

# Skill Standards for Entry-Level Tractor-Trailer Drivers



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## PREFACE

This publication is made available in the interest of truck safety and the advancement of tractor-trailer driver training.

The skill standards and accompanying curriculum standards that may be attached hereto are the product of the collective wisdom of more than 250 motor carrier safety personnel, drivers, and educators teaching in the field of tractor-trailer operating, curriculum and safety. The curriculum standards represent the touchstones that a tractor-trailer driver-training course should contain, and against which any such course may be judged. The absence of any particular performance element(s) and/or criterion/criteria from a training program should not signify a deficiency in that program, as each course of instruction must be considered individually.

The curriculum standards that may be attached hereto incorporate the curricular recommendations of the U. S. Department of Transportation's Federal Highway Administration's Office of Motor Carriers. They represent the minimum curriculum judged by the Professional Truck Driver Institute, Inc. (PTDI) (formerly, Professional Truck Driver Institute of America) to be necessary prior to operating a tractor-trailer.

The standards and requirements for course certification that may be attached hereto have been adopted as the official policy of PTDI and serve as the criteria by which PTDI evaluates the training course(s) and curriculum of organizations seeking certification. The standards specified in this document must be substantively met before PTDI approves of and issues its certification to a driver-training course.

The contents of this publication do not represent official policy of any governmental or quasi-governmental agency. PTDI expressly disclaims any and all liability for the content, use, and application of these skill, curriculum, and course certification standards, and makes no representation or warranty as to the fitness of any individual who has been trained in accordance with the standards or procedures detailed herein.

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Note: These Skill Standards are one of three sets of standards – “Skill Standards for Entry-Level Tractor-Trailer Drivers,” “Curriculum Standard Guidelines for Entry-Level Tractor-Trailer Driver Courses” and “Certification Standards & Requirements for Entry-Level Tractor-Trailer Driver Courses.”

## INTRODUCTION

Skill standards describe in detail the work and quality of work that truckers perform. The standards position our industry to continue to improve safety, to be profitable into the next century, and provide a basis for many of the materials and processes that we use in training and in performance assessment for workers in the industry.

Skill standards enable at least the following:

- They enable training providers to better plan and develop curriculum, assessment, and instructional materials.
- They encourage individual workers to set goals and to assess their progress toward those goals in terms of the things they know how to do as truck drivers.
- They allow employers to differentiate and market their product with confidence that the work done by their employees is of the best possible quality, the safest procedures, and the most productive available.
- Skill standards help the industry achieve international recognition for quality and indicate that the jobs performed by truck drivers are significant and well performed.
- Skill standards are the statements of what drivers must actually know and do on the job, as reported by the drivers themselves. Skill standards and curriculum standards are not the same thing. Skill standards are a "role map" of content for driver training programs to use as they develop curriculum and instructional exercises. Curriculum standards are what and how the schools teach their selected course content. Schools are not responsible for teaching all the skills and knowledge listed in the Skill Standards; trucking firms also must teach some of the information, and the driver must master additional information on his/her own.

## OVERVIEW OF THE STANDARDS

There follows a set of standards for entry-level tractor-trailer drivers in the form of a long-distance hauler. The standards describe the skill and knowledge base as well as the performance criteria critical for success as an entry-level driver. The standards are based on information collected from high performance drivers, as nominated by their companies throughout the United States. The skills address issues ranging from managing life on the road to backing a tractor-trailer in traffic. The materials form a baseline from which to develop curriculum, instructional materials, exercises, and assessment routines in training.

## APPROACH

The skill standards have been developed through a collaborative effort of schools, truck drivers, trucking firms, and trucking associations throughout the industry. The information builds from data originally created by the U.S. Department of Transportation and the Professional Truck Driver Institute (PTDI) about the tasks, skills, and duties necessary to be a successful truck driver. The process of updating that information involved performing an extended search of the literature; conducting extensive structured interviews with high performance truck drivers; and involving truckers, trucking firm representatives, and driver/trainers in a survey to document the

importance and frequency of the skills, tasks, and knowledge suggested through the extended search and the structured group interviews.

That information then was compiled into a role map for truckers which was reviewed and refined by experts from trucking firms and schools and was used as the basis of developing the skill standards. The standards then were reviewed and elaborated upon by owners and trainers from trucking firms, as well as teachers and school administrators from trucking schools.

The result is a set of standards that should be useful to guide the training and performance of entry-level tractor-trailer drivers.

## **BENEFITS**

The benefits arising from skill standards include specific outcomes useful to each of the major stakeholders in the industry. That is, there are benefits from skill standards for employers, for education and training providers, and for individual workers. Each of those is expressed below.

For employers, skill standards will:

- Improve employee recruitment and retention by more clearly identifying skill requirements.
- Encourage improved responsiveness and performance of education and training providers.
- Enlarge the pool of skilled workers.
- Focus attention on the importance of the training investment.

For education and training providers, skill standards will:

- Provide information on changes in the modern workplace for all major industries and occupations.
- Contribute to program and curriculum development by providing an inventory of critical work performances.
- Strengthen the relationship between education and training providers and the trucking industry.
- Help them communicate with students and workers to improve career planning.

For students and workers, skill standards will:

- Help them make better decisions about careers and the training necessary to obtain well-paying jobs.
- Allow them to communicate more effectively to an employer what they know and can do.
- Allow them to work more effectively with employers in career development and skill upgrading.

## **FORMAT**

The following standards are for entry-level tractor-trailer drivers and do not assume attainment of solo, first-seat skills. Standards are presented for each of the major duties or functions of entry-level truckers, as defined by the role map. Each standard contains a statement of the duty competency; a performance criterion, and a list of necessary elements for the duty. Knowledge required to perform the duty, attitude statements (if applicable), and the skill matrix are included in the appendices.

## **Primary Functions/Duties: Long Distance Hauler**

1. Read and Interpret Control Systems
2. Perform Vehicle Inspections
3. Exercise Basic Control
4. Execute Shifting
5. Back and Dock Tractor-Trailer
6. Couple Trailer
7. Uncouple Trailer
8. Perform Visual Search
9. Manage and Adjust Vehicle Speed
10. Manage and Adjust Vehicle Space Relations
11. Check and Maintain Vehicle Systems/Components
12. Diagnose and Report Malfunctions
13. Identify Potential Driving Hazards and Perform Emergency Maneuvers
14. Identify and Adjust to Difficult and Extreme Driving Conditions
15. Handle and Document Cargo
16. Deal with Accident Scenes and Reporting Procedures
17. Deal with Environmental Issues
18. Plan Trips/Make Appropriate Decisions
19. Use Effective Communication and Public Relations Skills
20. Manage Personal Resources/Deal with Life on the Road
21. Record and Maintain Hours of Service Requirement

<b>Performance Skill: READ AND INTERPRET CONTROL SYSTEMS</b>
--

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given the cab instrumentation and control panels of a typical truck tractor that is in operation,...

**Statement of Work to be Performed:**

... the driver will identify and locate, read, and interpret the typical vehicle instruments and controls of a tractor-trailer rig.

**Performance Criteria:**

- Drivers must identify and locate each of the vehicular driving controls and the various monitoring devices (gauges, alarms, lights, etc.) required to operate the vehicle safely and efficiently.
- Drivers must read instrument/gauge accurately within  $\pm 1$  unit of measure correctly each time.
- Drivers must operate control/switch correctly each time.
- Drivers must supplement gauge/control information with other data.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Identify, locate, and read/operate each of the primary controls including those required for - steering, accelerating, shifting, braking, and parking.
2. Identify, locate, and read/operate each of the secondary controls including those required for -- control of lights, signals, windshield wipers and washers, interior climate, engine starting and shutdown, suspension and coupling.
3. Identify, locate, read/operate, and indicate the acceptable reading range of the various instruments required to monitor vehicle and engine speed as well as the status of -- fuel, oil, air, cooling, exhaust, and electrical systems.
4. Augment displayed information from other sources, given that instruments may malfunction or not be entirely accurate.

