



NATIONAL
OCCUPATIONAL
STANDARD

Commercial
Vehicle Operator
(TRUCK DRIVER)





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du Canada

contents

element 1	SUPPORTIVE COMPETENCIES	7
BLOCK 1	Understand the Workplace	8
BLOCK 2	Relate and Interact in the Workplace	9
BLOCK 3	Maintain Health, Wellness and Relationships	10
BLOCK 4	Understand Basic Regulatory Requirements	11
BLOCK 5	Communicate in the Workplace	12
BLOCK 6	Use Workplace Documents	13
BLOCK 7	Complete Numeracy Tasks	14
BLOCK 8	Operate Computer and Electronic Devices	15
element 2	FUNCTIONAL COMPETENCIES	17
BLOCK 9	Plan Work, Plan Trips and Solve Problems	18
BLOCK 10	Prevent Loss and Maintain Secure Facilities	20
BLOCK 11	Support Inspection and Maintenance Program	21
BLOCK 12	Conduct Daily Vehicle Inspections	22
BLOCK 13	Comply with Hours of Service Regulations	23
BLOCK 14	Operate Vehicle Air Brake Systems	25
BLOCK 15	Secure Cargo for Transport	26
BLOCK 16	Operate Commercial Vehicle Systems and Features	28
BLOCK 17	Maintain Situational Awareness	30
element 3	DRIVING COMPETENCIES	31
BLOCK 18	Prepare and Start to Drive	32
BLOCK 19	Control vehicle Motion and Speed	33
BLOCK 20	Control Vehicle Direction and Position	35
BLOCK 21	Maximize Fuel Efficiency	36
BLOCK 22	Practice Defensive Driving Techniques	37
BLOCK 23	Adhere to Requirements that are Specific to Commercial Vehicles	38
BLOCK 24	Back, Dock and Park Vehicles	39
BLOCK 25	Handle Emergency Incidents	40
BLOCK 26	Couple Trailers	41
BLOCK 27	Uncouple Trailers	42
BLOCK 28	Turn Tractor-Trailers	43
BLOCK 29	Back, Dock and Park Tractor-Trailers	44
appendix A	NSC 13 – SCHEDULE 1 ITEMS	46
	DAILY VEHICLE INSPECTION – SCHEDULE 1	47
	MINOR AND MAJOR DEFECTS	48
appendix B	VEHICLE MANEUVERS	56
appendix C	GLOSSARY	69



executive summary

The work of a commercial vehicle operator (truck driver) can be varied. Many of these individuals will require job-specific knowledge, skills and abilities that apply to specific workplaces, industries and commodities.

This National Occupational Standard clearly defines the core knowledge, skills and abilities that are shared by the widest-possible array of commercial vehicle operators (truck drivers) and typically developed early in a career.

The people who meet this standard will be prepared to:

- Operate a straight truck or tractor-trailer with a Gross Vehicle Weight of up to 45,000 kg (100,000 lb.)
- Transport freight contained within a cargo-van-style trailer
- Handle general freight, Less-than-Truckload (LTL) or loose freight, tailgate deliveries, intercity Pickups and Deliveries (P&D), inner-city travel, and potentially heated (but non-refrigerated) loads
- Operate on urban, regional and national roads – in any terrain except mountain passes
- Operate in all types of weather. Commercial vehicle operators (truck drivers) who have yet to meet the National Occupational Standard may, at the discretion of their employer, be excluded from operating in extreme weather.

This National Occupational Standard also reflects the realities of today's workplace.

Each detail emerged during a national project known as Driving the Future, which in 2014/15 joined together Trucking HR Canada, the Canadian Trucking Alliance (CTA), provincial trucking associations, individual fleets, truck drivers, trainers, and other industry experts in unionized and non-unionized environments. Their work was guided by a National Working Group of fleet representatives from across Canada, involved regional consultation sessions, and incorporated feedback from in-person and online reviews.

This project was funded in part by Employment and Social Development Canada.

introduction

This National Occupational Standard (NOS) defines the knowledge, tasks and subtasks which collectively describe the occupation of a commercial vehicle operator (truck driver). The occupation includes more than 300,000 Canadians – nearly 1% of the population and over 1.5% of the nation's labour force.

The occupation can vary significantly, depending on the particular workplace, industry, and commodities involved. The workplace of a commercial vehicle operator (truck driver) may be a motor carrier whose primary business activity involves moving cargo, or a business which operates commercial vehicles to support other activities.

This National Occupational Standard defines the core knowledge, task and subtask competencies that are typically developed early in a career, and are shared by the widest-possible array of commercial vehicle operators (truck drivers). Most commercial vehicle operators (truck drivers) will also acquire additional knowledge and skills that are not included in this National Occupational Standard (NOS) but apply to specific workplaces.

The knowledge, tasks and subtasks defined in this National Occupational Standard (NOS) apply to the following work:

- Operating a straight truck or tractor-trailer with a Gross Vehicle Weight of up to 45,000 kg (100,000 lb.)
- Transporting freight contained within cargo-van-type space
- Handling general freight, Less-than-Truckload (LTL) or loose freight, pickups and deliveries (P&D), inter-city and inner-city travel, and heated (but non-refrigerated) loads
- Operating on urban, regional, and national roads – excluding mountain passes
- Operating in all types of weather. Commercial vehicle operators (truck drivers) who have yet to meet the National Occupational Standard may, at the discretion of their employer, be excluded from operating in extreme weather.

Activities which require specialized knowledge and skills in addition to those defined in this National Occupational Standard (NOS) include:

- | | |
|--|--|
| • aggregate or dump operation | • international border crossing |
| • bin, lugger, or roll-on/roll-off | • livestock |
| • car carrier | • Long Combination Vehicle (LCV) |
| • cargo or dry bulk tank operation | • mountain operation |
| • crane or auxiliary vehicle (e.g., moffet, hitchhiker) | • on/off road operation (e.g., logging, petroleum) |
| • dangerous goods (as defined by the need for a TDG certificate) | • overweight and over dimensional load |
| • ferry crossing | • owner-operator, leased operator |
| • flat deck operation | • refrigerated goods |
| • inter modal container | • train, double |

document structure

KNOWLEDGE, TASKS AND SUBTASKS HAVE BEEN GROUPED INTO THREE GENERAL ELEMENTS OF COMPETENCY, INCLUDING:



supportive competencies

Interpersonal, workplace and other non-driving competencies that are often described as “soft skills”.



functional competencies

Non-driving job functions and equipment operations.



driving competencies

The driving-specific competencies which apply to a straight truck, tractor-trailer, or both.

These three competency elements include 29 individual blocks, which are further divided into required knowledge, tasks and subtasks.

Knowledge competencies are described in ways that can be measured through a written test. Task and subtask competencies are described in ways that can be observed.

NOTE: Content has been numbered for reference purposes only. The order and length of any content does not imply significance. In selected cases, however, the numbers are used to highlight the sequence of related steps.

NOTE: “Workers” in this document refers to commercial vehicle operators (truck drivers) in a workplace setting.

NOTE: “Highway” in this document refers to all highways, roads and streets.

element 1 | **SUPPORTIVE COMPETENCIES**

SUPPORTIVE COMPETENCIES INCLUDE INTERPERSONAL, WORKPLACE AND OTHER NON-DRIVING OCCUPATIONAL REQUIREMENTS THAT ARE OFTEN DESCRIBED AS “SOFT” SKILLS.



