however, you should be prepared to perform the same inspection, described in section (11M.5.2) on all of the vehicle axles. The vehicle inspection used to evaluate your basic knowledge does not cover all the federal inspection guidelines. It is your responsibility to be knowledgeable of the Federal Motor Carrier Safety Regulations.

[For safety purposes, you should use wheel chocks during the Vehicle Inspection test.] You will have to walk around and enter/exit the vehicle to conduct the inspection. When exiting the vehicle, you must set the parking brake(s) and place the vehicle in neutral.

When entering/exiting the vehicle, you must safely exit/enter by facing the vehicle and maintaining three (3) points of contact at all times (when entering/ exiting a bus, safely enter/exit by facing forward and maintaining a firm grasp on the handrail).

You are only required to inspect the items on the CDL Vehicle Inspection checklist. You may use the checklist provided in this section for your test and check off items as you have completed them, but NO additional markings or writing may be placed on this list prior to the test.

You MUST name, point to and/or touch and fully explain to the examiner WHAT you are inspecting each safety critical item for. If you do not, you will not get credit for the item(s). **[You will NOT have to crawl under the vehicle.]** Any vehicle that has components marked or labeled, other than by the manufacturer, CANNOT be used for the Vehicle Inspection test.

Failure to Follow Instructions or Unsafe Act – Failure to follow examiner instructions for completing the test as directed may result in an automatic failure, and the test may be terminated by the examiner. Always follow the examiner's instructions and directions. If you do not understand the instructions, ask the examiner for clarification.

Committing an "unsafe act" (e.g., forgetting to set the parking brake), may result in an automatic failure for an unsafe act, and the test may be terminated by the examiner. Safety of the driver, the examiner and the testing area is of the highest priority. Always think SAFETY.

11M.1 – Internal Inspection (All Vehicles)

Study the following vehicle parts for the vehicle you will be using during the CDL Vehicle Inspection test. You should be able to identify each part and tell the examiner what you are looking for or inspecting.

11M.1.1 – In-Vehicle/Engine Start

Lighting Indicators

Description: Dashboard indicator lights for signals, flashers, headlight high beam; Anti-lock Braking System (ABS); and Diesel Exhaust Fuel (DEF)/Diesel Particulate Filter (DPF).

Why Inspect: Indicates which functions are active or warns of problem vehicle components.

Inspection: Each of the following items must be inspected. Inspect to make sure the dash indicators work when the vehicle starts and when corresponding lights are turned on including:

- Left turn signal indicator.
- Right turn signal indicator.
- Four-way emergency indicator.
- High beam headlight indicator.

- ABS indicator on dashboard; (and for combination vehicles only, the rear driver's side trailer ABS light should turn on then off), if equipped.
- DEF indicator, if equipped.

Note: Operational inspection of actual turn signals, four-way indicators and high beam functions must be done separately during the lights operation inspection described in Section 11M.4.

Emergency Equipment

Description: Required emergency equipment.

Why Inspect: Emergency equipment must be available and in usable condition.

Inspection:

- Inspect for three (3) red reflective triangles, six (6) fuses or three (3) liquid burning flares.
- Inspect for a properly charged and secured fire extinguisher.
- Inspect for spare electrical fuses (if used) or identify circuit breakers.

Note: If the vehicle is not equipped with electrical fuses, you must mention this to the examiner and identify that the vehicle operates on circuit breakers.

Windshield and Traffic Monitoring Devices

Description: Windshield, mirrors and other monitoring devices, such as cameras.

Why Inspect: Cracks, obstructions, stickers, or dirt in the driver's viewing area can cause the driver to lose sight of changes in road conditions or other traffic around the vehicle.

Inspection:

- Inspect that the windshield is clean with no obstructions except for an inspection sticker. There can be no damage, such as cracks or flaws to the glass.
- Inspect that mirrors are clean and adjusted properly from the inside, when present.
- If equipped, inspect that rear and side view monitoring devices or cameras are clean and in working condition. Devices should be viewable from the inside and the video display must be operable and adjusted for viewing.

Wipers/Washers

Description: Windshield wipers and washers.

Why Inspect: Wipers improve visibility during rain and snow. Worn blades reduce visibility. Washers assist in keeping the windshield clean.

Inspection:

- Inspect that wiper arms and blades are secure, not damaged, and demonstrate wipers operate smoothly by turning them on and off.
- Inspect for windshield washer fluid and demonstrate windshield washers operate correctly by activating the washers.

Heater/Defroster

Description: Heats cab or passenger compartment and prevents frost or condensation from forming on windshield.

Why Inspect: The defroster improves visibility, especially during cold weather.

Inspection:

- Identify, describe and demonstrate the heater(s) and defroster(s) work correctly by operating the controls.

Horn(s)

Description: Air and/or electrical horns used for warning other roadway users (e.g., cars, motorcyclists, bicyclists and pedestrians).

Why Inspect: The horn is a device that must function properly in order to warn other roadway users of your presence.

Inspection:

- Inspect that air horn and/or electric horn work.

Parking and Trailer Brake Check

Description: Keeps vehicle from moving or rolling when parked.

Why Inspect: The parking brake(s) must function when a vehicle is parked, especially when on a grade/hill. A vehicle allowed to roll could cause damage or injury to other roadway users or property.

Inspection: You will be required to demonstrate the parking brake check (and trailer parking brake check, if equipped). This procedure is designed to determine that the parking brake(s) are working correctly, and they keep the vehicle from moving.

- Parking Brake: With the parking brake engaged (trailer brakes released on combination vehicles, if applicable), remove foot from service brake and inspect that the parking brake will hold the vehicle by gently pulling forward with the parking brake on.
- Trailer Brake: With the parking brake released and the trailer parking brake engaged (combination vehicles only), remove foot from service brake and inspect that the trailer parking brake will hold the vehicle by gently pulling forward with the trailer parking brake on. Also assists in checking the coupling connection with the trailer.

Service Brake Check

Description: Procedure to be followed to inspect the application of air, hydraulic or electric service brakes.

Why Inspect: This procedure is designed to make certain that air, hydraulic or electric service brakes are operating correctly for normal operation.

Inspection: You will be required to demonstrate the application of air, hydraulic or electric service brakes. This procedure is designed to determine that the brakes are working correctly, and that the vehicle does not pull to one side or the other at a low speed.

- Pull forward at 5 mph, apply the service (foot) brake and come to a complete stop. Inspect to see that the vehicle does not pull to either side and stops when the service brake is applied. If the vehicle pulls to either side or does not stop well, the brakes may not be working correctly.

11M.1.2 – Air Brake or Hydraulic Brake Check (based on type of brake system)

Air Brake Check (Equipped Vehicles Only)

Description: Procedures to be followed in inspecting air brake systems.

Why Inspect: Air brake safety devices vary. This procedure is designed to make certain that safety devices are operating correctly as air pressure drops from "normal" to "low air" conditions. Loss of air pressure will cause the emergency brakes to activate causing an abrupt and uncontrolled stop.