<b>Performance Skill: PERFORM VEHICLE INSPECTIONS</b>
---

**PERFORMANCE SKILL STANDARD:****Conditions of Performance:**

Given a typical tractor-trailer truck and a trip,...

**Statement of Work to be Performed:**

... the driver will conduct pre-trip, en route, and post-trip inspections.

**Performance Criteria:**

- Inspect and make a correct determination of the condition of various critical vehicle components, including instruments and controls; engine and drive train; chassis and suspension; steering system, braking system; tires; wheels and rims; lighting and signaling system; emergency equipment; and cargo securement device(s).
- Perform pre-trip inspections in a regular, systematic sequence that is accurate, uniform, and time efficient.
- Perform en route inspections by checking mirrors for signs of trouble; checking connections, hoses, and gauges; monitoring instruments and looking, listening and feeling for indications of malfunctions.
- Make periodic roadside stop inspections of critical items, and meeting en route requirements for transporting various cargoes.
- Perform post-trip inspections by making accurate notes of actual and suspected component abnormalities or malfunctions that occurred during the trip using a Vehicle Condition Report (V.C.R.).
- Refuse to operate a vehicle found to be in unsafe (for vehicle, drivers, and other road users) operating condition, either prior to a trip or en route.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Perform each type of inspection.
2. Complete Vehicle Condition Report (V.C.R.)
3. Inspect and determine the condition of critical vehicle components, including the instrument and controls; engine and drive train; chassis and suspension; steering system; braking system; coupling system; emergency equipment; and cargo securement devices.
4. Perform pre-trip inspections in a regular, systematic sequence that is accurate, uniform, and time efficient.
5. Perform en route inspections by checking mirrors for signs of trouble; monitoring instruments and looking, listening, and feeling for malfunctions; making periodic roadside inspections of critical components; and meeting en route requirements for transporting all types of cargo.
6. Perform post-trip inspections by making accurate notes of actual and suspected component abnormalities or malfunctions.

<b>Performance Skill: EXERCISE BASIC CONTROL</b>
--

**PERFORMANCE SKILL STANDARD:****Conditions of Performance:**

Given a typical tractor-trailer rig with at least a 15,000-pound. load, a typical road surface, and a trip to make,...

**Statement of Work to be Performed:**

... the driver will start, move (drive), and steer the tractor-trailer.

**Performance Criteria:**

- Start and drive tractor trailer such that he/she scores acceptable proficiency rating on an operational checklist for basic controls in areas such as executing sharp left and right turns, centering the vehicle, and maneuvering in restricted areas.
- Keep rig in center of traffic lane.
- Avoid obstacles on both sides, front, and back.
- Achieve smooth and effective acceleration and stopping.
- Position rig to begin and complete turns in lane.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Get into cab, adjust seat, and fasten seat belt.
2. Start, warm up, cool down, and shut off engine.
3. Get out and check position for obstructions, position, and paths or use appropriate spotters with clearly understood signals.
4. Judge path and clearances of trailer.
5. Activate warning flashers prior to moving into reverse gear. Tap horn periodically if tractor does not have a back-up alarm. (Keep window open and radio off.)
6. Position vehicle correctly before beginning a backing/docking maneuver.
7. Execute reverse steering of an articulated vehicle.
8. Back slowly (using idle speed) in straight and curved lines.
9. Constantly check on both sides and to the rear when backing -- look in mirrors; watch for things that could tilt trailer; watch for overhead obstructions; watch behind tractor tires.
10. Pull up and start over when necessary.
11. Park trailer in jackknife and parallel positions.
12. Parallel park rig.
13. Use and adjust for sliding tandems on trailers.

<b>Performance Skill: EXECUTE SHIFTING</b>
--

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a multi-speed, dual range transmission and any number of driving conditions (traffic, terrain, speed, and highway conditions), ...

**Statement of Work to be Performed:**

... the driver will execute proper up and down shifting technique.

**Performance Criteria:**

- Match shifting to engine needs and safe operations for road conditions.
- Shift smoothly to protect equipment.
- Shift to maximize fuel efficiency.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Shift up and down through all gears of multi-speed, dual range transmissions.
2. Double clutch and time shift for smooth and fuel-efficient performance.
3. Select proper gear for speed, terrain, turns, and highway conditions.
4. Avoid riding the clutch.
5. Demonstrate progressive shifting technique.
6. Demonstrate and explain skip shifting.
7. Demonstrate proper gear recovery.
8. Demonstrate how to stop in any gear.

<b>Performance Skill: BACK AND DOCK TRACTOR-TRAILER</b>
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**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a typical tractor-trailer, a load, a route or direction to back, and a place to park the rig,...

**Statement of Work to be Performed:**

... the driver will back and dock the tractor-trailer.

**Performance Criteria:**

- Back trailer on performance test to acceptable criteria on range and street with at least three 100' backs to within 6" of dock.
- Back and park in restricted area within appropriate tolerances.
- Back in straight and curved lines within appropriate tolerances.
- Park at alley docks, in jackknife and parallel positions.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Get out and check dock area for obstructions, position, and paths.
2. Judge path and clearances of trailer.
3. Activate warning flashers prior to moving into reverse gear. Tap horn periodically if tractor does not have a back-up alarm. (Keep window open and radio off.)
4. Position vehicle correctly before beginning a backing/docking maneuver.
5. Use appropriate spotter with clear signals, as necessary.
6. Execute reverse steering of an articulated vehicle.
7. Back slowly (using idle speed) in straight and curved lines.
8. Perform serpentine backing slowly and using idle speed.
9. Back into restricted space.
10. Constantly check when backing -- look in mirrors; watch for things that could tilt trailer; watch for overhead obstructions; watch behind tractor tires.
11. Pull up and start over when necessary.
12. Park trailer in jackknife and parallel positions.
13. Parallel park rig.

<b>Performance Skill: COUPLE TRAILER</b>
--

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given verbal or written instructions to connect to a specific trailer, given the trailer and the time for pick-up,...

**Statement of Work to be Performed:**

... the driver will demonstrate safe coupling of typical tractor-trailer units.

**Performance Criteria:**

- Driver must couple tractor-trailer units within 8 to 10 minutes.
- Complete coupling in accord with safety requirements and approved practices.
- Complete coupling with secure connections, including air lines and electrical cables.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Check and adjust mirrors.
2. Align tractor and trailer units and back to position where fifth wheel plate just touches apron of trailer. Get out and check height of fifth wheel.
3. Secure trailer against movement and recheck trailer height.
4. Connect and check air lines.
5. Connect and check electrical cable.
6. Back tractor slowly and straight into trailer kingpin at right level and with appropriate force, check coupling and pin engagement.
7. Check connection for security by pulling tractor forward gently. If it is okay, release brake; if not, secure connection.
8. Check for symptoms of improper/incomplete connections and make necessary adjustments.
9. Set in-cab air brake controls, retract and secure landing gear, and adjust mirrors and remove chocks (if used).

<b>Performance Skill: UNCOUPLE TRAILER</b>
--

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given verbal or written instructions about where and when to leave a trailer, and a trailer of any size attached to a tractor,...

**Statement of Work to be Performed:**

... the driver will demonstrate safe uncoupling of typical tractor-trailer units.

**Performance Criteria:**

- Driver must uncouple tractor-trailer units within 5-7 minutes in accordance with approved procedures.
- Complete uncoupling in accord with safety requirements and approved practices.
- Secure trailer from movement.
- Follow correct sequence for disconnecting electric lines and air hoses.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Spot trailer on surface capable of supporting weight and secure vehicle against movement.
2. Set in-cab air brake controls and trailer brakes.
3. Lower gear to raise trailer to correct height and check support.
4. Uncouple trailer and disconnect dolly.
5. Disconnect and secure air and electrical units prior to uncoupling.
6. Pull tractor partially clear of trailer.
7. Secure tractor, check trailer supports and brakes/chocks.
8. Pull tractor completely clear of trailer.

<b>Performance Skill: PERFORM VISUAL SEARCH</b>
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**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a typical tractor trailer and a driving situation,...