ELEMENT 1 INCLUDES:

- BLOCK 1** Understand the Workplace
- BLOCK 2** Relate and Interact in the Workplace
- BLOCK 3** Maintain Health, Wellness and Relationships
- BLOCK 4** Understand Basic Regulatory Requirements
- BLOCK 5** Communicate in the Workplace
- BLOCK 6** Use Workplace Documents
- BLOCK 7** Complete Numeracy Tasks
- BLOCK 8** Operate Computers and Electronic Devices



BLOCK 1 | UNDERSTAND THE WORKPLACE

KNOWLEDGE

A commercial vehicle operator (truck driver) knows that employers and workers must comply with government regulations and standards, and that employers can establish additional workplace-specific practices, procedures and policies to support business objectives.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) KNOWS:

- 1** Employers must comply with government regulations and standards that apply to occupational health and safety, employment, transportation, and business operations. Examples of these regulations include: the Canada Labour Code, National Safety Code, Transportation of Dangerous Goods Act, provincial Occupational Health and Safety Acts, etc.
- 2** Workers must comply with government regulations and standards that apply to worker obligations, rights and responsibilities; employment; health and safety; labour agreements; etc.
- 3** Gaining and sustaining employment may require: security screening and background checks; regular appraisals and performance reviews; pre-employment, periodic, or post-incident drug and alcohol testing; etc. Workers may also need to acknowledge that they understand and accept workplace standards and policies.
- 4** Gaining and sustaining employment will generally require medical clearance based on a specific type of driver's licence, and may also involve a physical assessment or fitness screening.
- 5** Some medical conditions – such as heart conditions, epilepsy, some types of diabetes, etc. – may prohibit a driver from holding specific types of commercial driver's licences.
- 6** Expectations of worker performance are usually defined through workplace practices, procedures and policies that may include: corrective action processes, consequences for failing to adhere to requirements, and steps that can lead to dismissal.
- 7** Specific workplace practices, procedures and policies vary in scope and application, and may be written or unwritten.
- 8** Workers are sometimes expected to rely heavily on their personal knowledge of regulatory or compliance requirements.
- 9** Workers must identify workplace hazards according to workplace practices, procedures and policies and hazards which are communicated through methods such as Workplace Hazardous Materials Information System (WHMIS), and labels and Safety Data Sheets (SDS), used in the system known as the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) for Workplace Chemicals.
- 10** Some cargo is defined through regulations as "dangerous goods". This cargo can only be handled and transported by workers who have been specifically trained and certified. All workers must recognize the symbols and methods used to identify "dangerous goods".
- 11** Workers must develop a clear understanding of workplace practices, procedures and policies – and take steps to recognize and resolve situations in which their understanding is unclear.

BLOCK 2 | RELATE AND INTERACT IN THE WORKPLACE**KNOWLEDGE**

A commercial vehicle operator (truck driver) effectively interacts and speaks with coworkers, supervisors, customers, suppliers, enforcement officials and the general public.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:**

- 1** Practice techniques for social, verbal and electronic interactions that positively impact the worker's success.
- 2** Practice techniques including: honesty, respect and integrity in workplace interactions with coworkers, supervisors, customers, suppliers, other motorists, regulatory officials, and the general public.
- 3** Demonstrate awareness that interactions involving spoken words include specific words as well as the accompanying tone of voice, context, gestures and body language.
- 4** Know that interactions can consist entirely of gestures and body language, without exchanging spoken words.
- 5** Know that actions and statements can be misinterpreted and even considered offensive by individuals who have different cultural experiences, beliefs or backgrounds.
- 6** Know the types of avoidable actions, behaviours or attitudes that can cause workplace conflict, including: disrespect, disagreement, discrimination, harassment, racism, intolerance, being judgmental, being violent, being outspoken, being overbearing, showing favoritism, making ignorant statements, etc.
- 7** Know that there is value in greeting a person or group before interacting on any issue.
- 8** Know that teamwork in the workplace supports the success of the employer and workers.
- 9** Use techniques for effectively approaching supervisors to help resolve workplace difficulties, and a process to be followed if the difficulties are not resolved.
- 10** Know that regulations require employers and workers to provide a workplace in which everyone feels secure and free of unnecessary conflict.
- 11** Know that deliberate will and action in every interaction are needed to avoid conflict.
- 12** Comply with workplace practices, procedures and policies that workers must follow when dealing with internal contacts such as coworkers, supervisors, customers and suppliers, and external contacts such as other motorists, officials, media and the public.
- 13** Know that employers and workers must be sensitive to cultural diversity, and realize that cultural differences require a gentle and careful reaction when encountering any misunderstanding.
- 14** Know that personal appearance and behavior can affect an employer's corporate image.
- 15** Act professionally during commercial vehicle inspections, and cooperate and follow instructions when interacting with enforcement officials.



BLOCK 3 | MAINTAIN HEALTH, WELLNESS AND RELATIONSHIPS

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) knows the importance of being “fit for work” – and generally maintains a healthy lifestyle, and balances personal and work life, to contribute to overall occupational success.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Know that some types of driving require significant amounts of time away from home. This schedule can cause work-related and personal stress, and can affect family relationships.
- 2** Know that lifestyle and dietary factors can influence fatigue, performance, physical fitness and agility.
- 3** Know that each worker’s emotional state will affect their tolerance for dealing with stress, the decisions they make, and their ability to properly do a job. Workers should assess their emotional state before deciding if they are ready to drive.
- 4** Know that the effects of alcohol, over-the-counter drugs, prescription drugs, or illegal drugs can continue before, during and after work, and there can also be consequences for using these substances.
- 5** Use personal strategies to recognize and alleviate the causes and symptoms of stress that may affect performance at work.
- 6** Use personal strategies to recognize and combat fatigue.
- 7** Carefully plan ahead and know where work breaks can be taken.
- 8** Use procedures and proactive techniques such as stretching and proper lifting methods that can prevent workplace injuries.
- 9** Plan suitable sleep and other breaks to avoid fatigue while completing driving responsibilities.
- 10** Address occupational factors which contribute to health-related challenges such as obstructive sleep apnea, back strain, injuries caused by slips, trips and falls, etc.
- 11** Practice techniques for remaining physically, mentally and emotionally “fit for work”.
- 12** Utilize personal hygiene habits that positively affect workplace relationships.

BLOCK 4 | UNDERSTAND BASIC REGULATORY REQUIREMENTS**KNOWLEDGE**

A commercial vehicle operator (truck driver) knows the purpose, fundamental structure, and basic content of regulations that apply to commercial vehicle operations.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) KNOWS:**

- 1** The National Safety Code is a model for Canadian jurisdictions to regulate the safe operation of commercial vehicles.
- 2** Legislation and regulations may affect operations within each jurisdiction. The applicable rules can vary, even during the same workday, depending on where a driver is working.
- 3** Commercial vehicles are generally defined by weight. Individual Canadian jurisdictions can set unique weight thresholds.
- 4** Different classes of driver's licences apply to different types of vehicles. Required licence classes vary between Canadian jurisdictions.
- 5** A driver's licence may require specific endorsements for certain types of commercial vehicles and operations.
- 6** Personal driving history can affect the status of a worker's commercial licence and ability to drive commercial vehicles.
- 7** Government agencies develop and retain records of driver incidents and infractions.
- 8** Government agencies develop and retain records of commercial motor carrier incidents and infractions.
- 9** Medical condition and history affect the type of licence a driver can hold.
- 10** Regulations apply to the movement of vehicles on all public roads and highways.
- 11** Regulations apply to the mechanical condition of commercial vehicles.
- 12** Regulations apply to the allowable weights and dimensions of commercial vehicles.
- 13** Regulations apply to the securing of cargo transported by commercial vehicles.
- 14** Regulations apply to the air brake systems used on commercial vehicles.
- 15** Regulations apply to the daily inspection of commercial vehicles.
- 16** Regulations apply to the transport of materials and products that are defined as "dangerous goods".
- 17** Regulations apply to the hours a person is permitted to drive a commercial vehicle, be on duty, and be off duty.
- 18** Commercial vehicles may be restricted from operating on certain routes, or at particular times, due to their weight, licence, size or commodity being transported.



BLOCK 5 | COMMUNICATE IN THE WORKPLACE

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) communicates effectively with internal and external contacts in the workplace.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Receive, understand and follow written and verbal instructions from supervisors, dispatchers and other workplace staff.
- 2** Comply with workplace practices, procedures and policies that may include methods that workers must adopt for effectively and professionally interacting with people including police, enforcement personnel, the media, general public, other motorists, etc.
- 3** Seek clarification whenever they are uncertain about instructions, expectations, procedures or policies.
- 4** Adopt and consistently follow standard workplace protocols when using phones, radios, computers, on-board systems, written forms of communication, etc.
- 5** Speak clearly and professionally to fellow workers, supervisors, dispatchers and workplace operation staff.
- 6** Speak clearly and professionally to staff at shipper and customer locations.
- 7** Listen to and convey messages from shippers and customers.
- 8** Receive and convey negative messages and/or complaints in a polite and professional manner.
- 9** Avoid revealing any sensitive information about their operation, vehicle, trips, routes or cargo.
- 10** Follow regulations when communicating with police, enforcement officers, and emergency responders.