Inspection: ***Failure to explain and demonstrate (perform) all four (4) parts of the correctly will result in an automatic failure of the CDL Vehicle Inspection test.***

The proper procedures for inspecting the air brake system are as follows:

1. **Air Gauge and Governor Cutoff Check –** Chock the wheels (if necessary), start the vehicle and inspect that the air gauge is working and builds the air pressure to governor cutoff (approximately 120 – 140 psi) and identify the cutoff pressure for your vehicle.
2. **Air Leakage Rate Test –** With the air pressure built to cutoff, shut off the engine, return the key to the "on" or "battery charge" position (if necessary), release the parking brake (all vehicles), and the tractor protection valve (combination vehicle). Fully apply the foot brake. Once the air gauge is stabilized, hold the foot brake for one (1) minute. Inspect the air gauge to see if the air pressure drops more than three (3) pounds in one (1) minute (single vehicle or trailer without airbrakes) or four (4) pounds in one (1) minute (combination vehicle).
3. **Air Warning Device(s) Test –** With the engine on or if engine off, make sure the key or electrical power is in the "on" or "battery charge" position. Begin fanning off the air pressure by applying and releasing the foot brake. The low air warning devices (buzzer, light, and flag) should activate before air pressure drops below 55 psi or level specified by the manufacturer. It is the applicant's responsibility to know the vehicle manufacturer's specifications.
4. **Emergency Brake(s) Test –** Continue to fan off the air pressure. The parking brake (or emergency brake) valve should close (pop out) between 20 psi and 45 psi (no less than 20 psi and no more than 45 psi).
   - On air operated trailers, the tractor protection valve and trailer parking brake (or emergency brake) valve should close (pop out) at the same time or prior to the valve for the truck/tractor/bus.
   - You will need to identify the level specified by the manufacturer for the vehicle you are testing in, if the valves close outside of 20 to 45 psi. If the vehicle's valves are not designed to pop out, you will need to listen for the sound of air discharging from the air system, which indicates the parking (or emergency) brakes have been applied. If the vehicle is equipped with a backup air system, you will need to explain that there is a backup system and that the valve(s) will not pop out.

Note: You will need to explain the specific procedures specified by the manufacturer for the vehicle you are testing in. It is your responsibility to know and describe to the examiner the vehicle manufacturer's specifications for air systems.

Hydraulic Brake Check (Hydraulic Brake Equipped Vehicles Only)

Description: Procedure to be followed to inspect hydraulic brakes. Types of hydraulic and inspection procedures will vary.

Why Inspect: Damaged hydraulic hoses, leaks in the braking system or low hydraulic fluid will result in a partial or total loss of the braking system that may result in increased stopping distances or a crash.

Inspection: ***Failure to explain and demonstrate the hydraulic brake check correctly will result in an automatic failure of the CDL Vehicle Inspection test.*** This check is designed to see that the hydraulic brakes operate correctly. Use the following hydraulic brake check steps based on your vehicle's system specifications:

- Inspect that indicators and warning systems are functioning, as specified by the manufacturer, if equipped.
- With the transmission placed in "park", identify the normal height of the brake pedal and inspect brake pedal pressure (i.e., pump the brake pedal three (3) times, and then hold it down for five (5) seconds), or as specified by the manufacturer. The brake pedal should not move (depress) after initial application and should be firm and have a sufficient amount of reserve for brake pedal application.
- Inspect that the hydraulic power assist system(s), if equipped, are functioning, as specified by the manufacturer.

Note: Hydraulic brake systems vary. Your system may require the ignition to be in the "on" position and/or the engine running. You will need to explain and demonstrate to the examiner the procedures for your vehicle as specified by the manufacturer.

11M.2 – Passenger and School Bus Only

Passenger Entry and Lift

Description: Bus door(s) used for normal entry or exit. Passenger lift used for wheelchair accessibility.

Why Inspect: All passengers must be able to enter and exit safely.

Inspection:

- Inspect that entry door(s) are not damaged, operate smoothly and close securely from the inside.
- Inspect that handrails are secure and, if equipped, that the step light(s) are working.
- Inspect that the entry steps are clear, and the tread is not loose, or worn.
- If equipped with a passenger lift, inspect for leaking, damaged or missing parts, and explain how the lift should be inspected for correct operation.
- If equipped, lift must be fully retracted and latched securely.

Emergency Exits

Description: Bus doors, roof hatches, or push-out windows used for emergency evacuation.

Why Inspect: Emergency exits must be operable in order to provide an escape for passengers during a crash or emergency.

Inspection:

- Inspect that all emergency exits are labeled, not damaged, operate smoothly, and close securely from the inside. Demonstrate that at least one (1) emergency exit operates smoothly, closes securely, and is not damaged. Confirm that the exit and warnings work properly. Point out and describe how all other emergency exits operate.
- Inspect that release handles can be operated properly both from inside and outside the vehicle.
- With the key in the "on" or "battery charged" position, inspect that emergency exit warning devices are working.

Passenger Seating

Description: Passenger vehicle seats and frames.

Why Inspect: Seats must be safe for passengers to sit in.

Inspection:

- Inspect that there are no broken seat frames and inspect that seat frames are firmly attached to the floor.
- Inspect that seat cushions are attached securely to the seat frames.

Passenger Monitoring Devices

Description: Mirrors and monitoring devices, such as cameras, for observing and monitoring passengers or students.

Why Inspect: Internal (passenger) and external (fender, cross-over and other) mirrors or monitoring devices for seeing and observing passengers or students help the driver to safely observe and monitor passengers/students during driving, loading and unloading. Passenger/school bus vehicle drivers must be able to see boarding and discharging passengers/students.

Inspection:

- Inspect that all internal and external passenger mirrors and mirror brackets are not bent and are mounted securely with no missing parts.
- Inspect all internal and external passenger mirrors for proper adjustment and that they are clean.
- If equipped, inspect that passenger monitoring devices or cameras are clean and viewable from the inside and the video display is operable and adjusted for viewing.
- Inspect student crossover mirrors (school bus only).

11M.3 – School Bus Only

Student Lights (Front and Back)

Description: Strobe light (if equipped), alternately flashing amber lights and alternately flashing red lights on school buses.

Why Inspect: Student lights allow the driver of a school bus to communicate presence and intentions to stop/resume student loading and unloading with other traffic.

Inspection: The following student lights must be inspected, and the operation demonstrated, on both the front and back of the vehicle.

- Inspect that strobe light (if equipped) is operational and is not broken. Inspect that the strobe light indicator on the dash is operational.
- Inspect that alternately flashing amber lights (if equipped), on both front and rear of vehicle, are operational and is not broken. Inspect that the flashing amber light indicator on the dash is operational.
- Inspect that alternately flashing red lights, on both front and rear of vehicle, are operational and is not broken. Inspect that the flashing red light indicator on the dash is operational.

Stop Arm(s) and Safety Arm

Description: The stop arm and safety arm on school buses that operate when student loading and unloading lights are activated.

Why Inspect: Stop Arm – Warns other drivers a school bus is stopping or is stopped. **Safety Arm** - Forces school students to cross well (e.g., 10 feet) away from the front of the school bus in the driver's view.

Inspection: The following school bus safety items must be inspected and the operation of, must be described and demonstrated.

- Inspect the stop arm(s) - if equipped, are securely mounted to the vehicle frame and there are no loose, broken, or damaged parts. Inspect the stop arm extends fully when operated, stop arm lights are operational and that the stop arm indicator on the dash is operational.
- Inspect that safety arm, if equipped, is securely mounted to the vehicle frame and there are no loose, broken, or damaged parts. Inspect that the safety arm functions properly in conjunction with the stop arm, it extends fully.