**Statement of Work to be Performed:**

... the driver will conduct a visual search of the road for potential hazards and critical objects.

**Performance Criteria:**

- Driver will demonstrate adequate visual search technique by pointing out important obstacles in various types of traffic, as scored on the performance test, using the "commentary driving" technique.
- Driver will demonstrate appropriate visual behavior by time (frequency) and locations checked.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Correctly adjust any type of rear view mirror to appropriate specifications.
2. Maintain a minimum 12-15 second eye lead time.
3. Scan both sides of the road using quick glances to observe roadside activity and vehicles near you.
4. Check mirrors for hazards every few seconds, and always before changing speed or direction.
5. Check instrument panel frequently.
6. Look ahead as far as possible during turns and on curves.
7. Check to the side before turning or changing lanes.
8. Monitor overtaking traffic in order to be aware of vehicles behind and in blind spots.
9. Avoid diverting attention from the path ahead.
10. Maintain a straight-line path whenever necessary to divert attention/eyes from the path ahead.
11. Check all intersections and crossings using proper technique.

<b>Performance Skill: MANAGE AND ADJUST VEHICLE SPEED</b>
---

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a tractor-trailer truck, a trip, and a route with varying conditions,...

**Statement of Work to be Performed:**

... the driver will read/identify conditions, adjust speed, and manage speed effectively in response to various road, weather, and traffic conditions.

**Performance Criteria:**

- Adjust speed correctly to the configuration and condition of the roadway; weather and visibility conditions; traffic conditions; and vehicle, cargo, and driver conditions.
- Maintain ramp speed 10 mph below posted speed, under ideal conditions.
- Obey the legal speed limit.
- Drive at speeds appropriate to road condition and necessary stopping distances.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Judge maximum safe speed at which a curve and on/off ramps can be entered and adjust speed to under maximum.
2. Obey speed limit.
3. Maintain proper speed to manage the space around the truck from other vehicles.
4. Judge maximum safe speed that traction will permit and adjust speed accordingly.
5. Recognize and interpret all types of driving conditions and road surfaces.
6. Judge and adjust maximum safe speed at which vehicle control can be maintained under traffic conditions, crosswinds, road conditions, weather conditions, and limited visibility.

<b>Performance Skill: MANAGE AND ADJUST VEHICLE SPACE RELATIONS</b>
---

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a typical tractor-trailer, a road, a route of travel, and traffic,...

**Statement of Work to be Performed:**

... the driver will properly manage the space required for safe vehicle operation.

**Performance Criteria:**

- Select a lane offering the best mobility and least traffic interruption, in accordance with the law, to cause minimum interference to other vehicles.
- Assure a safe gap before changing lanes, passing other vehicles, merging, and crossing or entering traffic; position vehicle correctly in the lane and relative to crosswalks so as to minimize hazards to other road users.
- Position tractor-trailer appropriately before initiating and completing a turn so as to prevent other vehicles from passing on the wrong side and to minimize encroachment on other lanes.
- Maintain a following distance appropriate to traffic, road surface, visibility, and vehicle weight; maximize separation from traffic when vehicle is disabled.
- Avoid structures having inadequate overhead clearance.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Explain basic formula for determining safe following distance.
2. Judge adequacy of gaps in traffic for passing, crossing traffic, entering traffic, and changing lanes.
3. Use proper visual search techniques to determine and achieve appropriate space.
4. Properly position vehicle for making all driving moves, and avoiding getting other drivers or pedestrians in the wrong spot.
5. Judge clearances on all sides of truck in motion, especially above the trailer.
6. Adjust following distances for loads and road conditions.

<p><b>Performance Skill: CHECK AND MAINTAIN VEHICLE SYSTEMS AND COMPONENTS</b></p>
--

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a typical tractor-trailer rig, a trip, and a basic tool kit,...

**Statement of Work to be Performed:**

... the driver will check each system function, correctly note indications of problems for various systems, and fix those within his/her jurisdiction. Systems to check include engine, steering, cooling, electrical, tires, fuel, air intake and exhaust systems, brakes, drive train, coupling systems, and suspension.

**Performance Criteria:**

- Explain proper range of function for all key vehicle systems.
- Check each component and vehicle system.
- Correctly note symptoms of problems.
- Correct problems within jurisdiction.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Check and service engine, fuel, oil, coolant, battery, and filters.
2. Perform simple emergency repairs to enable a vehicle to reach a maintenance facility.
3. Check tire air pressure.
4. Check for proper tire and wheel mounting. Report problem.
5. Drain moisture from air brake supply reservoirs and fuel system.
6. Check brakes. Report problems or adjust according to regulation, certification and company policy.
7. Clean and repair light bulbs and lenses.
8. Change fuses and reset circuit breakers.

<b>Performance Skill: DIAGNOSE AND REPORT MALFUNCTIONS</b>
--

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a typical tractor-trailer rig and either a description of problem symptoms or actual symptoms of poor performance ,...

**Statement of Work to be Performed:**

... the driver will troubleshoot symptoms, identify vehicle malfunctions, and report problem.

**Performance Criteria:**

- Identify symptom and vehicle systems and match symptom to likely problem.
- Troubleshoot/identify problem, and/or identify if a problem exists.
- Report problem accurately and according to guidelines.
- Fix problems within jurisdiction of driver, as described by company policy and regulation.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Check each component and vehicle system. Identify vehicle systems or components that are functioning properly, are in imminent danger of failing, or functioning improperly.
2. Identify and interpret symptoms of malfunction.
3. Match symptom to possible list of problems.
4. Describe symptoms of improper operation completely and accurately to maintenance personnel.
5. Correct problems within jurisdiction.
6. Avoid attempting to perform maintenance for which driver is unqualified.
7. Properly report breakdowns occurring en route.
8. Properly complete a Vehicle Condition Report (V.C.R.).

<p align="center"><b>Performance Skill: IDENTIFY POTENTIAL DRIVING HAZARDS AND PERFORM EMERGENCY MANEUVERS</b></p>
--

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a typical tractor-trailer rig, a trip, and any of a number of potential problems,...

**Statement of Work to be Performed:**

... the driver will recognize the potential dangers in the driving environment and take appropriate action(s) before the dangers develop into emergency situations, or respond appropriately to an emergency.

**Performance Criteria:**

- Identify road conditions and other road users that are a potential threat to the safety of the tractor-trailer.
- Suggest appropriate adjustments, as indicated by passing a written test on the topic or demonstrating skill.
- Explain causes of and techniques to avoid skids and jackknives.
- Explain how to deal with skid.
- Demonstrate through proper speed and space management and proper acceleration and braking techniques he/she should be able to avoid a skid.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Perceive immediately a potential threat from visible characteristics and actions of other road users, road conditions, and the environment.
2. Match and initiate prompt defensive or evasive action.
3. Use proper evasive steering techniques.
4. Practice good visual search techniques.
5. Identify and explain situations where skids and jackknives are likely.
6. Use brakes in a manner that will stop the vehicle in the shortest possible distance while maintaining directional control.
7. Oversteer and countersteer out of a skid in a way that will regain directional control and not produce another skid.
8. Operate brakes properly to provide maximum braking without loss of control.
9. Judge maximum safe speed for slippery surface conditions.
10. Deal with blowout with proper steering and stopping.
11. Maintain control.

<p style="text-align: center;"><b>Performance Skill: IDENTIFY AND ADJUST TO DIFFICULT AND EXTREME DRIVING CONDITIONS</b></p>
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**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a typical tractor-trailer rig, a load, a route, and a set of difficult or extreme driving conditions,...

**Statement of Work to be Performed:**

... the driver will identify the conditions and make the appropriate adjustments.

**Performance Criteria:**

Explain and demonstrate correct defensive adjustments for at least the following conditions:

- Night operations
- Cold weather operation
- Hot weather operation
- Mountainous terrain
- Wet conditions
- Windy conditions

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

Night Operations

1. Judge and adjust speed, distances, and separation under nighttime conditions.
2. Demonstrate improved scanning technique.
3. Use high beams legally; dim headlights in accord with law and safety.
4. Respond safely to glare of other vehicles.
5. Manage driver's fatigue.
6. Use proper signaling techniques.