BLOCK 6 | USE WORKPLACE DOCUMENTS**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) knows the importance and meaning of written workplace documents, and communicates effectively through written means.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:**

- 1** Know the importance and meaning of written company practices, procedures, policies, messages, bulletins and other workplace communications, and understand how to comply with the content.
- 2** Legibly complete all workplace forms needed to establish and sustain employment.
- 3** Know the importance and meaning of job task analyses and workplace hazard assessments.
- 4** Seek clarification and assistance when they do not fully understand any written workplace documents.
- 5** Know the meaning of messages and symbols on cargo packaging and cargo documents such as waybills, packing lists, delivery documents, instructions, workplace hazard information, etc.
- 6** Identify the purpose, importance and proper condition of vehicle related documents such as vehicle registration, insurance, program registry, fuel tax reporting, permits, etc.
- 7** Compose and deliver written information and messages relating to workplace activities.
- 8** Access information and reference tables such as those related to vehicle weights and dimensions.
- 9** Legibly complete work activity reports, daily logs, records of duty status and/or cycle tracking records for Hours of Service regulations compliance. (See Block 13)
- 10** Legibly record information onto, track and manage cargo-related documents such as waybills.
- 11** Access written workplace information such as practice, procedure and policy documents related to cargo securement, job task analyses, hazard assessments, etc.



BLOCK 7 | COMPLETE NUMERACY TASKS

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) completes basic mathematical calculations required for commercial vehicle operation.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- | | |
|---|---|
| <p>1 Calculate route and trip distances.</p> | <p>6 Calculate and record information needed for fuel tax reports.</p> |
| <p>2 Estimate fuel consumption rates, and estimate how far a vehicle can travel on a particular quantity of fuel.</p> | <p>7 Calculate and record cargo weight when necessary.</p> |
| <p>3 Calculate actual and allowable axle weights.</p> | <p>8 Complete all calculations to determine current compliance with Hours of Service regulations, and determine the remaining hours that are available to work. (See Block 13)</p> |
| <p>4 Know vehicle dimension and axle spacing requirements, and complete necessary calculations to confirm compliance with vehicle requirements such as “bridge formulas”, etc.</p> | <p>9 Convert imperial and metric measurements using tables, mathematical formulas, or conversion programs.</p> |
| <p>5 Calculate trip durations to determine arrival times and plan departure times.</p> | |

BLOCK 8 | OPERATE COMPUTERS AND ELECTRONIC DEVICES

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) proficiently uses computers, electronic and communication devices common in commercial vehicle operations.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

1 Proficiently use a calculator or computer when necessary.

2 Use a hand held electronic or communication device only when and where permitted.

3 Proficiently operate a mobile (cellular) telephone.

4 Proficiently use workplace-specific electronic tools such as communication, tracking and video event recording devices, customer-specific data-entry devices, etc.

5 Complete basic data-entry, form-filling and online search tasks.



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element 2 | **FUNCTIONAL COMPETENCIES**

FUNCTIONAL COMPETENCIES INCLUDE NON-DRIVING TASKS AND COMPLIANCE REQUIREMENTS.



ELEMENT 2 INCLUDES:

- BLOCK 9** Plan Work, Plan Trips and Solve Problems
- BLOCK 10** Prevent Loss and Maintain Secure Facilities
- BLOCK 11** Support Inspection and Maintenance Program
- BLOCK 12** Conduct Daily Vehicle Inspections
- BLOCK 13** Comply with Hours of Service Regulations
- BLOCK 14** Operate Vehicle Air Brake Systems
- BLOCK 15** Secure Cargo for Transport
- BLOCK 16** Operate Commercial Vehicle Systems and Features
- BLOCK 17** Maintain Situational Awareness



BLOCK 9 | PLAN WORK, PLAN TRIPS AND SOLVE PROBLEMS

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) plans ahead, anticipates problems, and professionally and efficiently deals with any emergency situation.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Avoid traveling to an unfamiliar location without first confirming facilities and preferred routes.
- 2** Access reliable and up-to-date maps and electronic route information.
- 3** Access reliable information about commercial vehicle routes, road construction, road closures, height clearances, weight restrictions, permit requirements, etc.
- 4** Prepare a route plan, or identify a predetermined route plan, that considers vehicle size and weight.
- 5** Identify special requirements relating to the vehicle, load, routing or commodity.
- 6** Access reliable information about weather and road conditions, before and during a trip.
- 7** Adjust trip plans or work plans when encountering unanticipated changes.
- 8** Plan each trip to ensure compliance with Hours of Service regulations. (See Block 13)
- 9** Identify, locate and access service facilities, rest areas, and emergency refuge locations as necessary.
- 10** Proficiently use some basic hand tools.
- 11** Identify and locate suitable fuel sources, and purchase fuel according to workplace practice, procedures and policies.
- 12** Carry required emergency equipment on or inside the vehicle, and understand how and when to use the equipment.
- 13** Know workplace risks and hazards, and properly wear or otherwise use appropriate Personal Protective Equipment.
- 14** Operate basic emergency equipment such as a fire extinguisher, safety warnings (triangles, flares), spill kits, etc.
- 15** Readily locate emergency contact information.
- 16** Adjust the vehicle's fifth wheel setting, axle position, or suspension system as necessary.
- 17** Carry necessary first aid supplies, and understand personal limitations in administering first aid.
- 18** Regularly check cargo securement to confirm compliance. Adjust the vehicle, cargo or securement devices as required, before and during a trip. (See Block 15)
- 19** Operate cargo access doors in a safe manner, and protect against potential falling cargo when opening doors.
- 20** Regularly check vehicle(s) as required by regulations and according to workplace practices, procedures and policies. (See Blocks 11 and 12)

BLOCK 9 | PLAN WORK, PLAN TRIPS AND SOLVE PROBLEMS



21 Proceed proficiently through construction zones and detours.

22 Identify and prepare for common problems and challenges, such as packing cold weather attire and equipment when necessary.

23 Address the cargo-handling or specialized equipment needed for the cargo being transported.

24 Confirm that cargo matches related documents – and identify any areas requiring clarification, changes, adjustment or planning.

25 Carefully track cargo and related documents during each trip, identifying discrepancies between cargo documents and the cargo being transported.

26 Calculate changing cargo weight when needed and verify compliance with vehicle weight regulations.

27 Within personal capabilities – and according to workplace practices, procedures and policies – assist another driver, motorist or member of the public during an emergency or whenever there is an obvious urgent need for such assistance.

28 Work carefully – within personal limitations, and according to workplace practices, procedures and policies – when dealing with any emergency, breakdown or immobilizing situation.

29 When a vehicle is disabled or immobilized, use towing, recovery, police and emergency services according to workplace practices, procedures and policies.

30 Contact emergency service as soon as it appears necessary for himself or herself, a fellow worker, motorist, or any member of the public.

31 Understand their obligations in regulation and/or company practices, procedures and policies with respect to dealing with a build-up of snow or ice on their vehicle(s) and the need to take appropriate corrective action.



**functional
competencies**
BLOCK 10

BLOCK 10 | PREVENT LOSS AND MAINTAIN SECURE FACILITIES

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) knows how to prevent cargo loss claims, and follows required procedures to maintain secure facilities, prevent cargo loss and avoid damage.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Follow required practices, procedures and policies when accessing workplace, shipper and customer facilities, and restricted areas.
- 2** Seek appropriate help when accessing an unfamiliar location or facility.
- 3** Handle and load cargo carefully, and confirm that all cargo is properly packaged, unitized, arranged and secured inside facilities and vehicles.
- 4** Follow workplace practices, procedures and policies when releasing sensitive information about an operation, vehicle, trips, routes or cargo.
- 5** Use appropriate Personal Protective Equipment properly and as required – inside or outside of every workplace, shipper facility and customer facility.
- 6** Use cargo seals, pin locks and similar vehicle security devices according to company practices, procedures and policies.
- 7** Operate cargo handling equipment in the proper manner, and only when fully trained and authorized.
- 8** Follow all workplace, shipper and receiver, practices, procedures and policies that involve issues such as parking locations and methods, facility security, securing and accessing vehicles, and securing valuables including cash, etc.