First Aid Emergency and Body Fluid Kits

Description: Required emergency equipment (including emergency first aid kit and body fluid cleanup kit) for a school bus.

Why Inspect: Emergency equipment must be available and in usable condition.

Inspection:

- Inspect that emergency first aid kit is present and the seal has not been broken which may indicate missing items.
- Inspect that body fluid cleanup kit is present and the seal has not been broken which may indicate missing items.

11M.4 – Lights Operations Check (All Vehicles)

Lights Operations Check

Description: Headlights, high-beam lights, turn signals, 4-way flashers, clearance lights, taillights, and brake lights on the front, sides and rear of a commercial motor vehicle and trailer (combination only).

Why Inspect: Lights allow the driver of a commercial vehicle to see and be seen and to communicate with other traffic.

Inspection:

- Inspect that all lights on the front, sides and rear of the vehicle operate and illuminate when corresponding lights are turned on, including the left and right turn signals, 4-way flashers, low beam headlights, high beam headlights, clearance or marker lights, taillights and brake lights. Inspect that brake lights come "on" when brakes are applied and turn "off" when brakes are released.

Note: On a combination vehicle, you need only inspect the rear of the trailer..

Note: The operation of all external lights must be inspected from outside the vehicle. You may ask the examiner to assist you in inspecting the external operation of the lights. You will need to direct the examiner to the front, sides and rear of the vehicle or trailer (combination only), as you conduct the inspection. You are responsible for telling the examiner exactly which lights you would like them to inspect as you activate the lights from inside the vehicle. You will need to roll the window down and speak loud enough for the examiner to hear. If you forget or leave out a specific light, you will not get credit.

11M.5 – External Inspection (All Vehicles)

11M.5.1 – Front of Vehicle / Engine Area (Engine Off)

Lenses

Description: Light lenses or covers on the front of the vehicle/tractor.

Why Inspect: Light lenses or covers must be clean and free of damage for lights to work properly.

Inspection:

- Inspect that light lenses or covers are the proper color, clean, not broken and not missing.

Critical Fluid Levels

Description: Engine oil for engine lubrication; coolant for cooling the engine; steering fluid for assisting wheel action to the front wheels; and brake fluid for vehicle braking (hydraulic brakes only).

Why Inspect: Proper fluid levels ensure that engine, cooling, steering and brake systems (hydraulic brakes only) operate correctly and extends the life of the engine and these systems.

Inspection: With the engine off, indicate that fluids would be inspected for proper levels including the:

- engine oil;
- cooling system/coolant;
- power steering fluid; and
- brake fluid (hydraulic brakes only).

If applicable, indicate where to inspect the fluid level and where the dipstick(s) or sight glass(es) are located. Identify that you would inspect that the level is between the add and the full marks for each item.

Caution: Never remove the coolant radiator cap if the engine is hot.

Fluid and Air Leaks

Description: Fluid leaks from engine and other vehicle systems; and air leaks, if applicable.

Why Inspect: Fluid loss could indicate component failure in areas where levels might not be readily inspected (e.g., transmission or fuel systems). Air leaks could indicate component failure in areas that may not be readily inspected (e.g., air compressor and other air components).

Inspection:

- Look for puddles on the ground.
- Look for dripping fluids around and on underside of engine and transmission.
- Inspect hoses and air lines, if applicable, for condition and leaks.

Steering System

Description: Mechanisms that transform steering column action into wheel turning action.

Why Inspect: Worn, cracked, loose or broken steering parts could result in loss of steering. Movement in the linkage can cause the vehicle to wander or experience other serious control problems.

Inspection:

- Inspect that the power steering box is securely mounted and not leaking.
- Inspect that all steering hoses and connections are not cracked, worn or leaking.
- Inspect that the steering system has no missing nuts, bolts, or cotter keys.
- Inspect that visible connecting links, arms, and rods from the steering box to the wheel are not worn or cracked and that joints and sockets are not worn or loose.

11M.5.2 – Axle Components/Steering Axle

NOTE: Be prepared to perform the same inspection, described in this section (11M.5.2) on any of the vehicle axles.

Tires

Description: Tire/wheel assemblies in contact with the pavement.

Why Inspect: Underinflation increases the chance of blowout from excessive heat buildup due to increased flexing of the tire. Low tread depth increases the effect of hydroplaning, reduces traction and increases stopping distance.

Overinflation increases the chances of damage to the tire from curbs and potholes and loss of traction due to less tread in contact with the road. Cuts and bulges may cause tire failure, blowouts, and sudden loss of control.

Inspection: The following items must be inspected on each tire:

- Tire inflation: Inspect for proper inflation using a tire gauge. Make sure all valve stems are accessible.
- Tire condition: Inspect for cuts and damage that expose body plies to the tire in the tread and sidewall. Make sure that valve caps are not missing, and valve stems are not damaged or broken. Look for bumps and bulges in the sidewall and mismatched diameters in dual tires.
- Tread depth: Inspect for minimum tread depth with a tread depth gauge on all major tread grooves containing wear bars (4/32 on steering axle tires, 2/32 on all other tires).

NOTE: You will not get credit if you simply kick the tires or use a mallet to inspect for proper inflation. You must mention the use of a tire gauge.

NOTE: If the tires are equipped with an automatic tire inflation system (ATIS) or tire pressure monitoring system (TPMS) that has hoses connected to the tire valve stems, you need only mention that tire pressure is monitored and adjusted by an automatic system and inspect that it is working properly.

Rims/Wheels

Description: The metal rims/wheels which tires are mounted on.

Why Inspect: Damaged rims can result in loss of a tire from the rim, loss of a wheel from an axle, loss of air pressure in a tire, a wheel rolling off a rim due to damage to flange, or split rim. A damaged wheel can result in loss of vehicle control, leading to a crash. Wheels and rims should be inspected for conditions that could result in a complete or partial wheel separation or air loss in the tire.

Inspection:

- Inspect for damaged, cracked or bent rims. Rims cannot have welding repairs. Inspect for rust trails that may indicate rim is loose on a wedge wheel, if applicable.
- Inspect studs and bolt holes to make sure they are not elongated (out of round) and there are no missing or loose nuts or bolts.

Wheel Fasteners (Lug Nuts)

Description: Holds wheel on axle.

Why Inspect: Loose or missing lug nuts could result in the loss of a wheel and lead to a crash.

Inspection:

- Inspect that all lug nuts are present.
- Inspect that lug nuts are not loose and there are no signs of rust trails or shiny threads that may show looseness.
- Inspect that there are no broken studs.

Springs and Air Bags and Shocks

Description: Leaf or coil springs for dampening wheel vibration forces created by rolling over road surface. Air bags that accompany springs or serve as the primary suspension system. Gas or hydraulic devices (shocks) that cushion suspension and stabilize the vehicle.

Why Inspect: Damaged or missing leaf springs or coils may lead to loss of control or rollover if the vehicle falls on the frame or on a tire. Shifted springs may strike a tire causing a blowout or interference with steering. Damaged air bags or shocks can affect vehicle handling and stopping distances.