Adverse Weather

7. Prepare for operation in cold weather, including removing snow and ice from windows, mirrors, brakes, lights, and hand holds.
8. Inspect for cold weather operation by paying special attention to coolant level and mixture, heater, defrosters, wipers, washers, tire tread, brakes, lights, reflectors, wiring system, hoses, fuel, exhaust system, and fifth wheel.
9. Make sure that moisture is expelled from the air tanks after each trip.
10. Check weather information before and during trips and adjust plan accordingly.

11. Check for ice accumulation (and remove it) on brakes, air hoses, electrical wiring, and radiator shutters during operation.
12. Adjust operation of vehicle to weather conditions, including speed selection, braking, direction changes, and following distance to maintain control and avoid jackknifing.
13. Assure safe operation of brakes after driving through deep water.
14. Use windshield wipers, washers, and defrosters to maintain visibility.
15. Start engine in cold weather.
16. Observe road surface for changes in conditions.
17. Adjust rate of change in speed and direction to road conditions to avoid skidding.
18. Coordinate acceleration and shifting to overcome the resistance of snow, sand, and mud.
19. Carry additional food and clothing to deal with "stop" situations.

Hot Weather:

20. Check tires, lubrication, levels and operation of cooling system, fan belts, fans and hoses and check the radiator for debris.
21. Carry an ample supply of drinking water.
22. Inspect tires frequently.
23. Avoid leaving the vehicle if it is disabled in the desert.

Mountains:

24. Check brake adjustment prior to mountain driving.
25. Use right lane or special truck lane going up grades.
26. Place transmission in appropriate gear for engine braking before starting downgrade.
27. Use proper braking technique and maintain proper engine braking before starting downgrades.
28. Use special speed reduction devices properly; e.g., engine brakes.
29. Use truck escape ramp, if available, when brakes fail on a downgrade.
30. Observe temperature gauge frequently when pulling heavy loads up long grades.
31. Use 4-way flashers.

<b>Performance Skill: HANDLE AND DOCUMENT CARGO</b>
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**PERFORMANCE SKILL STANDARD:****Conditions of Performance:**

Given a typical trailer, a typical load, and a bill of lading or cargo list,...

**Statement of Work to be Performed:**

... the driver will perform all cargo handling safely and documentation procedures accurately.

**Performance Criteria:**

- Verify nature, amount, and condition of cargo on both pick-up and delivery.
- Verify load is distributed and tied down correctly to meet legal and safety requirements.
- Verify information on bill of lading and properly record and report discrepancies and damage to the cargo.
- Obtain appropriate signatures on delivery receipts and other required forms.
- Properly prepare a manifest.
- Move heavy loads safely, as verified by a performance test.
- Obtain hazardous materials endorsement prior to carrying hazardous materials.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Prepare manifest, as required.
2. Verify cargo types, nature, amount, and condition on pick-up and delivery.
3. Verify seals, if used.
4. Cover cargo, as necessary.
5. Obtain appropriate signatures.
6. Verify information on bill of lading and properly record/report discrepancies and damage.
7. Verify that load distribution on trailer fits within regulations.
8. Verify that placards match load and meet regulations; correct placards, as necessary.
9. Safely operate common types of cargo handling equipment.
10. Select proper sizes of chain, cable, nylon webbing, steel strapping, or rope.
11. Secure load with chains, cables, webbing, or strapping and correctly use the binding system.
12. Block and brace cargo properly.
13. Stop to inspect cargo, according to regulations.
14. Demonstrate knowledge of proper lifting techniques required to safely load and unload cargo.

<p><b>Performance Skill: DEAL WITH ACCIDENT SCENES AND REPORTING PROCEDURES</b></p>
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**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given an accident on the road,...

**Statement of Work to be Performed:**

... the driver will follow safe and legal procedures at an accident scene, and properly report accidents.

**Performance Criteria:**

- Pass a written test on procedures, achieving a score of at least 80% correct on accident procedures. Among the topics to include are: guarding the scene of an accident to prevent further injury or damage, and obtain assistance; obtaining all information needed for accident reports to law enforcement, the employer, and the insurance company; (rendering assistance to any injured parties, including providing first aid, provided he/she has had proper training; extinguishing fire including cargo, engine, electrical, and tire fires); and discussing liability only with law enforcement, the company, or their representative.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Stop and park truck in safe location.
2. Notify police; call for assistance; place warning devices.
3. Apply first aid and CPR procedures as necessary, especially in relation to shock, resuscitation, and stopping bleeding.
4. Protect injured persons from others, except from trained emergency personnel.
5. Choose and operate fire extinguishers correctly.
6. Protect self from blood-borne pathogens.
7. Direct traffic, as necessary.
8. Obtain information for accident reporting, including photographs.
9. Discuss accident details only with appropriate officials.
10. Make sure any truck cargo that is spilled is cleaned up. Arrange for cleanup as necessary. If hazardous materials are involved, call appropriate authorities.
11. Stay at scene until law enforcement and company say it is okay to leave.

<b>Performance Skill: DEAL WITH ENVIRONMENTAL ISSUES</b>
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**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a typical tractor-trailer rig and a trip,...

**Statement of Work to be Performed:**

... the driver will recognize environmental hazards/issues and obligations and act to meet responsibilities.

**Performance Criteria:**

- Identify hazard and match correct response with problems as written on a situational test.
- Indicate idle requirements and demonstrate how to monitor and adjust to them.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Check hoses, couplings, and other components that may contribute to environmental issues.
2. Monitor idle time and make appropriate adjustments.
3. Check regularly for signs of leaks.
4. Fuel carefully to avoid spills.
5. Recognize and report spills en route.

<b>Performance Skill: PLAN TRIPS/MAKE APPROPRIATE DECISIONS</b>
---

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a proposed trip order, load, and resources...

**Statement of Work to be Performed:**

... the driver will lay out and plan the trip.

**Performance Criteria:**

- Correctly identify necessary/required permits.
- Estimate time of arrival to within 30 minutes.
- Identify fuel stops.
- Calculate and budget money correctly to within \$10.00.
- Choose most effective route for time, budget, load, and conditions.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Plan a route from one point to another that is optimal in terms of travel time; fuel costs; potential hazards; and /provincial, state, and local travel restrictions.
2. Arrange to secure permits required by the nature of the vehicle, its cargo, and route to be traveled.
3. Arrange a secure place for vehicle on layovers, especially when transporting hazardous materials.
4. Use math to calculate miles, fuel use, and expenses.
5. Interpret maps.
6. Estimate travel time and plan rest stops and layovers to ensure adequate rest.
7. Estimate fuel consumption and plan fuel stops.
8. Estimate needed expense money and obtain funds and/or company credit cards.
9. Accurately document expenses according to policy and regulation.

<p><b>Performance Skill: USE EFFECTIVE COMMUNICATION AND PUBLIC RELATIONS SKILLS</b></p>
--

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a trip order, a truck, and a route,...

**Statement of Work to be Performed:**

... the driver will communicate effectively with all those around him/her.

**Performance Criteria:**

- Convey clear intentions so message receiver knows intention.
- Receive and send clear messages from/to dispatcher with on-board devices.
- Present a good public image.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Signal intentions such as lane changes, hazards, and backing up.
2. Use horn, headlights, and other lights appropriately.
3. Establish and use eye contact with drivers and pedestrians as a warning.
4. Avoid making decisions only on basis of another's signal.
5. Interact tactfully with customers and general public, family, and company.
6. Use effective and appropriate conversation with customers, company personnel, and family.
7. Use on-board communication devices. To extent possible, operate devices when vehicle is not moving.
8. Ask effective questions, including clarifying questions.
9. Avoid directing traffic while operating vehicle.