BLOCK 11 | SUPPORT INSPECTION AND MAINTENANCE PROGRAM**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) knows the importance of proper vehicle maintenance and follows all workplace practices, procedures and policies to ensure vehicle maintenance and inspection are properly completed.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:**

- 1** Know that every workplace must establish a system, and keep a written record, for periodically inspecting and maintaining vehicles.
- 2** Know that every commercial vehicle must meet prescribed performance standards while operating on a highway.
- 3** Know the importance of enforcement and audit programs to ensure that inspection and maintenance is adequate.
- 4** Conduct required daily (trip) inspections using supplied forms and schedules. (See Block 12)
- 5** Inspect the condition of vehicles and operating components according to workplace practices, procedures and policies.
- 6** Use appropriate Personal Protective Equipment during maintenance and inspection activities according to workplace practices, procedures and policies.
- 7** Confirm that every commercial vehicle being operated displays valid evidence that regulatory periodic inspections and workplace-specific inspections have been conducted.
- 8** Check level of operating fluids including fuel, engine oil, engine coolant, power steering oil, windshield washer, Diesel Exhaust Fluid (DEF), etc. – and top up when necessary.
- 9** Regularly check basic vehicle components such as drive belts, hoses, tires, etc.
- 10** Complete minor vehicle repair such as: repair minor electrical connection problem; replace lamp, gladhand seal or wiper blade; reset circuit breaker; etc.
- 11** Coordinate vehicle repairs that take place away from company facilities, complete required reports and follow related procedures according to workplace practices, procedures and policies.
- 12** Practice engine warm-up and cool-down procedures that are appropriate for conditions, following manufacturer recommendations and in accordance with workplace practices, procedures and policies.
- 13** Know the sounds and other signs that indicate a vehicle is operating in an abnormal manner.
- 14** Identify defective conditions and damage on most vehicle components and systems, according to company practices, procedures and policies.
- 15** Report vehicle damage, defects, completed repairs and any other condition that may require maintenance, correction or review.
- 16** Adhere to workplace practices, procedures and policies about vehicle condition, cleanliness and corporate image.



BLOCK 12 | CONDUCT DAILY VEHICLE INSPECTIONS

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) effectively conducts prescribed daily inspections and monitors the vehicle's safe condition.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Know they are responsible for the safe condition of each commercial vehicle they operate.
- 2** Know that Schedule 1 of National Safety Code Standard 13 (NSC 13) lists all minor and major defects that the driver is expected to identify.
- 3** Know that NSC 13 Schedule 1 includes the most common defects/unsafe conditions that a driver may encounter.
- 4** Conduct daily inspections and identify each of the 75 minor and major defect listed in NSC 13 Schedule 1.*
- 5** Identify when a minor or major defect listed in NSC 13 Schedule 1 is present on their vehicle.
- 6** Properly complete and sign written or electronic daily inspection reports that declare the vehicle's condition.
- 7** Continuously monitor vehicle condition according to NSC 13 Schedule 1 while driving or otherwise being responsible for the vehicle, and update the inspection report as required.
- 8** Record on an inspection report every minor defect found during an inspection or while operating a vehicle, and report the minor defect according to workplace practices, procedures and policies.
- 9** Immediately record on an inspection document and report every major defect found during an inspection, or while operating a vehicle, and immediately stop operating the vehicle.
- 10** Maintain a vehicle's out-of-service status whenever a major defect is identified, until the condition is corrected.
- 11** Conduct regular en-route and post-trip vehicle inspections according to workplace practices, procedures and policies.
- 12** Adhere to the regulations and company practices, procedures and policies whenever accepting an inspection report from another worker.
- 13** Carry a valid inspection report for each vehicle operated, and a copy of NSC 13 Schedule 1, and produce these documents when required by an enforcement officer.

***Note:** The specific knowledge related to each of the minor and major defects contained in NSC 13 Schedule 1 is listed in Appendix A. Differences may exist in some jurisdictions.

BLOCK 13 | COMPLY WITH HOURS OF SERVICE REGULATIONS**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) knows and follows the Hours of Service (HOS) regulations.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:****Application and Duty Status**

1 Know that the Hours of Service regulations apply to operating any commercial vehicle.

2 Know that they are on-duty when driving, in care and control of a vehicle, and performing other types of work.

3 Calculate when they can begin to drive, and how many hours are available for driving.

4 Know that in normal conditions they must take 10 hours off-duty each day, and have one 24-hour period off-duty within the previous 14 days.

5 Know they cannot drive any further when any one of the on-duty limits is reached.

6 Know that a commercial vehicle may be operated for personal use, and for up to 75 km in a day when: the vehicle is empty and no trailer is being towed; no work of any sort is being done for a motor carrier; and the starting and ending odometer readings are recorded in the driver's daily log.

Driving Limitations and Duty Cycles in Normal Conditions

7 Know that they must not drive a commercial vehicle after being on-duty for 14 hours in a day.

8 Know that they must not drive a commercial vehicle after accumulating 13 hours of driving in a day.

9 Know that a work shift begins when they return to on-duty, after being off-duty for at least 8 consecutive hours.

10 Know they are still considered to be on the previous work shift when returning to on-duty after less than 8 hours off-duty, and they may be prohibited from driving.

11 Know that they must not drive a commercial vehicle any longer when 16 hours have elapsed since their work shift began.

12 Know that a 7-day cycle is called "Cycle 1" and allows a driver to be on-duty for 70 hours in a 7-day period.

13 Know that a 14-day cycle is called "Cycle 2" and allows a driver to be on-duty for 120 hours in a 14-day period.

14 Know that a new cycle can start only after taking the required minimum number of hours off-duty, and that this period is called a "reset".

15 Know that resetting Cycle 1 requires at least 36 hours off-duty.

16 Know that resetting Cycle 2 requires at least 72 hours off-duty.

17 Know that up to 2 hours of the required minimum daily off-duty time can be deferred from one day to the next as long as the deferred time is properly added to the correct portion of off-duty time in the following day.

continued on page 24



**functional
competencies
BLOCK 13**

BLOCK 13 | COMPLIES WITH HOURS OF SERVICE REGULATIONS

Driving Limitations in Adverse Conditions

18 Know that, when encountering specifically defined adverse driving conditions, driving up to 2 hours beyond the daily limit is permitted when remaining within the 16-hour work shift rule.

19 Know that, when adverse conditions cause a driver to be on-duty longer than is normally permitted, the off-duty period on the following day must be increased by a similar amount.

Completing a Driver's Daily Log

20 Know that they must maintain and carry a daily log whenever they: operate beyond 160 km of their home terminal; return to a location other than their home terminal at the end of the day; or work for an employer who does not maintain a record of the driver's duty status.

21 Know that they must track their status within each day as defined on the daily log, and track the duty status within their work shift, which can start at any time of day.

22 Know that the "day" shown on a daily log is a 24-hour period which generally begins at midnight, but can start at any time set by an employer.

23 Know that the "home terminal" is determined by the employer and is normally associated with the location where a worker begins to drive a commercial vehicle.

24 Know that, when operating a commercial vehicle for which a daily log must be carried, a driver must carry logs which show the previous 14 days of duty status.

25 Know that a driver's daily logs may also need to be retained for tax purposes such as meal deductions, etc.

26 Maintain a complete, legible and accurate driver's daily log (in a written or electronic format) that fully complies with the regulations.

27 Carry daily logs that apply to the preceding 14 days, whenever operating a commercial vehicle requiring the driver to carry a log.

28 Retain and submit daily logs as required by the regulations and according to workplace practices, procedures and policies.

FOR CERTAIN DRIVERS, HOS KNOWLEDGE MAY ALSO INCLUDE THE FOLLOWING ITEMS:

Completing a Duty Status Record

29 A driver may be exempt from the requirements to complete and carry a daily log when: they drive within a radius of 160 km from their home terminal; return to their home terminal at the end of the day; and work for an employer who maintains a record of their duty status.

30 A record of each driver's duty status must track the driver's activities within each day, within the work shift, and within a duty cycle.

31 A driver using a record of duty status instead of a daily log must still comply with all of the driving restrictions.

Sleeper Berth Provisions

32 Proper use of the sleeper berth allows the off-duty period to be split.

33 Off-duty periods can, in certain conditions, be split into shorter periods.

U.S. HOS Requirements

34 Canadian HOS requirements differ from those in the U.S.

BLOCK 14 | OPERATE VEHICLE AIR BRAKE SYSTEMS**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) knows how air brake systems operate, and routinely inspects and tests system safety features.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:**

- | | |
|--|--|
| 1 Know the basic operating principles of air brakes. | 14 Identify insecure air compressor mounts, brackets or fasteners. |
| 2 Know the general function of supply, service, parking/emergency and trailer sub-systems and related components.* | 15 Check the air brake system for audible air leaks. |
| 3 Know the visual characteristics, external components and basic function of foundation brakes. | 16 Test the low air pressure warning device. |
| 4 Know how speed, weight, vehicle specifications and downhill grades affect vehicle braking. | 17 Measure air pressure build-up time. |
| 5 Understand conditions such as brake fade and brake lag. | 18 Identify air compressor governor cut-out and cut-in pressure settings. |
| 6 Identify common brake types and recognize many of the components. | 19 Test the air loss rate of an air brake system. |
| 7 Identify damaged, missing or malfunctioning foundation brake components. | 20 Test the tractor (towing vehicle) protection valve. |
| 8 Identify cracked, loose, missing or contaminated brake lining, improper drum contact, or lining that is less than the required thickness. | 21 Test automatic application of the trailer spring (parking/emergency) brakes. |
| 9 Identify audible air leaks and visible evidence of cracks and non-manufactured holes in brake chambers. | 22 Test spring (parking/emergency) brakes. |
| 10 Identify mismatched brake chamber size and/or slack adjuster length on steering axles. | 23 Test the function and condition of air tank drain valves. |
| 11 Identify cracked and/or broken brake drums or rotors. | 24 Identify insecurely mounted air tanks. |
| 12 Identify leaks, damage, deterioration and improper fittings on readily visible brake hoses and air lines. | 25 Test spring brake operation. |
| 13 Identify a loose, cut or frayed compressor drive belt. | 26 Know the importance of proper brake pushrod stroke. |
| | 27 Know how to measure brake pushrod stroke. |
| | 28 Know that only qualified individuals may repair brakes. |

*Note: The specific requirements may vary in some jurisdictions. Drivers of straight vehicles may not be required to know about trailer-related systems.