Inspection: The following items must be inspected, where visible and accessible, on each axle:

- Inspect for missing, shifted, cracked, or broken leaf springs and inspect that spring mounts are not cracked, broken or missing any parts.
- Inspect for broken or distorted coil springs and inspect that mounts are not cracked, broken or have any missing parts.
- Inspect that the air ride suspension is secure, not damaged and not leaking (if equipped).
- Inspect that shock absorbers are secure, not damaged and not leaking (if equipped).
- Inspect that the vehicle is sitting level (front to rear and side to side).

NOTE: Inform the examiner if the suspension components are not visible or accessible, such as transit or motor coach buses, and inspect that the vehicle is sitting level (front to rear and side to side) and note that a leaning vehicle may indicate a suspension problem.

Brake Lines / Hoses / Leaks

Description: Carries air or hydraulic fluid to wheel brake assembly.

Why Inspect: Loss of hydraulic fluid may lead to loss of brake power and response. Loss of air pressure may cause wheel lockup.

Inspection:

- Inspect that hoses or lines can supply air or hydraulic fluid to the brakes and are not leaking.
- Inspect for cracked, worn or frayed hoses or lines.
- Inspect that all hose or line couplings and fittings are secure.

NOTE: If electric brakes, inspect that electric lines are secure, and casing is not worn or cracked.

Brake Contaminates

Description: Contamination, such as grease, oil, etc., that can affect braking performance when slowing or stopping the vehicle.

Why Inspect: Contaminates on the brakes can cause a reduction in braking friction which may lead to a crash. Contaminates can also create a fire hazard.

Inspection:

- If accessible, inspect for contaminants such as grease, oil, etc., on the brake lining or pads and the brake drum or disc that can affect braking capabilities.

11M.5.3 – Side of Vehicle

Lenses and Reflectors

Description: Light lenses or covers and reflectors on the sides of the vehicle and trailer (combination only).

Why Inspect: Light lenses or covers must be free of damage for lights to work properly. Reflectors allow the driver of a commercial vehicle to be seen and to communicate presence with other traffic.

Inspection:

- Inspect that light lenses or covers on the sides of the vehicle and trailer (combination only) are the proper color, clean, not broken or missing.
- Inspect that reflectors on the sides of the vehicle and trailer (combination only) are the proper color, clean, not broken or missing.

Traffic Monitoring Devices

Description: Side view mirrors for rear view of traffic to the sides and behind (all vehicles). Other monitoring devices, such as cameras, may be utilized with mirrors or instead of mirrors.

Why Inspect: Mirrors or other monitoring devices provide visibility to the sides and rear of the vehicle. The driver must be able to see other traffic, especially in blind areas.

Inspection:

- Inspect that mirror(s) are clean and not cracked and mirror brackets are not bent and are mounted securely with no missing parts.
- If equipped, rear and side view monitoring devices or cameras must be clean to view from the inside.

Battery/Electrical System

Description: Batteries that supply electrical current for vehicle functions or serve as a partial or primary source for vehicle power.

Why Inspect: Damage to the batteries, electrical system or electric motor can cause vehicle breakdowns or electrical shortage leading to a fire onboard the vehicle.

Inspection:

- Inspect that batteries are secure, if visible.
- Inspect that all connections are tight and should not show signs of excessive corrosion, if visible.
- Inspect all electrical system cables and lines are secure and not cracked or worn.
- Inspect that the battery box, cover or door is secure, if applicable.

NOTE: Inform the examiner if the batteries are not visible or accessible.

Fuel Tank(s)

Description: A container that holds fuel.

Why Inspect: Leaks are a fire hazard and can cause driving hazards to other traffic. Fuel on pavement can be very slippery.

Inspection:

- Inspect that all fuel tank(s), including Diesel Exhaust Fuel (DEF) tank(s), if equipped, are securely mounted, cap(s) are tight, and that there are no leaks from tank(s) or lines.

Frame(s)

Description: Structural members for supporting vehicle body or trailer body.

Why Inspect: Loose or cracked frame members may reduce vehicle stability, cause handling and cornering problems (e.g., wandering, possible rollover) resulting in total loss of vehicle control. Cracks, breaks or holes in the cargo area can result in possible loss of cargo.

Inspection:

- Inspect for cracks, broken welds, holes or other damage to the frame members, including the trailer, if applicable.
- Inspect for cracks, breaks or holes in the cargo area or floor, including the trailer, if applicable.
- Inspect that trailer tandem release lever and pins are secure, if applicable.

11M.5.4 – Rear of Vehicle or Trailer

Lenses and Reflectors

Description: Light lenses or covers and reflectors on rear of vehicle or trailer (combination only).

Why Inspect: Light lenses or covers must be free of damage for lights to work properly. Reflectors allow the driver of a commercial vehicle to be seen and to communicate presence with other traffic.

Inspection:

- Inspect that light lenses or covers are the proper color, clean, not broken and not missing.
- Inspect that reflectors are the proper color, clean, not broken and not missing.

NOTE: On a combination vehicle, you need only inspect the rear of the trailer.

11M.6 – COMBINATION VEHICLES

11M.6.1 – Combination Vehicles Only

Air and Electric Lines / Connectors

Description: Carry air and electricity from power unit to trailer.

Why Inspect: Air Brakes – Loss of air to the trailer will result in a partial or total loss of braking to the towed unit. A low air condition will cause sudden application of the trailer's spring brakes, which may result in loss of control and lead to a crash.

Electric Brakes – Loss of electrical connection to the trailer will result in total loss of braking and control to the towed unit and can lead to a crash.

Electric Lines – Damaged lines may result in loss of the vehicle's ability to communicate its maneuvers to other drivers (no turn, or brake lights). Not being seen by other traffic at night is a serious traffic hazard and can lead to a crash.

Inspection:

- Inspect that air and electric connectors on the power unit and trailer are seated and sealed, free of damage and locked into place.
- Inspect that air hoses and electrical lines are not cut, cracked, chafed, spliced, taped or worn (steel braid/electrical conductor must not show through). Listen for air leaks (air brake systems only).
- Inspect that electrical lines and air lines (if equipped) are not tangled, crimped or pinched, or dragging against vehicle parts or the ground.

NOTE: You must inspect the connections on both the power unit and trailer to receive credit.

For the remainder of this section (11M.6.1), you will need to study the type of coupling system your vehicle is equipped with – that you will be using for your Vehicle Inspection test:

- Fifth Wheel Combination, or
- Pintle Hook Combination, or
- All Other Types of Combinations.

FOR FIFTH WHEEL COMBINATIONS ONLY

Fifth Wheel Skid Plate

Description: Plate on which the trailer rests and secures the trailer kingpin.

Why Inspect: A faulty or damaged fifth wheel skid plate and an improper connection between the tractor and the trailer can result in handling problems, rollover, or separation of the tractor and trailer leading to a crash.

Inspection:

- Inspect that the fifth wheel skid plate is securely mounted to the vehicle by the fifth wheel platform.
- Inspect for cracks, breaks or excessive wear.
- Inspect for proper lubrication, if applicable.

Kingpin, Apron & Gap

Description: Pin that attaches the semi-trailer to tractor (kingpin) and the metal plate attached to the kingpin that provides the surface for resting the trailer on the fifth wheel (apron).

Why Inspect: Wear or damage to the kingpin can result in handling problems, rollover, or separation of the tractor and trailer leading to a crash.