<p><b>Performance Skill: MANAGE PERSONAL RESOURCES/DEAL WITH LIFE ON THE ROAD</b></p>
---

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a trip over the road that requires days and nights away from home,...

**Statement of Work to be Performed:**

... the driver will actively manage own life and resources so as to take care of self and job.

**Performance Criteria:**

- Correctly identify problems and strategies that deal effectively with personal resources by describing, demonstrating, and matching problems and solutions for issues such as:

fatigue  
diet  
exercise  
personal hygiene  
stress

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Employ fatigue reducing strategies.
2. Use stress reducing techniques, as needed.
3. Exercise restraint with diet and recreation while on the road.
4. Get exercise while on the road.
5. Make good decisions about where to stop and stay.
6. Practice good personal hygiene.
7. Practice good communication skills with family.

<p style="text-align: center;"><b>Performance Skill: RECORD AND MAINTAIN HOURS OF SERVICE REQUIREMENTS</b></p>
--

**PERFORMANCE SKILL STANDARD:**

**Conditions of Performance:**

Given a trip and a tractor-trailer,...

**Statement of Work to be Performed:**

... the driver will adhere to the requirements of the Federal Motor Carrier Safety Regulations Part 395 "Hours of Service Regulations" and complete a Driver's Daily Log and logbook recap.

**Performance Criteria:**

- Comply with hours of service requirements.
- Maintain a complete, neat, and accurate driver's daily log and logbook recap.
- Perform all necessary calculations correct to the closest quarter (1/4) hour.

**PERFORMANCE ELEMENTS AND ASSESSMENT CRITERIA:**

1. Interpret hours of service regulations correctly.
2. Use hours of service regulations correctly.
3. Keep time accurately.
4. Perform arithmetic calculations necessary to recap and apply totals to the hours of service regulations.
5. Determine driving hours remaining on a particular day or tour of duty.
6. Keep pick-up and delivery record.

**SKILL MATRIX****Read and Interpret Control Systems**

1. Identify, locate, and read/operate each of the primary controls including those required for - steering, accelerating, shifting, braking, and parking.
2. Identify, locate, and read/operate each of the secondary controls including those required for -- control of lights, signals, windshield wipers and washers, interior climate, engine starting and shutdown, suspension and coupling.
3. Identify, locate, read/operate, and indicate the acceptable reading range of the various instruments required to monitor vehicle and engine speed as well as the status of -- fuel, oil, air, cooling, exhaust, and electrical systems.
4. Augment displayed information from other sources, given that instruments may malfunction or not be entirely accurate.

**Perform Vehicle Inspections**

1. Perform each type of inspection.
2. Complete Vehicle Condition Report (V.C.R.)
3. Inspect and determine the condition of critical vehicle components, including the instrument and controls; engine and drive train; chassis and suspension; steering system; braking system; coupling system; emergency equipment; and cargo securement devices.
4. Perform pre-trip inspections in a regular, systematic sequence that is accurate, uniform, and time efficient.
5. Perform en route inspections by checking mirrors for signs of trouble; monitoring instruments and looking, listening, and feeling for malfunctions; making periodic roadside inspections of critical components; and meeting en route requirements for transporting dangerous cargo.
6. Perform post-trip inspections by making accurate notes of actual and suspected component abnormalities or malfunctions.

**Exercise Basic Control**

1. Get into cab, adjust seat, and fasten seat belt.
2. Start, warm up, cool down, and shut off engine.
3. Get out and check position for obstructions, position, and paths or use appropriate spotters with clearly understood signals.
4. Judge path and clearances of trailer.
5. Activate warning flashers prior to moving into reverse gear. Tap horn periodically if tractor does not have a back-up alarm. (Keep window open and radio off.)
6. Position vehicle correctly before beginning a backing/docking maneuver.
7. Execute reverse steering of an articulated vehicle.
8. Back slowly (using idle speed) in straight and curved lines.
9. Constantly check on both sides and to the rear when backing -- look in mirrors; watch for things that could tilt trailer; watch for overhead obstructions; watch behind tractor tires.
10. Pull up and start over when necessary.
11. Park trailer in jackknife and parallel positions.
12. Parallel park rig.
13. Use and adjust for sliding tandems on trailers.

## **Execute Shifting**

1. Shift up and down through all gears of multi-speed, dual range transmissions.
2. Double clutch and time shift for smooth and fuel-efficient performance.
3. Select proper gear for speed, terrain, turns, and highway conditions.
4. Do not ride the clutch.
5. Demonstrate progressive shifting technique.
6. Demonstrate and explain skip shifting.
7. Demonstrate proper gear recovery.
8. Demonstrate how to stop in any gear.

## **Back and Dock Trailer**

1. Get out and check dock area for obstructions, position, and paths.
2. Judge path and clearances of trailer.
3. Activate warning flashers prior to moving into reverse gear. Tap horn periodically if tractor does not have a back-up alarm. (Keep window open and radio off.)
4. Position vehicle correctly before beginning a backing/docking maneuver.
5. Use appropriate spotter with clear signals, as necessary.
6. Execute reverse steering of an articulated vehicle.
7. Back slowly (using idle speed) in straight and curved lines.
8. Perform serpentine backing slowly and using idle speed.
9. Back into restricted space.
10. Constantly check when backing -- look in mirrors; watch for things that could tilt trailer; watch for overhead obstructions; watch behind tractor tires.
11. Pull up and start over when necessary.
12. Park trailer in jackknife and parallel positions.
13. Parallel park rig.

## **Couple Trailer**

1. Check and adjust mirrors.
2. Align tractor and trailer units and back to position where fifth wheel plate just touches apron of trailer. Get out and check height of fifth wheel.
3. Secure trailer against movement and recheck trailer height.
4. Connect and check air lines.
5. Connect and check electrical cable.
6. Back tractor slowly and straight into trailer kingpin at right level and with appropriate force; check coupling and pin engagement.
7. Check connection for security by pulling tractor forward gently. If it is okay, release brake; if not, secure connection.
8. Check for symptoms of improper/incomplete connections and make necessary adjustments.
9. Set in-cab air brake controls, retract and secure landing gear, and adjust mirrors and remove chocks (if used).

## **Uncouple Trailer**

1. Spot trailer on surface capable of supporting weight and secure vehicle against movement.
2. Set in-cab air brake controls and trailer brakes.
3. Lower gear to raise trailer to correct height and check support.
4. Uncouple trailer and disconnect dolly.
5. Disconnect and secure air and electrical units prior to uncoupling.
6. Pull tractor partially clear of trailer.
7. Secure tractor, check trailer supports and brakes/chocks.
8. Pull tractor completely clear of trailer.

## **Perform Visual Search**

1. Correctly adjust any type of rear view mirror to appropriate specifications.
2. Maintain a minimum 12-15 second eye lead time.
3. Scan both sides of the road using quick glances to observe roadside activity and vehicles near you.
4. Check mirrors for hazards every few seconds, and always before changing speed or direction.
5. Check instrument panel frequently.
6. Look ahead as far as possible during turns and on curves.
7. Check to the side before turning or changing lanes.
8. Monitor overtaking traffic in order to be aware of vehicles behind and in blind spots.
9. Avoid diverting attention from the path ahead.
10. Maintain a straight-line path whenever necessary to divert attention/eyes from the path ahead.
11. Check all intersections and crossings using proper technique.

## **Manage and Adjust Vehicle Speed**

1. Judge maximum safe speed at which a curve and on/off ramps can be entered and adjust speed to under maximum.
2. Obey speed limit.
3. Maintain proper speed to manage the space around the truck from other vehicles.
4. Judge maximum safe speed that traction will permit and adjust speed accordingly.
5. Recognize and interpret all types of driving conditions.
6. Judge and adjust maximum safe speed at which vehicle control can be maintained under traffic conditions, crosswinds, road conditions, weather conditions, and limited visibility.

## **Manage and Adjust Vehicle Space Relations**

Explain basic formula for determining safe following distance.