**functional
competencies
BLOCK 15**

BLOCK 15 | SECURE CARGO FOR TRANSPORT

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) knows the regulatory requirements for securing cargo and takes the steps necessary to secure cargo on their vehicle, before and during transport.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Know that every commercial vehicle transporting cargo must have the cargo secured according to the regulations (National Safety Code Standard 10).
- 2** Know that the requirement to secure cargo includes any material, equipment or other loose article carried on the vehicle, including dunnage, blocking, tarps, tools, equipment, spare materials, etc.
- 3** Know all cargo must be secured so that it cannot fall off the vehicle or in any way be lost.
- 4** Know that articles of cargo must be secured to prevent forward, rearward and sideways movement, and in some cases must also be secured to prevent upward movement.
- 5** Know that all cargo must be secured so that it cannot shift in a way that can affect a vehicle's stability or maneuverability in a negative way.
- 6** Know that cargo must be loaded in such a way that it does not interfere with the driver's ability to drive the vehicle safely, and does not block vehicle entry or exit.
- 7** Know how to properly inspect the security of the cargo.
- 8** Know that articles of cargo are generally secured against the vehicle's structure and by using devices such as tiedowns, blocking and bracing.
- 9** Know that any cargo securing method or device must be the proper type, and must be properly used, strong enough, and in good condition.
- 10** Know that devices used to secure cargo are generally rated for their strength and that most cargo requires a minimum number of tiedowns with particular working load limit ratings.
- 11** Know that cargo tiedowns are specifically designed and rated for such use, must have a means to be tightened, and must be used according to the manufacturer instructions.
- 12** Know that tiedown ratings are determined by manufacturers, are expressed as a "working load limit" (WLL), and marked on the tiedowns.
- 13** Know that the combined strength of individual tiedowns used together to restrain cargo is called the "aggregate working load limit".
- 14** Know that friction between cargo and vehicle surfaces, and friction between different articles of cargo that are in contact, helps to keep some types of cargo secure.
- 15** Know that the size, shape and weight of cargo generally dictates the required number, strength and placement of tiedowns.
- 16** Know that the aggregate working load limit of tiedowns used to secure cargo must equal at least 50% of the cargo weight.
- 17** Know that cargo fully enclosed within a vehicle structure will not generally require tiedowns, but may require blocking, bracing or devices to increase friction between the vehicle and cargo.

BLOCK 15 | SECURE CARGO FOR TRANSPORT



**functional
competencies
BLOCK 15**

18 Know that individual pieces of cargo will, in some cases, need to be “unitized” into larger units of cargo.

19 Know they are not required to inspect cargo if a vehicle has been sealed to prevent access and they have been instructed by their employer not to remove the seal.

20 Know that certain commodities require specific securing methods, devices and equipment to comply with specific regulatory requirements.

21 Identify cargo that can be secured according to general regulatory requirements, and identify that specific securement methods are required for certain cargo including: logs; dressed lumber and similar building materials; metal coils; paper rolls; concrete pipe; intermodal containers; automobiles; light trucks and vans; heavy vehicles, equipment and machinery; flattened or crushed cars; roll-on/roll-off and hook-lift containers; boulders; etc.

22 Inspect cargo and methods used to secure the cargo before driving, to confirm everything is properly secured to comply with the regulations, and according to workplace practices, procedures and policies.

23 Inspect cargo and related articles at specific intervals during the trip to ensure everything remains properly secured to comply with the regulations, and according to workplace practices, procedures and policies.

24 Confirm proper methods and devices have been used to secure cargo, are in good condition, and are in the proper locations.

25 Inspect the condition and integrity of tiedown devices, and adjust tiedowns as necessary to keep cargo secure during transport.

26 Ensure that, in cases where cargo needs to be unitized, individual articles of cargo remain adequately secured into larger articles of cargo.

27 Ensure that cargo secured to the vehicle structure is properly distributed and arranged, and that any required blocking, bracing or friction mat is adequate, properly positioned and securely in place.

28 Follow the specific cargo securing practices, procedures and policies of the workplace, shipper and/or receivers.



**functional
competencies
BLOCK 16**

BLOCK 16 | OPERATE COMMERCIAL VEHICLE SYSTEMS AND FEATURES

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) understands and properly operates typical commercial vehicle systems and features.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Know the general layout of a typical commercial vehicle engine compartment, identify important service items, and locate operating fluid check points.
- 2** Know the general layout and function of major body, frame and external vehicle components and systems.
- 3** Locate fuel tanks and filler caps, and practice proper fueling methods.
- 4** Know the correct operating fluids required for a vehicle, and how to properly re-fill and maintain fluid levels.
- 5** Know the differences between single, tandem, tridem and other multi-axle configurations.
- 6** Understand the operation of typical manual, automated and automatic commercial vehicle transmissions, controls, shift patterns and clutches.
- 7** Identify the basic types, features and function of tires and wheels.
- 8** Identify the physical features and operation of common types of suspension systems.
- 9** Locate and operate all typical primary and secondary controls, gauges and instruments.
- 10** Identify and read the instrument panel indicators displaying important vehicle operating information, warnings and safety system status.
- 11** Understand the basic operation of a differential and inter-axle differential used in tandem drive axles.
- 12** Operate a differential lock or inter-axle differential lock.
- 13** Operate engine brake or retarders, and understand how and when to appropriately use these systems to control vehicle speed.
- 14** Identify the physical features, indicators, warnings, and the basic operation of hydraulic brake systems.
- 15** Identify the physical features and basic operation of drum and disc brake systems.
- 16** Know how steering control is lost when tires skid during heavy brake use or when braking with poor traction.
- 17** Know that Anti lock Brake Systems (ABS) keep wheels from locking, but may not shorten vehicle stopping distance.
- 18** Know how stability control systems operate and affect vehicle operation.
- 19** Operate vehicle heating, defrosting and air-conditioning systems.
- 20** Operate vehicle lamps and accessories.
- 21** Operate windshield wiper and washer systems.
- 22** Carry, secure, store and use, or operate required emergency equipment.
- 23** Know the basic operation of portable or on-board cargo heating equipment.
- 24** Identify and operate different types of trailer coupling devices.

BLOCK 16 | OPERATE COMMERCIAL VEHICLE SYSTEMS AND FEATURES



25 When involved in tractor-trailer operation, proficiently alter the position of a fifth wheel to alter vehicle dimensions or distribute vehicle and/or cargo weight.

26 When involved in tractor-trailer operation, proficiently reposition trailer axles to alter vehicle dimensions, or to distribute vehicle and/or cargo weight.

27 Adjust rear view mirrors to maximize the view and effectively remove or minimize a vehicle's blind spots.

28 Know the basic operation of collision avoidance systems.

29 Know the maintenance and inspection requirements relating to commercial vehicle system and features. (See Block 11 & 12)

30 Be generally familiar with vehicle owner and operator manuals, understand the nature of the content, and locate the manuals as needed.

31 Have a basic understanding of common emission controlling devices including malfunction indicators, Diesel Particulate Filter (DPF) and their regeneration procedures, Diesel Exhaust Fluid (DEF), etc.

32 Have a basic awareness of the use of hybrid drive systems and alternate fuels such as Liquefied Petroleum Gas (LPG), Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG), and biodiesel, etc.