Inspection:

- Inspect that the kingpin is in place and not bent, damaged or worn.
- Inspect that the visible part of the apron is not bent, cracked, or broken.
- Inspect that the trailer is lying flat on the fifth wheel skid plate and there is no space between the apron and fifth wheel (no gap).
- Inspect for proper lubrication, if applicable.

FOR PINTLE HOOK COMBINATIONS ONLY

Pintle Hook

Description: Tow hitch or receiving coupling which the trailer drawbar ring/eye locks into.

Why Inspect: A faulty or damaged pintle hook and an improper connection between the power unit and the trailer can result in handling problems, rollover, or separation of the power unit and trailer leading to a crash.

Inspection:

- Inspect that the pintle hook is securely mounted to the vehicle frame.
- Inspect for loose or missing parts including mounting bolts, nuts, pins, brackets and clamps.
- Inspect for cracks, breaks or excessive wear.

Trailer Drawbar Ring & Tongue

Description: Trailer drawbar ring or eye attached to the front of the trailer tongue that secures into the pintle hook for coupling. The trailer tongue that extends from the trailer's main body frame to allow for coupling and turning.

Why Inspect: Wear, damage, cracks or improper welds in the drawbar ring and trailer tongue may result in loss of the trailer leading to a crash.

Inspection:

- Inspect that the drawbar ring or eye is not bent or twisted.
- Inspect that the drawbar ring or eye is secured to the trailer tongue and there are no loose or missing bolts, broken welds, or cracks.
- Inspect that the drawbar ring or eye is not worn.
- Inspect the trailer tongue for dents, twists, cracks, and broken welds and that the trailer tongue can support the weight of the load. If extendable, inspect that bolts, locking pins and cotter pins are in place.

ALL OTHER TYPES OF COMBINATIONS

Note: Coupling systems vary. If you have another type of coupling system, you will need to describe to the examiner how it works and what you are inspecting.

Tow Hitch

Description: Tow or receiver hitch and trailer ball, which the trailer coupler rests on.

Why Inspect: A faulty or damaged tow hitch or other mechanism and an improper connection between the power unit and the trailer can result in handling problems, rollover, or separation of the power unit and trailer leading to a crash.

Inspection:

- Inspect that the tow hitch or other mechanism is securely mounted to the vehicle frame. Inspect sway bar/control, if equipped.
- Inspect for loose or missing parts including mounting bolts, nuts, pins, brackets and clamps, including the trailer ball or other mechanism.
- Inspect for cracks, breaks or excessive wear.

Trailer Coupler & Tongue

Description: Trailer coupler attached to the front of the trailer tongue that latches to the trailer hitch and trailer ball. The trailer tongue that extends from the trailer's main body frame to allow for coupling and turning.

Why Inspect: Wear, damage, cracks or improper welds in the trailer coupler and trailer tongue may result in loss of the trailer, leading to a crash.

Inspection:

- Inspect that the trailer coupler is not bent or twisted.
- Inspect that the trailer coupler is secured to the trailer tongue and there are no loose or missing bolts, broken welds, or cracks.
- Inspect that the trailer coupler is not worn.
- Inspect the trailer tongue for dents, twists, cracks, and broken welds and that the trailer tongue can support the weight of the load. If extendable, inspect that bolts, locking pins and cotter pins are in place.

Locking and Safety Devices

Description: Locking connection and safety devices that keep the trailer locked into place.

Why Inspect: The trailer could uncouple during travel if the locking mechanisms are not secured. Safety devices help to keep the locking mechanism in place and provide assistance should the connection fail.

Inspection: *Fifth Wheel Coupling Systems Only*

- Look into fifth wheel gap and inspect that locking jaws or lever are fully secured around the kingpin and inspect for play between kingpin and locking jaws/lever.
- Inspect that the release arm is in the engaged position and the safety latch or lock (if equipped) is in place.
- Inspect the sliding fifth wheel locking pins (if equipped) for damage and the pins are fully engaged.

Inspection: *All Other Coupling Systems*

- Inspect the locking mechanism or latch for missing or broken parts and make sure the pintle or hitch release lever or latch is locked in place and secure.
- Inspect that safety pins and cotter pins are in place and not missing, if present.
- Inspect that safety cables or chains are secure, crossed, and free of kinks and excessive slack, if present. Breakaway cables must be engaged.

11M.6.2 – Trailers Only

Landing Gear & Clearance

Description: Supports front end of trailer when trailer is not coupled to a truck or tractor.

Why Inspect: Landing gear must be raised properly so that it will not strike the ground during travel and must clear the back of the power unit while turning. Its handle must be secured to the vehicle so it will not move and strike other traffic. Any damage to landing gear supports may result in the trailer tipping or falling over when disconnected.

Inspection:

- Inspect that the landing gear is fully raised, has no missing parts, the crank handle is secure, and the support frame and landing pads are not damaged.
- If power operated, inspect for air or hydraulic leaks.
- If tractor semi-trailer, inspect that the fifth wheel is positioned properly so that the tractor frame will clear the landing gear during turns.

Reflective Tape

Description: Reflective tape on the side and rear of the trailer, if required.

Why Inspect: Reflective tape on a trailer allows the driver of a commercial vehicle to be seen and to communicate presence with other traffic.

Inspection:

- Inspect that reflector tape on the sides and rear of the trailer are present and affixed securely to the vehicle.

Note: Reflective tape is only required for trailers. Some jurisdictional laws may require for school buses.

Basic Control Skills Test

Remember, the Vehicle Inspection test must be passed before you can proceed to the Basic Control Skills Test (covered in the next section).

Class A Checklist
Tractor Semi-Trailer or Truck & Trailer or Bus & Trailer

In-Vehicle/Engine Start
- ☐ *Air or hydraulic brake check
- ☐ Parking & trailer brake check
- ☐ Service brake check
- ☐ Lighting indicators
- ☐ Emergency equipment
- ☐ Windshield & traffic monitoring devices
- ☐ Wipers & washers
- ☐ Heater & defroster
- ☐ Horn(s)

Lights Operations Check
- ☐ All external lights

Front of Vehicle/Engine Area
- ☐ Lenses
- ☐ Fluid levels
- ☐ Fluid & air leaks
- ☐ Steering systems

Steering Axle
- ☐ Tires
- ☐ Rims
- ☐ Lug nuts
- ☐ Springs/mounts & air bags & shocks
- ☐ Brake lines or hoses & leaks
- ☐ Brake contaminates

Side of Vehicle
- ☐ Lenses & reflectors
- ☐ Traffic monitoring devices
- ☐ Battery
- ☐ Fuel tank(s)/DEF tank
- ☐ Frame(s)

Combination Vehicles Only
- ☐ Air & electric lines & connectors
- ☐ Fifth wheel skid plate or pintle hook or tow hitch
- ☐ Kingpin & apron & gap or drawbar ring & tongue or coupler & tongue
- ☐ Locking & safety devices

Trailer Only
- ☐ Landing gear & clearance
- ☐ Reflective tape

Rear of Trailer
- ☐ Lenses & reflectors

Passenger and School Bus Only
- ☐ Passenger entry & lift
- ☐ Emergency exits
- ☐ Passenger seating
- ☐ Passenger monitoring devices

School Bus Only
- ☐ Student lights (front & back)
- ☐ Stop arm(s) & safety arm
- ☐ First aid & body fluid kits

* Automatic failure if Air Brake or Hydraulic Brake check is not explained and demonstrated correctly.