2. Judge adequacy of gaps in traffic for passing, crossing traffic and entering traffic, and changing lanes.
3. Use proper visual search techniques to determine and achieve appropriate spacing.
4. Properly position vehicle for making all driving moves, and avoiding other drivers or pedestrians from getting in the wrong spot.
5. Judge clearances on all sides of truck in motion, especially above the trailer.
6. Adjust following distances for loads and road conditions.

### **Check and Maintain Vehicle Systems/Components**

1. Check and service engine, fuel, oil, coolant, battery, and filters.
2. Perform simple emergency repairs to enable a vehicle to reach a maintenance facility.
3. Check tire air pressure.
4. Check for proper tire and wheel mounting. Report problem.
5. Drain moisture from air brake supply reservoirs and fuel system.
6. Check brakes. Report problems or adjust according to regulation, certification and company policy.
7. Clean and repair light bulbs and lenses.
8. Change fuses and reset circuit breakers.

### **Diagnose and Report Malfunctions**

1. Identify vehicle systems or components that are functioning properly, are in imminent danger of failing, or functioning improperly.
2. Identify and interpret symptoms of malfunction.
3. Match symptom to possible list of problems.
4. Describe symptoms of improper operation completely and accurately to maintenance personnel.
5. Correct problems within jurisdiction.
6. Avoid attempting to perform maintenance for which driver is unqualified.
7. Properly report breakdowns occurring en route.
8. Properly complete a Vehicle Condition Report (V.C.R.).

### **Identify Potential Driving Hazards and Perform Emergency Maneuvers**

1. Perceive immediately a potential threat from visible characteristics and actions of other road users, road conditions, and the environment.
2. Match and initiate prompt defensive or evasive action.
3. Use proper evasive steering techniques.
4. Practice good visual search techniques.
5. Identify and explain situations where skids and jackknives are likely.
6. Use brakes in a manner that will stop the vehicle in the shortest possible distance while maintaining directional control.
7. Oversteer and countersteer out of a skid in a way that will regain directional control and not produce another skid.
8. Operate brakes properly to provide maximum braking without loss of control.
9. Judge maximum safe speed for slippery surface conditions.
10. Deal with blowout with proper steering and stopping.
11. Maintain control.

## **Identify and Adjust to Difficult and Extreme Driving Conditions**

### Night Operations

1. Judge and adjust speed, distances, and separation under nighttime conditions.
2. Demonstrate improved scanning technique.
3. Use high beams legally; dim headlights in accord with law and safety.
4. Respond safely to glare of other vehicles.
5. Manage driver's fatigue.
6. Use proper signaling techniques.

### Adverse Weather

7. Prepare for operation in cold weather, including removing snow and ice from windows, mirrors, brakes, lights, and hand holds.
8. Inspect for cold weather operation by paying special attention to coolant level and mixture, heater, defrosters, wipers, washers, tire tread, brakes, lights, reflectors, wiring system, hoses, fuel, exhaust system, and fifth wheel.
9. Make sure that moisture is expelled from the air tanks after each trip.
10. Check weather information before and during trips and adjust plan accordingly.
11. Check for ice accumulation (and remove it) on brakes, air hoses, electrical wiring, and radiator shutters during operation.
12. Adjust operation of vehicle to weather conditions, including speed selection, braking, direction changes, and following distance to maintain control and avoid jackknifing.
13. Assure safe operation of brakes after driving through deep water.
14. Use windshield wipers, washers, and defrosters to maintain visibility.
15. Start engine in cold weather.
16. Observe road surface for changes in conditions.
17. Adjust rate of change in speed and direction to road conditions to avoid skidding.
18. Coordinate acceleration and shifting to overcome the resistance of snow, sand, and mud.
19. Carry additional food and clothing to deal with "stop" situations.

### Hot Weather:

20. Check tires, lubrication, levels and operation of cooling system, fan belts, fans and hoses and check the radiator for debris.
21. Carry an ample supply of drinking water.
22. Inspect tires frequently.
23. Avoid leaving the vehicle if it is disabled in the desert.

### Mountains:

24. Check brake adjustment prior to mountain driving.
25. Use right lane or special truck lane going up grades.
26. Place transmission in appropriate gear for engine braking before starting downgrade.
27. Use proper braking technique and maintain proper engine braking before starting downgrades.
28. Use special speed reduction devices properly; e.g., engine brakes.
29. Use truck escape ramp, if available, when brakes fail on a downgrade.
30. Observe temperature gauge frequently when pulling heavy loads up long grades.
31. Use 4-way flashers.

## **Handle and Document Cargo**

1. Prepare manifest, as required.
2. Verify cargo types, nature, amount, and condition on pick-up and delivery.
3. Verify seals, if used.
4. Cover cargo, as necessary.
5. Obtain appropriate signatures.
6. Verify information on bill of lading and properly record/report discrepancies and damage.
7. Verify that load distribution on trailer fits within regulations.
8. Verify that placards match load and meet regulations; correct placards, as necessary.
9. Safely operate common types of cargo handling equipment.
10. Select proper sizes of chain, cable, nylon webbing, steel strapping, or rope.
11. Secure load with chains, cables, webbing, or strapping correctly and tie appropriate knots.
12. Block and brace cargo properly.
13. Stop to inspect cargo, according to regulations.
14. Demonstrate knowledge of proper lifting techniques required to safely load and unload cargo.

## **Deal with Accident Scenes and Reporting Procedures**

1. Stop and park truck in safe location.
2. Notify police; call for assistance; place warning devices.
3. Apply first aid and CPR procedures as necessary, especially in relation to shock, resuscitation, and stopping bleeding.
4. Protect injured persons from others, except from trained emergency personnel.
5. Choose and operate fire extinguishers correctly.
6. Protect self from blood-borne pathogens.
7. Direct traffic, as necessary.
8. Obtain information for accident reporting, including photographs.
9. Discuss accident details only with appropriate officials.
10. Make sure any truck cargo that is spilled is cleaned up. Arrange for cleanup as necessary. If hazardous materials are involved, call appropriate authorities.
11. Stay at scene until law enforcement and company say it is okay to leave. If hazardous materials are involved, call appropriated authorities.

## **Deal with Environmental Issues**

1. Check hoses, couplings, and other components that may contribute to environmental issues.
2. Monitor idle time and make appropriate adjustments.
3. Check regularly for signs of leaks.
4. Fuel carefully to avoid spills.
5. Recognize and report spills en route.

### **Plan Trips/Make Appropriate Decisions**

1. Plan a route from one point to another that is optimal in terms of travel time, fuel costs, potential hazards, and federal, state/provincial, and local travel restrictions.
2. Arrange to secure permits required by the nature of the vehicle, its cargo, and route to be traveled.
3. Arrange a secure place for vehicle on layovers, especially when transporting hazardous materials.
4. Use math to calculate miles, fuel use, and expenses.
5. Interpret maps.
6. Estimate travel time and plan rest stops and layovers to ensure adequate rest.
7. Estimate fuel consumption and plan fuel stops.
8. Estimate needed expense money and obtain funds and/or company credit cards.
9. Accurately document expenses according to policy and regulation.

### **Use Effective Communication and Public Relations Skills**

1. Signal intentions such as lane changes, hazards, and backing up.
2. Use horn, headlights, and other lights appropriately.
3. Establish and use eye contact with drivers and pedestrians as a warning.
4. Avoid making decisions only on basis of another's signal.
5. Interact tactfully with customers and general public, family, and company.
6. Use effective and appropriate conversation with customers, company personnel, and family.
7. Use on-board communication devices. To extent possible, operate devices when vehicle is not moving.
8. Ask effective questions, including clarifying questions.
9. Avoid directing traffic while operating vehicle.

### **Manage Personal Resources/Deal with Life on the Road**

1. Employ fatigue reducing strategies.
2. Use stress reducing techniques, as needed.
3. Exercise restraint with diet and recreation while on the road.
4. Get exercise while on the road.
5. Make good decisions about where to stop and stay.
6. Practice good personal hygiene.
7. Practice good communication skills with family.