**functional
competencies
BLOCK 17**

BLOCK 17 | MAINTAIN SITUATIONAL AWARENESS

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) understands workplace hazards, and routinely assesses and adapts to changing conditions.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Know workplace hazards and risks, and recognize that such hazards and risks can change.
- 2** Know the role and importance of workplace practices, procedures and policies which are used to manage hazards and risks.
- 3** Locate and understand workplace practices, procedures and policies which are used to manage hazards and risks.
- 4** Review and understand documented job task analyses and hazard assessments.
- 5** Be aware of the presence of other motorists, pedestrians, cyclists and slow-moving vehicles which share the road with commercial vehicles.
- 6** Watch for wildlife or livestock which can enter the space around a vehicle, particularly on routes known for collisions involving animals.
- 7** Set up mirrors to minimize a vehicle's "blind spots".
- 8** Complete a hazard assessment whenever entering an unplanned, unfamiliar or altered workplace.
- 9** Monitor and adhere to highway speed advisories.
- 10** Monitor anticipated weather and road conditions before and during each trip.
- 11** Remain highly alert while driving.
- 12** Regularly and systematically scan exterior conditions by looking ahead and using mirrors.
- 13** Regularly and systematically scan vehicle conditions by monitoring instruments and gauges.
- 14** Monitor the movement and actions of other motorists while passing or being passed.
- 15** Know the visual cues and other signs of potentially hazardous traffic situations.
- 16** Diffuse any situation that could cause anger, hostility or danger.
- 17** Exit the vehicle whenever necessary to inspect clearances and identify potential obstructions.
- 18** Secure a vehicle properly before exiting.

element 3 | DRIVING COMPETENCIES

DRIVING COMPETENCIES INCLUDE TASKS WHERE COMMERCIAL VEHICLE OPERATORS (TRUCK DRIVERS) SPEND MOST OF THEIR TIME.



ELEMENT 3 INCLUDES:

BLOCK 18	Prepare and Start to Drive
BLOCK 19	Control Vehicle Motion and Speed
BLOCK 20	Control Vehicle Direction and Position
BLOCK 21	Maximize Fuel Efficiency
BLOCK 22	Practice Defensive Driving Techniques
BLOCK 23	Adhere to Requirements that are Specific to Commercial Vehicles
BLOCK 24	Back, Dock and Park Vehicles
BLOCK 25	Handle Emergency Incidents
BLOCK 26	Couple Trailers
BLOCK 27	Uncouple Trailers
BLOCK 28	Turn Tractor-Trailers
BLOCK 29	Back, Dock and Park Tractor-Trailers

Note: Blocks 28 and 29 apply only to tractor-trailers.



**driving
competencies**
BLOCK 18

BLOCK 18 | PREPARE AND START TO DRIVE

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) knows the importance of preparation and completes all necessary tasks prior to departure.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Plan ahead for each trip, addressing issues such as: Hours of Service regulations, rest stops, fuel stops, hazard awareness, shipper and customer facilities, primary and alternate routes, weather and road conditions, service facilities, departure and arrival times, etc. (See Block 9)
- 2** Drive only when fully alert and when judgment is not impaired in any way.
- 3** Calculate when driving can begin, and determine the number of hours available to drive, to comply with Hours of Service regulations. (See Block 13)
- 4** Determine before leaving the driver's seat that the vehicle is secured by the vehicle's parking brake, wheel chocks or suitable blocks.
- 5** Always properly enter and exit the cab or vehicle cargo area, maintaining 3-point contact, and avoid the risks of improperly climbing onto or jumping from equipment.
- 6** Inspect each vehicle to confirm it complies with safety regulations before a trip begins. (See Block 12)
- 7** Confirm the vehicle and cargo are properly inspected. (See Blocks 11, 12 and 15)
- 8** Confirm all required vehicle and cargo documents are valid and correct. These documents include items such as permit books, vehicle registration, insurance, bills of lading, etc.
- 9** When in a loading dock, confirm that all cargo handling equipment and devices have been returned to their proper place.
- 10** Check or remove vehicle restraints and other loading dock devices.
- 11** Confirm that cargo and all vehicle-related equipment are properly distributed, secured and covered if necessary. (See Block 15)
- 12** When a tractor-trailer is involved, check and/or adjust air suspension settings and controls, axle spacing, and fifth wheel position.
- 13** Check the condition, attachment and operation of coupling devices and any other connections between the towing vehicle and trailer. (See Block 26)
- 14** Adjust the driver's seat to the correct position.
- 15** Inspect, wear and properly adjust seatbelts.
- 16** Locate and identify all vehicle controls and instruments. (See Block 16)
- 17** Confirm mirrors are properly adjusted. (See Block 17)
- 18** Know the importance of proper start-up and/or warm-up procedures.
- 19** Set up and operate onboard communication systems and electronic logging devices. (See Block 5 and 8)
- 20** Scan all controls and instruments before driving.
- 21** Start the engine while monitoring the instrument panel and indicator lamps, listen for normal vehicle sounds, and avoid unnecessary idling.

BLOCK 19 | CONTROL VEHICLE MOTION AND SPEED**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) effectively and proficiently controls vehicle motion, speed and space around the vehicle.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:**

- 1** Proficiently operate one of the following common types of transmission. (Proficiency with more than one type of transmission can improve labour mobility and employment opportunities.)
 - a. Manual transmission and clutch** according to the manufacturer-recommended procedures, including:
 - » Efficiently operate the engine, clutch and transmission to avoid unnecessary clutch wear and damage to any drive train components.
 - » Select the correct gear for starting, smoothly start a vehicle into motion, and apply starting techniques that may be necessary to accommodate vehicle weight.
 - » Appropriately select and smoothly change gears while accelerating and decelerating.
 - » Shift progressively while accelerating.
 - » Skip gears appropriately during acceleration and deceleration.
 - b. Automated manual transmission** according to the manufacturer-recommended procedures.
 - c. Automatic transmission** according to the manufacturer-recommended procedures.
- 2** Keep a vehicle from rolling backward when starting to drive uphill.
- 3** Know the relationship between engine rpm and torque output, and routinely operate the engine in its optimal range.
- 4** Look ahead, maintain adequate space around the vehicle, and adjust space management techniques when traffic is congested, etc.
- 5** Anticipate the need to brake or stop, modulate brake pressure to make smooth and gradual stops, and use all service brakes.
- 6** Anticipate the need to down-shift when approaching grades and rolling terrain, and select the appropriate gear, engine rpm and vehicle speed for these conditions.
- 7** Adjust speed as appropriate in response to speed advisories, traffic and road conditions.
- 8** Adjust vehicle speed before entering a curve or turn, and avoid using brakes during a curve or turn.
- 9** Effectively use a compression-style engine brake or driveline retarder to hold back or slow a vehicle, and avoid using these devices in slippery conditions.
- 10** Understand the time needed to clear intersections, and anticipate the typical patterns of traffic control signals.
- 11** Understand the increased risk of collisions within traffic intersections.

continued on page 34



**driving
competencies**
BLOCK 19

BLOCK 19 | CONTROL VEHICLE MOTION AND SPEED

12 Operate at speed that is at or below posted speed advisory and is appropriate for vehicle weight, center of gravity, and type of cargo.

13 Properly use highway acceleration and deceleration lanes to smoothly integrate with traffic.

14 Select the appropriate gear, engine rpm and vehicle speed for traveling up and down grades.

15 Properly use a cruise-control system. Avoid cruise-control use on slippery roads, steep grades or sharp curves, in heavy traffic, during limited visibility, or on city streets.

16 Apply an effective method to get a vehicle moving on a slippery surface, using the power divider "differential lock" as needed.

17 Monitor an overtaking or merging vehicle, and provide additional space when necessary.

18 Anticipate conditions that make it harder to control vehicle speed due to reduced traction, and effectively adjust driving techniques whenever a vehicle is likely to react differently.

19 Increase following distance, reduce speed and be more attentive in difficult and adverse conditions such as: darkness, poor visibility, high wind, slippery surfaces, etc.

20 Modify braking techniques in difficult conditions such as: slippery surfaces, congested traffic, low visibility, high wind, etc.

21 Operate only when road conditions are safe, and avoid putting any vehicle or person into an unnecessarily hazardous situation.