You are only required to inspect the items on the CDL Vehicle Inspection checklist. You may use this checklist for your test and check off items as you have completed them, **NO** additional markings or writing may be placed on this list. You **MUST** name, point to and/or touch and fully explain what you are inspecting each safety critical item for. If you do not do so, you will not get credit for the item(s).

Class B or Class C Checklist
Straight Truck or Other Straight Vehicle

In-Vehicle/Engine Start

- ☐ *Air or hydraulic brake check
- ☐ Parking & trailer brake check
- ☐ Service brake check
- ☐ Lighting indicators
- ☐ Emergency equipment
- ☐ Windshield & traffic monitoring devices
- ☐ Wipers & washers
- ☐ Heater & defroster
- ☐ Horn(s)

Lights Operations Check

- ☐ All external lights

Front of Vehicle/Engine Area

- ☐ Lenses
- ☐ Fluid levels
- ☐ Fluid & air leaks
- ☐ Steering systems

Steering Axle

- ☐ Tires
- ☐ Rims
- ☐ Lug nuts
- ☐ Springs/mounts & air bags & shocks
- ☐ Brake lines or hoses & leaks
- ☐ Brake contaminates

Side of Vehicle

- ☐ Lenses & reflectors
- ☐ Traffic monitoring devices
- ☐ Battery
- ☐ Fuel tank(s)/DEF tank
- ☐ Frame(s)

Rear of Vehicle

- ☐ Lenses & reflectors

* Automatic failure if Air Brake or Hydraulic Brake check is not explained and demonstrated correctly.

You are only required to inspect the items on the CDL Vehicle Inspection checklist. You may use this checklist for your test and check off items as you have completed them, **NO** additional markings or writing may be placed on this list. You **MUST** name, point to and/or touch and fully explain what you are inspecting each safety critical item for. If you do not do so, you will not get credit for the item(s).

Class B or Class C Checklist
Passenger or School Bus

In-Vehicle/Engine Start
- ☐ *Air or hydraulic brake check
- ☐ Parking & trailer brake check
- ☐ Service brake check
- ☐ Lighting indicators
- ☐ Emergency equipment
- ☐ Windshield & traffic monitoring devices
- ☐ Wipers & washers
- ☐ Heater & defroster
- ☐ Horn(s)

Passenger and School Bus Only
- ☐ Passenger entry & lift
- ☐ Emergency exits
- ☐ Passenger seating
- ☐ Passenger monitoring devices

School Bus Only
- ☐ Student lights (front & back)
- ☐ Stop arm(s) & safety arm
- ☐ First aid & body fluid kits

Lights Operations Check
- ☐ All external lights

Front of Vehicle/Engine Area
- ☐ Lenses
- ☐ Fluid levels
- ☐ Fluid & air leaks
- ☐ Steering systems

Steering Axle
- ☐ Tires
- ☐ Rims
- ☐ Lug nuts
- ☐ Springs/mounts & air bags & shocks
- ☐ Brake lines or hoses & leaks
- ☐ Brake contaminates

Side of Vehicle
- ☐ Lenses & reflectors
- ☐ Traffic monitoring devices
- ☐ Battery
- ☐ Fuel tank(s)/DEF tank
- ☐ Frame(s)

Rear of Vehicle
- ☐ Lenses & reflectors

* Automatic failure if Air Brake or Hydraulic Brake check is not explained and demonstrated correctly.

You are only required to inspect the items on the CDL Vehicle Inspection checklist. You may use this checklist for your test and check off items as you have completed them, **NO** additional markings or writing may be placed on this list. You **MUST** name, point to and/or touch and fully explain what you are inspecting each safety critical item for. If you do not do so, you will not get credit for the item(s).

SECTION 12M — BASIC CONTROL SKILLS TEST

This Section Covers

12M.1 – Scoring
12M.2 – Exercises
12M.3 – Road Test

For the Basic Control Skills test, you will demonstrate basic skills in a commercial vehicle and judging its position in relation to other objects.

It tests for the basic skills needed for safe control and operation of the vehicle. The types of judgment and skills required for these skills are also required in many different driving situations.

You will receive points for changing direction to gain a better position, crossing over or touching boundary lines or cones and for your final position.

You may be permitted to exit the vehicle to check around the vehicle during backing exercises. When entering/exiting the vehicle, you must set your parking brake, place the vehicle in neutral, and safely exit/enter by facing the vehicle and maintaining three (3) points of contact at all times (when entering/exiting a bus, face forward and maintain a firm grasp on the handrail).

If at any time you open the door, move from a seated position when in physical control of the vehicle, (or on a bus, walk to the back to get a better view), you will be scored for a look.

You will receive specific instructions for each exercise prior to performing them. You will have an opportunity to ask questions. You must complete the exercise as directed. If you see the examiner raise their hand (like this), stop and return your vehicle within the exercise boundary lines.

Your Basic Control Skills test will include the following exercises, either off-road or somewhere on the street during the Road Test:

Step 1 – Forward Stop,

Step 2 – Straight-Line Backing,

Step 3 – Forward Offset Tracking, and

Step 4 – Reverse Offset Backing.

These exercises are shown in Figures 12M.1 through 12M.4 on page 12M-4.

12M.1 – Scoring

During the Basic Control Skills test exercises, you will be scored for:

Pull-ups – pulling forward on a backing exercise to clear an encroachment or to get a better position is scored as a "pull-up." These exercises include Exercise 2 – Straight-Line Backing and Exercise 4 – Reverse Offset Backing. The examiner will score the number of times you pull-up.

Stopping without changing direction does not count as a pull-up.

You will not be penalized for initial pull-ups. However, an excessive number of pull-ups, will count as errors. Your examiner will cover "pull-ups" when giving instructions for these exercises.

Back-ups – backing up on a forward moving exercise to clear an encroachment or to get a better position is scored as a "back-up." "Back-ups" will be scored on Exercise 3 – Forward Offset Tracking. The examiner will score the number of times you back-up.

Encroachments – crossing over or touching exercise boundary lines or cones with any portion of your vehicle, other than the vehicle's mirrors (door or fender) or other unique vehicle parts at door mirror height or higher, such as a bucket truck, is scored as an encroachment. Unique parts below door mirror height are counted as an "encroachment."

If you have encroached, the examiner will stop you and you must return the vehicle within the exercise boundaries. You must stop immediately when signaled by the examiner. The examiner will score the number of times you touch or cross over an exercise boundary line or cone. Each encroachment will count as an error.

Looks – exiting the vehicle while performing an exercise to check the vehicle's position while backing. You may be permitted to safely stop and exit the vehicle to check the external position of the vehicle (look).

When doing so, you must set the parking brake(s) and place the vehicle in neutral. Then, when exiting/entering the vehicle, you must do so safely by facing the vehicle and maintaining three (3) points of contact

with the vehicle at all times (when exiting/entering a bus, you may face forward and maintain a firm grasp on the handrail). If you do not safely secure the vehicle or safely exit/enter the vehicle, it may result in an automatic failure for an unsafe act.

If you open your door or move from a seated position, it will count as a "look." If you open your door while the vehicle is moving (not in neutral and park), it may result in an automatic failure for an unsafe act.