### **Record and Maintain Hours of Service Requirements**

1. Interpret hours of service regulations correctly.
2. Use hours of service regulations correctly.
3. Keep time accurately.
4. Perform arithmetic calculations necessary to recap and apply totals to the hours of service regulations.
5. Determine driving hours remaining on a particular day or tour of duty.
6. Keep pick-up and delivery record.

**RELATED SKILLS AND KNOWLEDGE**

**Duty**

**Knowledge**

Read and Interpret Control Systems

Identify, locate, and explain function of each of the primary controls including those required for - steering, accelerating, shifting, braking, and parking.

Identify, locate, and explain function of each of the secondary controls including those required for -- control of lights, signals, windshield wipers and washers, interior climate, engine starting and shutdown, suspension and coupling.

Identify, locate, explain, and indicate the acceptable reading range of the various instruments required to monitor vehicle and engine speed as well as the status of -- fuel, oil, air, cooling, exhaust, and electrical systems.

Realize that instruments malfunction so that displayed information must be augmented from other sources.

Perform Vehicle Inspections

Explain systematic procedure to assure quick and complete inspection.

Suggest the effect of undiscovered malfunctions upon safety, effectiveness, and economy.

Know federal, state/provincial, and other regulations governing inspection, including special regulations for hazardous cargo.

Know procedures for post-trip inspection.

Know out-of-service criteria.

Know how to report malfunctions and problems.

Know locations and tolerances for all components and systems.

Know responsibilities and rules for ensuring use of safe operating vehicles and not operating others.

## Exercise Basic Control

Know clearance requirements of rig for all dimensions.  
Know starting, warm-up, and shut down procedures according to manufacturer's specifications.  
Know modulation procedure for air brakes.  
Know effect and procedure for using anti-lock brakes and non anti-lock brakes.  
Know steering techniques to track vehicle in lane and drive a straight line.  
Know the purpose/use of the P.D.L.  
Illustrate proper position from which to begin a turn and how to "set-up", execute, and recover from a turn.  
Know/recognize space requirements for 48' and 53' trailers.  
Describe consequences of excessive idling.  
Understand split axle and dump valve.  
Know purposes and consequences of speed/engine retarders.  
Know proper hand placement on wheel.

## Execute Shifting

Know shifting procedures and patterns for different transmissions.  
Read instruments and controls with accuracy sufficient to shift gears.  
Recognize common shifting errors and their consequences.  
Know gears that most likely will be the best choice under certain traffic, turns, highway, and terrain conditions.  
Know outcomes of proper shifting in terms of improved fuel mileage, reduced operating costs, and other benefits.  
Know the importance of matching RPMS and MPH for down shifting.

## Back and Dock Trailer

Know proper mirror adjustment and use.  
Know rules and procedures for backing in and across traffic.  
Know procedures for backing, "jerk and chase", parallel, and jackknife parking.  
Identify and explain hazards of backing and specific dangers/problems in various situations.  
Explain how to stop traffic and warn of backing process.  
Explain principles of reverse steering.  
Explain hazards associated with backing.  
Know that the "best" backing is finding a way not to back.

Couple Trailer	<p>Know and use chocking procedures, if necessary.</p> <p>Know components and function of fifth wheel, trailer apron, and kingpin.</p> <p>Know coupling test procedures.</p> <p>Know position, components, and function of air and electrical lines.</p> <p>Know connection procedures.</p> <p>Know air pressure requirements.</p> <p>Know how to adjust mirrors for optimal vision field.</p> <p>Know what optimal vision field is and how to recognize it.</p>
Uncouple Trailer	<p>Know surface conditions and characteristics necessary to support weight.</p> <p>Know air pressure system and controls.</p> <p>Know procedure for uncoupling.</p> <p>Know position, components, and function of air and electrical lines.</p>
Perform Visual Search	<p>Know the correct adjustments and specifications for various types of mirrors.</p> <p>Recognize the differences in images presented by flat and convex mirrors.</p> <p>Know the importance of making all visual checks to the sides and rear of the vehicle quickly in order to limit the amount of time their eyes are off the road ahead.</p> <p>Know the relationship between speed and sight distance.</p> <p>Know the search patterns appropriate for straight driving, changing speed or direction, and entering or crossing traffic.</p> <p>Recognize that effective visual searches will reduce fatigue.</p>
Manage and Adjust Vehicle Speed	<p>Know the relationship of speed to stopping distance, hydroplaning, crash severity, ability to maneuver, and fuel economy.</p> <p>Know the proper use of cruise control.</p> <p>Know the effect on maximum safe speed of vehicle weight, center of gravity, loss of stability, available sight distance, and road surface conditions.</p> <p>Know consequences of speeding violations.</p>

Manage and Adjust Vehicle  
Space Relations

Know the appropriate following distances for various conditions.

Know the importance of maintaining maximum separation from other vehicles to ensure room to maneuver to respond to errors of other drivers.

Know the importance of checking positions of one's own vehicle and other road users by mirrors.

Know the dangers of trailer overhang.

Know dangers created by overhead obstructions.

State regulations concerning commercial vehicle following distances, lane use, changing lanes, and passing other vehicles.

Check and Maintain Vehicle  
Systems/Components

Know the location, function, operation, and common failures of the following vehicle components: frames, suspension, and axles; engines; fuel systems, air intake and exhaust systems; lubrication systems; cooling systems; electrical systems; drive trains; brake systems; wheels, bearings, rims and tires; steering systems; and coupling systems.

Know the procedure for performing inspections and authorized maintenance and repairs.

Know the importance of periodic inspections and authorized maintenance and repairs.

Know to avoid attempting repairs for which they are unqualified.

Recognize the importance of periodic inspections and repair to prevent en route breakdowns, longevity of parts, safety, and economy of operation.

Know the inspection, repair, and maintenance regulations of the Federal Motor Carrier Safety Regulations.

Diagnose and Report  
Malfunctions

Know the procedures for starting vehicles with dead batteries or without air pressure.

Recognize the symptoms of improper operation revealed through instruments, vehicle operation characteristics, sight, sound, feel, and smell.

Know procedures for reporting malfunctions.

Know company maintenance policy.

Identify Potential Hazards and Deal with Emergency Maneuvers

Know the visible characteristics of road conditions that present a hazard to safe operations including slippery, soft, sloping, or uneven surfaces; dangerous curves; obstructions to visibility; and locations where there are likely to be strong cross-winds.

Know the characteristics of other road users (drivers or pedestrians) that make them potentially dangerous, including obstructed vision; distractions; confusion; impatience; impairment; and low speed.

Know activities of other road users (drivers and pedestrians) that provide clues to potential danger, including head and body movement; vehicle movement; and conflict situations.

Know the consequences of using the engine retarder or trailer brake on slippery roads.

Know that the vehicle can be turned more quickly than it can be stopped.

Know that in an impending head-on collision, it is generally safer to leave the roadway to the right than to strike another vehicle.

Know procedures for quick stops, quick turns, and evasive turns off the roadway.

Know procedures for handling brake failure and blowouts.

Know that trailer brakes are not to be used for skid recovery.

Know the role of skid control in preventing crashes.

Know skid dynamics, including friction, wheel load, and force.

Know causes of skidding - power and braking.

Know the characteristics of a tractor jackknife, trailer jackknife, front wheel skids, and all wheel skids.

Know skid recovery procedures - focus on where you want to go, power off, clutch in.

Know difference between A.B.S. and non A.B.S. brakes.

Know how to maintain directional control while operating over a slippery surface.

Know how to bring tractor-trailer to a stop in the shortest possible distance while maintaining directional control when operating on a slippery surface.

Know how to recover from tractor or trailer skids induced by snow, ice, water, oil, sand, wet leaves, or other slippery surfaces.

Know the best prevention for skidding is to control driving i.e., reduce speed.

Know the role of skid control in preventing accidents.

Know skid dynamics, including friction, wheel load, and force.

Know causes of skidding.

Know the characteristics of a trailer jackknife, front wheel skids, and all wheel skids.

Know procedures for handling brake failure and blowouts.