BLOCK 20 | CONTROL VEHICLE DIRECTION AND POSITION**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) effectively and proficiently controls vehicle direction, turns and position.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:**

- 1** Maintain a secure grip on the steering wheel, using two properly positioned hands, as much as possible.
- 2** Select appropriate lanes on multi-lane highways, and on highways having both express and collector lanes.
- 3** Maintain a consistent vehicle position, generally in the right-most driving lane, normally near the centre or slightly right of centre in the lane.
- 4** Steer smoothly, and avoid jerky and unnecessary steering correction.
- 5** Confirm and maintain mirror adjustments to minimize "blind spots".
- 6** Drive inside marked lanes, and change lanes only where permitted.
- 7** Watch traffic flow continuously, and identify the need to change lanes or merge with adequate time to do so.
- 8** Check carefully before beginning a lane change or merge, signal every lane change in advance, and then smoothly and deliberately change lanes only after confirming the space is clear.
- 9** Ensure a suitable amount of space is available to accommodate their vehicle whenever making a lane change or merge, leaving neither too much space or intruding on other vehicles, and adjusting space as necessary to deal with traffic congestion.
- 10** Change one lane at a time, and cancel the turn signal immediately after completing a lane change.
- 11** Select the correct lane for beginning and completing each turn.
- 12** Proficiently complete wide and tight turns, in right-hand and left-hand directions. Select the proper lanes for each turn, maintain appropriate speed, and keep wheels clear of curbs and obstructions.
- 13** Monitor traffic, pedestrians, cyclists and slow-moving vehicles on all sides, before and during each turn.
- 14** Respect the value of diffusing any situation that might intimidate another driver or cause another driver to take evasive action.
- 15** Successfully negotiate traffic circles or roundabouts.
- 16** Anticipate conditions that make it harder to control vehicle direction due to reduced lateral stability, and effectively adjust driving techniques whenever a vehicle is likely to react differently.
- 17** Reduce speed as needed before entering curves, ramps and turns, accounting for surface conditions, vehicle weight, centre of gravity, and cargo.
- 18** Account for vehicle overhang, off-tracking and lane encroachment during turns.



**driving
competencies**
BLOCK 21

BLOCK 21 | MAXIMIZE FUEL EFFICIENCY

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) maximizes fuel efficiency.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Accelerate at a smooth and gradual rate.
- 2** Anticipate necessary changes in speed, gear selection and surrounding space.
- 3** Operate the engine and transmission in the most fuel-efficient rpm range whenever possible.
- 4** When driving a vehicle with manual transmission, shift progressively and select the engine rpm and gear that are most suitable for the vehicle speed and load.
- 5** When driving a vehicle with an automated manual transmission, control shift points by adjusting the throttle.
- 6** Look ahead, anticipate the need to change speed, and gradually change speed.
- 7** Use cruise control whenever possible and appropriate for driving conditions.
- 8** Use auxiliary power units and “shore power” according to workplace practices, procedures and policies.
- 9** Idle the engine as little as possible, and only when and where permitted.
- 10** Set up and operate the vehicle to minimize fuel consumption. Minimize the gap between tractor and trailer where possible and allowed.
- 11** Use fuel types, vehicle technology, fuel additives, etc., according to workplace practices, procedures and policies. Purchase fuel based on workplace practices, procedures and policies that reflect price, etc.

BLOCK 22 | PRACTICE DEFENSIVE DRIVING TECHNIQUES**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) drives defensively.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Maintain a high level of situational awareness.
(See Block 17)
- 2** Observe and critique personal driving techniques to identify ways to improve.
- 3** Constantly monitor the actions of other drivers, changing weather and changing road surfaces.
- 4** Adjust driving techniques to match the vehicle configuration, cargo weight, centre of gravity, and driving experience.
- 5** Recognize and take steps to avoid situations that cause anger, hostility or danger.
- 6** Be courteous, and be prepared and willing to yield to other motorists, cyclists, pedestrians and slow-moving vehicles.
- 7** Regularly and systematically scan mirrors, instruments and gauges.
- 8** Watch for the visual cues and other signs of potentially hazardous traffic situations.
- 9** Maintain an appropriate following distance in all conditions.
- 10** Recognize and avoid sources of distraction.
- 11** Maintain the appropriate speed for road and traffic conditions, while adhering to safety regulations and workplace practices, procedures and policies.
- 12** Know they have a duty – known as the “duty of care” – to proactively protect other road users from harm.
- 13** Recognize their responsibilities around sharing a workplace with the public, and how the additional size and weight of their vehicle may be perceived by other road users.



**driving
competencies
BLOCK 22**



**driving
competencies
BLOCK 23**

BLOCK 23 | ADHERE TO REQUIREMENTS THAT ARE SPECIFIC TO COMMERCIAL VEHICLES

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) recognizes and responds to requirements that apply to commercial vehicles.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Read all signs with particular messages that apply to commercial vehicles.
- 2** Know the height of their vehicle.
- 3** Know the empty and loaded weight of their vehicle.
- 4** Know standard highway height and weight restrictions.
- 5** Know the routes that prohibit commercial vehicles.
- 6** Take extra care when crossing railway tracks and, before crossing, determine the space available for vehicles. Whenever possible, shift gears only before or after crossing the railway tracks.
- 7** Safely enter vehicle inspection facilities, or pull off the roadway, when instructed by an officer or highway sign.
- 8** Watch for potential hazards of unmarked overhead obstructions such as: canopies, roof overhangs and other building protrusions, signs, utility lines, tree limbs, doorway entries, etc.
- 9** Watch for snow build-up, debris or road construction that can change vehicle height, weight or clearances.
- 10** Read signs indicating the weight capacity of roadways or bridges – including seasonal weight restrictions.
- 11** Comply with specific requirements for using toll routes and bridges.
- 12** Know the location and proper use of truck emergency runaway lanes.
- 13** Know the times, days and/or weeks when commercial vehicle operations are restricted in certain urban areas.
- 14** Carry and know how to use the emergency equipment required for certain commercial vehicle operations.
- 15** Know how and when to properly set up emergency warning devices such as triangle reflectors.
- 16** Immediately recognize and respond to an unexpected situation in which their vehicle weight or height is greater than what is permitted to operate on a particular road or highway.
- 17** Respect local bylaws restricting vehicle loading and unloading activities, parking and idling.

BLOCK 24 | BACK, DOCK AND PARK VEHICLES**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) safely and proficiently backs, docks and parks a single commercial vehicle in any typical setting.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:**

- 1** Minimize backing activity by driving forward, driving around the block, or finding a different approach whenever possible.
- 2** Plan ahead to ensure backing is always done in the safest manner. For example, perform blindside backing only when there is no alternative, or choose to back into a space where it is possible to drive out in a forward direction rather than backing onto a road.
- 3** Approach each backing maneuver from the direction that provides the best possible visibility.
- 4** Check mirror set up before backing. Adjust mirrors if necessary.
- 5** Exit the vehicle and check the intended path for clearances, obstructions and hazards as often as necessary, before and during backing. Recheck the path whenever delays could allow conditions to change.
- 6** Open windows, silence entertainment and communication systems, use warning flashers, and briefly sound the horn whenever backing.
- 7** Warn nearby people of their intention to back up, and use warning lamps to improve vehicle visibility while backing.
- 8** Engage and follow directions from a competent signaler when necessary.
- 9** When using a signaler, confirm situational needs and risks are assessed, and that signals will be understood. Stop the vehicle when the signaler can no longer be seen or heard.
- 10** Know that, even when using a signaler, the driver remains responsible for backing safely and without incident.
- 11** Observe signals and other warning devices used around loading docks.
- 12** Proficiently back into and properly align with loading docks.
- 13** Proficiently back 30 metres in a straight line in a path that provides 15 cm clearance on either side at the vehicle's widest point, door or mirror.
- 14** Proficiently complete offset backing to the left.*
- 15** Proficiently complete offset backing to the right.*
- 16** Proficiently back into a space that provides only enough room to complete an "alley dock backing" maneuver from the left.*
- 17** Proficiently back into a space that provides only enough room to complete an "alley dock backing" maneuver from the right.*
- 18** Proficiently back into a parallel parking space from the left.*
- 19** Proficiently back into a parallel parking space from the right.*
- 20** Proficiently back through a slalom course following a predetermined layout, maintaining necessary clearances.*

* See Appendix B for details.



BLOCK 25 | HANDLE EMERGENCY INCIDENTS

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) handles emergency incidents in a professional manner, adhering to workplace practices, procedures and policies.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Maintain a high level of situational awareness.
(See Block 17)
- 2** Know the types of incidents that must be reported to employers, police and other reporting agencies.
- 3** Follow the specific requirements of workplace practices, procedures and policies regarding collisions, close calls, injuries or other similar incidents.
- 4** Know workplace practices, procedures and policies relating to obligations and limitations in administering first aid.
- 5** Conduct themselves according to workplace practices, procedures and policies in any emergency situation when speaking to police, media, other motorists and the public.
- 6** Follow workplace practices, procedures and policies when engaging emergency support such as: towing and recovery service, vehicle repair, breakdown, tire repair, etc.
- 7** Comply with regulations, and workplace practices, procedures and policies when using warning devices and other emergency equipment.