On a bus, if you walk to the back of the bus to get a better view, it will count as a "look."

You may be allowed a maximum of one (1) free look on Exercise 2 – Straight-line Backing, and two (2) free looks on Exercise 4 – Reverse Offset Backing, to check the position of your vehicle. Your examiner will cover "looks" when giving instructions for these exercises.

Final Position – the final position of the vehicle for backing exercises. You will be scored for final vehicle position on Exercise 2 – Straight-Line Backing and on Exercise 4 – Reverse Offset Backing.

It is important that you finish each exercise exactly as the examiner has instructed. Your vehicle must be within final exercise boundaries (other than mirrors and unique vehicle parts higher than the door mirrors, such as a bucket truck). If you do not maneuver the vehicle into its final position as described by the examiner, you will be penalized and will fail the Basic Control Skills test. You MUST complete the exercises as directed.

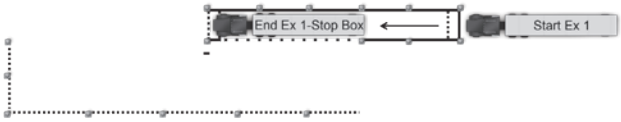
Failure to Follow Instructions or Unsafe Act – Failure to follow examiner instructions for completing the exercise as directed may result in an automatic failure and the test may be terminated by the examiner. Always follow the examiner instructions and directions. If you do not understand the instructions or understand how to complete the exercises, ask the examiner for clarification. **[If permitted, you may ask the examiner to walk you through the exercise area.]**

Committing an "unsafe act" (e.g., forgetting to set the parking brake or opening the door while in motion), may result in an automatic failure for an unsafe act and the test may be terminated by the examiner. Safety of the driver, the examiner and the testing area is of the highest priority. Always think SAFETY.

12M.2 – Exercises

12M.2.1 – Exercise 1 – Forward Stop

You will demonstrate your ability to judge the front of your vehicle during a controlled stop. Drive forward through the alley and stop with the front most part of the vehicle (other than unique vehicle parts higher than the door mirrors, such as a bucket truck) within the box at the end of the alley without going past it. You may stop only once.



Your examiner will point out the front most part of your vehicle when giving instructions for this exercise.

When you have stopped, set your parking brake, shift to neutral and sound the horn. The examiner will then score the exercise. You will receive points if the front most part of the vehicle (other than unique vehicle parts higher than the door mirrors, such as a bucket truck) is **not** in the stop box. (See Figure 12M.1 on page 12M-4).

12M.2.2 – Exercise 2 – Straight Line Backing

You will demonstrate your ability to back a vehicle in a straight line. From your stopped position from the previous exercise, the examiner will ask you to pull forward and stop when they raise their hand (like this ✋).

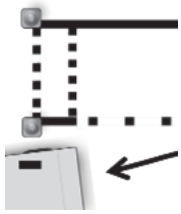
Then back straight through the alley until the front of your vehicle has cleared the last set of cones at the far end of the alley. (See Figure 12M.2 on page 12M-4.)

You will be scored for pull-ups, encroachments and final position.

You are allowed one (1) free pull-up and may safely exit the vehicle only one (1) time to check around the vehicle.

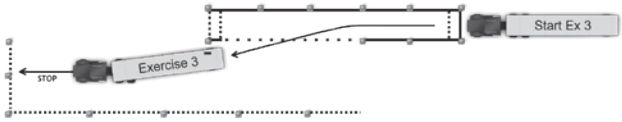
When you have completed the exercise, set your parking brake, shift to neutral and sound your horn. This will inform the examiner you have completed the exercise and allow them to score your final position.

12M.2.3 – Exercise 3 – Forward Offset Tracking



You will demonstrate your ability to maneuver a vehicle around other objects while moving forward.

You will drive forward and steer to the left through the opening into the opposite lane, keeping the right most rear tire between the cone and the line.



You will be scored for back-ups, encroachments and forward tracking clearance (rear tire between the cone and the line).

There are NO free back-ups, and you are NOT permitted to exit the vehicle during this exercise.

Stop your vehicle when you are parallel to the outer boundary, prior to or at the cones at the far end of the exercise. Then, set your parking brake, shift to neutral and sound your horn. This will inform the examiner you have completed the exercise and allow them to score the exercise. (See Figure 12M.3 on page 12M-4.)

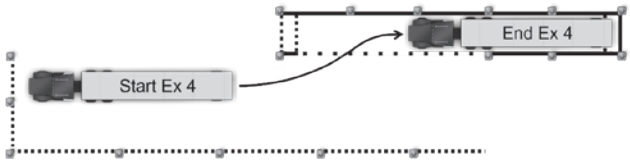
12M.2.4 – Exercise 4 – Reverse Offset Backing

You will demonstrate your ability to offset back and park a vehicle at the end of an alley. Starting parallel with the outer boundary, offset back into the alley, bringing the rear most part of your vehicle (other than unique vehicle parts higher than the door mirrors, such as a bucket truck) within three (3) feet of the rear of the alley.

Stop with the rear most part of the vehicle (other than unique vehicle parts) in the three (3) foot box at the end of the alley.

Your examiner will point out the rear most part of your vehicle when giving instructions for this exercise.

Your vehicle must be straight within the alley when completed. Your vehicle must be completely within the defined exercise boundaries when completed (other than mirrors or other unique vehicle parts higher than the door mirrors, such as a bucket truck). You may not go beyond the outer boundary line. (See Figure 12M.4 on page 12M-4.)



You will be scored for pull-ups, encroachments and final position.

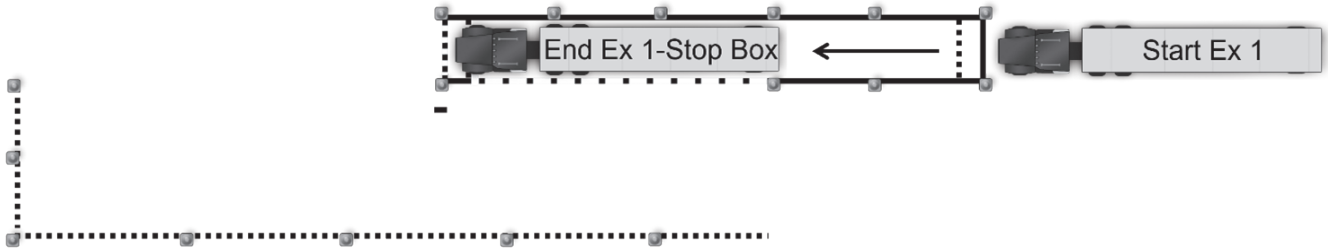
You are allowed two (2) free pull-ups and may exit the vehicle a maximum of two (2) times to check around the vehicle during this exercise.

When you have completed the exercise, set your parking brake, shift to neutral and sound your horn. This will inform the examiner you have completed the exercise and allow them to score your final position.