Know that skids may occur at any speed and identify skid recovery procedure.

Identify and Adjust to Difficult and Extreme Driving Conditions

#### Night Operation

Know proper use of cruise control at night.  
Know the effect of level of illumination on ability to see.  
Know the value of high beams to nighttime visibility.  
Know State laws covering use of headlights and auxiliary lights.  
Know the symptoms and danger of fatigue.  
Know the effect of headlight glare on visibility of others and its implications for the safety of both drivers.  
Know the general factors affecting night vision, including interior illumination and use of sunglasses during daytime.  
Know about increased wildlife movement at night.

#### Adverse Weather

Know the conditions that produce low traction, including initial rainfall, ice, snow, and mud.  
Identify the effects of rain, snow, and ice upon the ability to maneuver and stop the vehicle.  
Explain causes and procedures for avoiding skidding and jackknifing.

Recognize the nature of hydroplaning and the road and vehicle conditions that produce it.

Know the effect of ice, snow, water, mud, and debris on the operation of the brakes. Recognize the need to make sure all wheels are free to turn.

Know how to mount and dismount tire chains. Explain how to extricate the vehicle from snow, sand, and mud by maneuvering or towing.

#### Hot Weather

Know procedures for hot weather driving.  
Know hazards of hot weather driving.  
Know the effect of hot weather upon vehicle operation.  
Know the effect of hot weather upon tire pressure and tire life.

#### Mountains

Know the effect of vehicle weight and speed upon braking and shifting ability on long downgrades.

Identify the function and value of escape ramps.

Understand the meaning and use of percent of grade signs.

Recognize that the weight of the truck poses hazards on long downgrades unless the truck is put into proper gear.

Know attempting to downshift on steep declines is too dangerous to attempt.

## Handle and Document Cargo

Know rules for checking loads.

Know the procedures for proper completion of freight bill, cargo manifest, bill of lading, and other required forms.

Know that it is the driver's responsibility for ensuring paperwork is properly filled out.

Explain the possible consequences and penalties of improperly completed documentation.

Know rules for records.

Know rules for weights.

Know procedures for loading and unloading.

Know procedures for securing cargo -- including methods of blocking, bracing, packing, stacking; and use of straps, rope, cable, chains, and chain binders for tie down to prevent damage and accidents.

Know the nature, function, and operation of common cargo handling equipment -- including pallets, jacks, dollies, hand trucks, forklift trucks, nets, slings, rug poles, Johnson bars, and other equipment.

Know how to tie knots.

Know federal and state/provincial regulations on loading, weight limits, and distribution of cargo.

## Deal with Accident Scenes and Reporting

Know state laws and company requirements dealing with stopping and rendering assistance at the scene of an accident.

Explain procedures for protecting the scene of an accident and federal, state and/or provincial requirements for same.

Identify federal, state/provincial, insurance company, and employer requirements regarding accident reporting.

Suggest proper first aid procedures for the types of injuries most likely to be sustained in highway accidents.

Distinguish types of fire extinguishers appropriate to each class of fire.

Know procedures for extinguishing cargo, engine, electrical, and tire fires.

Explain where to stop vehicle in the event of a fire.

Know how to gather information at the scene.

Know how to complete Accident Reporting Forms.

Know the importance of carrying a camera.

Never admit guilt or say, "I'm sorry".

Know how to use the Emergency Response Guide.

Deal with Environmental Issues	<p>Know environmental regulations that affect the profession.</p> <p>Recognize symptoms of problems.</p> <p>Know how to contain the spill.</p> <p>Know how to report and document problems.</p> <p>Know federal and state/provincial regulations about environmental issues.</p> <p>Know what actions to take at the scene of a spill or problem by referring to the Emergency Response Guide (E.R.G.)</p> <p>Know accepted safe practices.</p>
Plan Trips/Make Appropriate Decisions	<p>Know the types of vehicles, cargoes, and routes requiring special permits.</p> <p>Know and use State regulations and the procedures for obtaining special permits.</p> <p>Identify common map symbols.</p> <p>Learn methods for good record keeping.</p> <p>Know procedures for route planning, including preparing paperwork, route selection, and estimating time, fuel, money, and personal needs.</p> <p>Know State and local law restrictions on vehicle size and weight.</p> <p>Know failure to obtain necessary permits can result in extensive delay and fines.</p>
Use Effective Communication and Public Relations Skills	<p>Know universally accepted signals.</p> <p>Know laws/regulations concerning traffic signals.</p> <p>Know relationship of signals to intent.</p> <p>Know and use procedure for handling complaints.</p> <p>Know how to listen and respond effectively.</p> <p>Read and respond to on-board messages.</p> <p>Know procedures for using on-board devices.</p>
Manage Personal Resources/Deal with Life on the Road	<p>Recognize signs of fatigue.</p> <p>Know strategies for dealing effectively with fatigue.</p> <p>Know symptoms of stress and techniques of how to deal with the problem.</p> <p>Know the elements of a good diet.</p> <p>Understand the pay process.</p> <p>Identify good exercise program for life on the road.</p> <p>Know personal sleep requirements and biorhythms.</p> <p>Identify safe and quiet truck stops.</p> <p>Know the effects of drugs and alcohol.</p>

Record and Maintain Hours of Service Requirements

Know all the requirements of Part 395 of The FMCSR covering Hours of Service and where to find them.  
Understand how to comply with the Hours of Service Regulations and know the procedures for completing the driver's daily log.  
Know the procedures for using logbook recap.  
Explain the consequences of failure to comply with hours of service regulations.  
Know en route inspection requirements.  
Know electronic methods of double-checking documentation/records.  
Explain how to use logbooks in planning a trip/meeting schedules.

ATTITUDES/APTITUDES/PSYCHOMOTOR SKILLS

<u>Duty</u>	<u>Attitude/Aptitude</u>
Read and Interpret Control Systems	Driver must be willing to read and use gauge information in making on-going decisions while driving.
Perform Vehicle Inspections	Driver must believe that the time spent on inspections saves lives and down time later.
Exercise Basic Control	Driver must accept that "Safety is an Attitude."
Execute Shifting	Coordinate hand and feet movement, eyesight, hearing to execute safe, smooth, and efficient operation.
Back and Dock Trailer	Driver must be willing to get out and look. Driver must be willing to stop process and begin again.
Couple Trailer	Driver must believe that accidents caused by improper coupling are preventable.  Driver must have strength to raise landing gear and deal with chocks (if used).
Uncouple Trailer	Driver must believe that accidents caused by improper uncoupling are preventable.
Perform Visual Search	Value visual searches as critical techniques for monitoring changing road and traffic conditions.
Manage and Adjust Vehicle Speed	Driver must believe that only through proper speed management can he/she acquire the space to safely maneuver the truck.
Manage and Adjust Vehicle Space Relations	Driver must believe that space management is critical to the safe operation of the truck.
Identify Potential Hazards and Perform Emergency Maneuvers	Be willing to stop, report conditions, and stand firm. Driver must believe that good judgment is essential for skid avoidance.

Identify and Adjust to Difficult and Extreme Driving Conditions	Driver must understand that night driving has additional requirements for driving safely, and requires additional attributes and skills. Driver must acknowledge that adverse weather conditions require special driving techniques and that bad weather accidents and jackknifing can be prevented by proper driving techniques.
Handle and Document Cargo	Be willing to exercise care with paperwork, securing loads, and reporting damage.
Deal with Accident Scenes and Reporting	Driver must be able to maintain self-control and be a professional. Be willing to offer assistance.
Deal with Environmental Issues	Obey the rules for states and nation.  Recognize that environmental issues are everyone's concern.
Use Effective Communication	Be willing to demonstrate self control when communicating. Be willing to use proper signaling techniques. Recognize that signals do not convey the "right" to execute a maneuver.
Manage Personal Resources/Deal with Life on the Road	Become a professional driver and accept the responsibility of being one. Recognize need for strong support group at home.
Record and Maintain Hours of Service Requirement	Accept responsibility of keeping an accurate, legal, and current log book at all times.