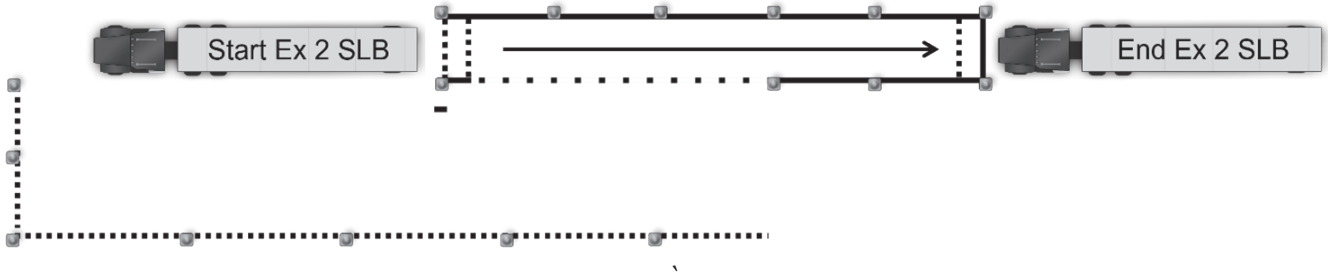
12M.3 – Road Test

Remember, the Basic Control Skills test must be passed before you can proceed to the Road Test

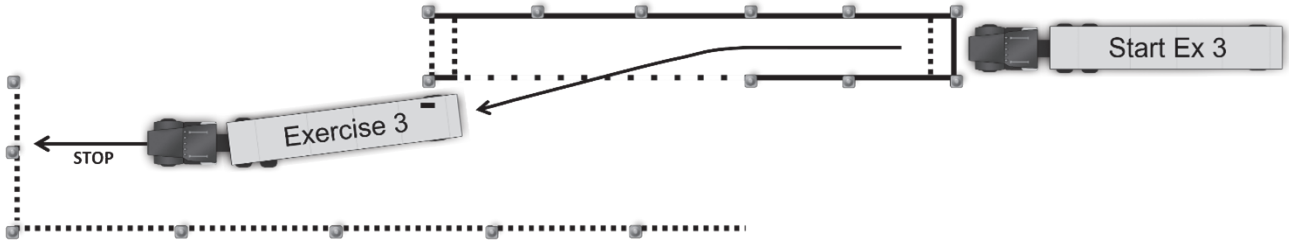
Basic Control Skills Test Exercises



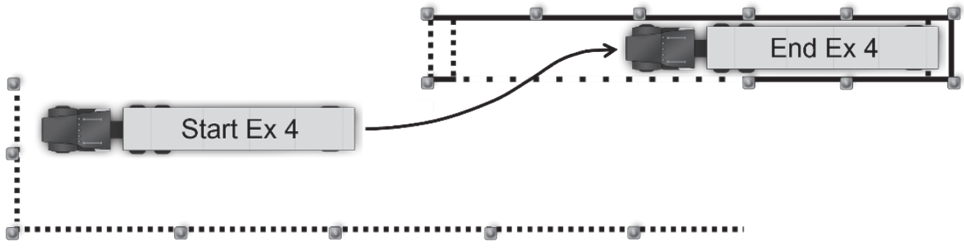
Exercise 1 – Forward Stop
Figure 12M.1



Exercise 2 – Straight Line Backing
Figure 12M.2

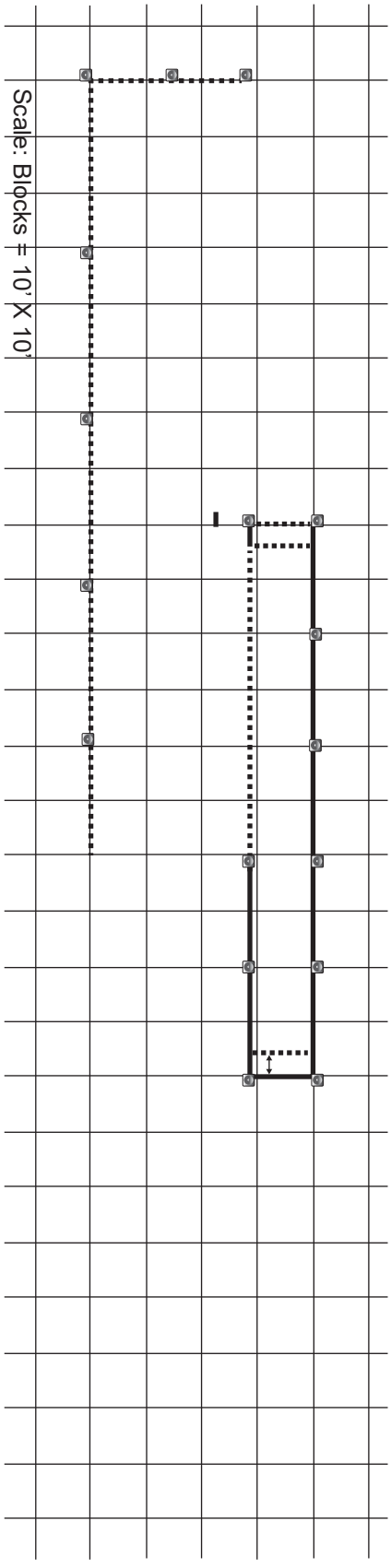
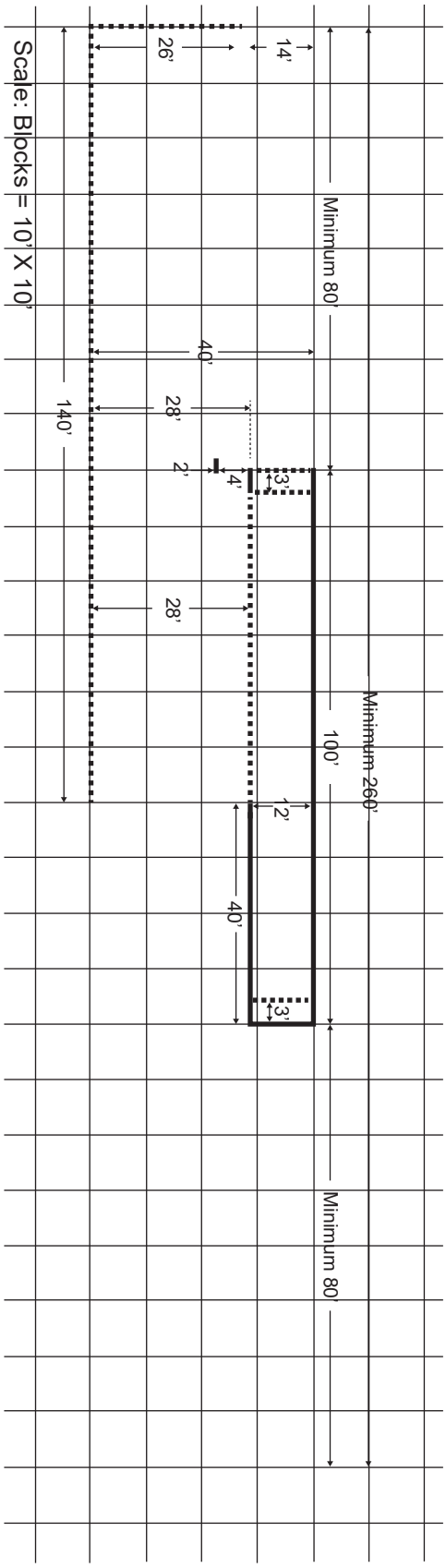


Exercise 3 – Forward Offset Backing
Figure 12M.3



Exercise 4 – Reverse Offset Backing
Figure 12M.4

Basic Control Skills Diagram w/ Cone Placement



Basic Control Skills Dimensions