BLOCK 26 | COUPLE TRAILERS**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) safely and proficiently couples trailers to towing vehicles.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:**

1 Inspect trailer couplers and connectors before coupling. Check for damage, cracks or other defects, and condition of lubricant where applicable.

2 Follow a systematic routine for the coupling process, adhering to workplace practices, procedures and policies.

3 Overcome challenges involving ground surface conditions, traction, clearances, obstructions and access.

Couple a trailer to a fifth wheel

4 Confirm the suitable and safe condition of the lower and upper fifth wheel couplers, air connections and electrical connections.

5 Align the tractor and trailer with the king pin near the centre line of the lower fifth wheel coupler.

6 Couple a trailer to a towing vehicle with a fifth wheel as follows:

Couple a trailer to a fifth wheel, using a tractor with fixed suspension

- a. Adjust coupling height if necessary, using the trailer landing gear so that the trailer upper coupler contacts the fifth wheel lower coupler behind the pivot.
- b. Reverse the tractor, gently but firmly engaging the fifth wheel, while monitoring the trailer's position.

Couple a trailer to a fifth wheel, using a tractor with air suspension with an air bag dump feature

- a. Back up close to the trailer, check vehicle heights and dump the tractor air suspension.
- b. Reverse the tractor until the fifth wheel lower coupler is fully under the front of the trailer, but still ahead of the king pin.

- c. Return the tractor air suspension to its normal height while monitoring the trailer's position.
- d. Reverse the tractor to engage the fifth wheel coupling.

Complete the remaining steps when coupling a trailer to any fifth wheel, regardless of suspension type

7 Confirm proper fifth wheel coupling by attempting to move the tractor forward ("tug test"). Then secure the tractor.

8 Visually confirm the lower fifth wheel coupler is fully locked by the position of the release handle and the jaws. Then connect air and electrical lines.

9 Raise the trailer landing gear and stow its handle.

10 Charge the trailer's air brake system, and confirm air pressure gauges show normal pressure levels and operation. (See Block 13)

11 Adjust trailer air suspension as needed.

Couple a trailer to a towing vehicle using a different type of coupling device

12 Establish the correct height for coupling.

13 Engage the coupler, and close the coupler latch and any secondary latch.

14 Connect electrical systems and any other required connections.

15 Connect safety chains or cables.



BLOCK 27 | UNCOUPLE TRAILERS

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) safely and proficiently uncouples trailers from towing vehicles.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Confirm the suitable and safe location for uncoupling.
- 2** Park and secure the towing vehicle and trailer.
- 3** Place any required wheel chocks and blocks, or engage locks.
- 4** Place suitable support material under the trailer landing gear if required.
- 5** Disconnect and stow the trailer system connectors.
- 6** Uncouple a trailer from a towing vehicle with a fifth wheel as follows:

Uncouple a trailer from a fifth wheel, using a tractor with fixed suspension

- a. Release the fifth wheel coupler lock
- b. Adjust trailer air suspension systems as required.
- c. Lower the trailer landing gear until it just touches the ground, but does not raise the trailer from the fifth wheel.
- d. Slowly drive the tractor forward, until the fifth wheel lower coupler is fully out from under the trailer, but the trailer is still above the tractor's frame.
- e. Confirm that the trailer is stable and slowly drive forward until the tractor is clear of the trailer.

Uncouple a trailer from a fifth wheel, using a tractor with air suspension and an air bag dump feature

- a. Release the fifth wheel coupler lock.
- b. Adjust trailer air suspension systems as required.
- c. Lower the trailer landing gear until it just touches the ground, but does not raise the trailer from the fifth wheel.
- d. Drive slowly forward a short distance to unlatch the fifth wheel coupler.
- e. Drop the tractor's air suspension.
- f. Confirm that the trailer is stable and slowly drive forward until the tractor is clear of the trailer.
- g. Restore air suspension to its normal setting.

Continue to uncouple a trailer using a fifth wheel

- 7** Secure the trailer according to company practices, procedures and policies before driving away.

Uncoupling a trailer from another type of coupler

- 8** Disconnect electrical systems and remove other connectors.
- 9** Detach safety chains or cables.
- 10** Engage trailer support gear until it contacts the ground.
- 11** Open the primary and secondary latch.
- 12** Raise the trailer to separate the coupler.
- 13** Slowly drive forward, confirm that the trailer is stable.
- 14** Secure the trailer according to company practices, procedures and policies before driving away.

BLOCK 28 | TURN TRACTOR-TRAILERS**KNOWLEDGE AND TASKS**

A commercial vehicle operator (truck driver) safely and proficiently completes right-hand, left-hand and U-turns with a tractor-trailer.

**THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:**

- 1** Know when trailer axles, and possibly fifth wheels, can and should be repositioned to complete turns.
- 2** Proficiently adjust overall vehicle length, fifth wheel position and axle positions as required, accounting for the vehicle's overhang, trailer swing, and the rules governing vehicle weights and dimensions. (See Block 16.25 and 16.26)
- 3** Plan how to approach a turn, and take a different route whenever a safe turn may not be possible.
- 4** Know the swept path of a tractor-trailer during a turn.
- 5** Begin a turn only when space, traffic and traffic control signals allow the turn to be completed safely.
- 6** Proceed slowly through each left-hand and right-hand turn, while tracking the rear of the trailer.
- 7** Drive over lane markings – or swing to the right or left of a marked lane – only after assessing all hazards, and only when the actions are needed to complete a turn.
- 8** Avoid contacting any obstacle during turns, and avoid contacting any curb, shoulder or similar obstacle when adequate turning room is available.
- 9** Steer beyond the intended lane during any turn that requires additional clearance for the trailer.
- 10** Be considerate and patient during a turn, and carefully monitor pedestrians, cyclists and other nearby vehicles.
- 11** Perform U-turns with a tractor-trailer according to company practices, procedures and policies. Proficiently complete a U-turn only where legally permitted, when necessary and after assessing all hazards.
- 12** Proficiently turn tractor-trailers from a laneway onto a two-lane street. *
- 13** Proficiently steer a tractor-trailer through a predetermined slalom course, maintaining the necessary clearance from course markers. *

* See Appendix B for details.



BLOCK 29 | BACK, DOCK AND PARK TRACTOR-TRAILERS

KNOWLEDGE AND TASKS

A commercial vehicle operator (truck driver) safely and proficiently backs up, docks or parks a tractor-trailer.

Note: This section repeats some of the knowledge and tasks listed in the general backing and docking knowledge and tasks defined in Block 24.

THIS MEANS THE COMMERCIAL VEHICLE OPERATOR (TRUCK DRIVER) WILL:

- 1** Minimize backing activity by driving forward, driving around the block, or finding a different approach whenever possible.
- 2** Plan ahead to ensure backing is always done in the safest manner (e.g., perform blindside backing only when there is no alternative, and back into a spot where it is possible to drive out in a forward direction rather than backing onto a road).
- 3** Approach each backing maneuver from the direction that provides the best possible visibility.
- 4** Check mirror setup before backing. Adjust mirrors if necessary.
- 5** Exit the vehicle and check the intended path for clearances, obstructions and hazards as often as necessary, before and during backing. Recheck the path whenever delays could allow conditions to change.
- 6** Open windows, silence entertainment and communication systems, use warning flashers, and briefly sound the horn whenever backing.
- 7** Warn nearby people of their intention to back up, and use warning lamps to improve vehicle visibility while backing.
- 8** Engage and follow directions from a competent signaler when necessary.
- 9** When using a signaler, confirm situational needs and risks are assessed, and that signals will be understood. Stop vehicle movement when visual contact or communication with signaler is lost.
- 10** Know that, even when using a signaler, the driver remains responsible for backing safely and without incident.
- 11** Observe signals and other warning devices used around loading docks.
- 12** Proficiently back into and properly align with loading docks.
- 13** Know the room required to safely back into a loading dock or parking space.
- 14** Know the most effective way to approach a space to begin backing.
- 15** Know the individual steering points needed to align the trailer during backing.
- 16** Anticipate and effectively counter "trailer drift" during backing.
- 17** Know that a backing tractor-trailer typically needs to travel 3 to 4 metres before the trailer begins to change direction in response to the steering wheel.
- 18** Know that shorter trailers respond more quickly to steering changes than longer trailers.
- 19** Know that the number of trailer axles and axle position affect trailer reaction during turns.
- 20** Know that straight backing maneuvers are the simplest backing maneuvers, and are the preferred option whenever available.

BLOCK 29 | BACK, DOCK AND PARK TRACTOR-TRAILERS



21 Approach each backing maneuver in the safest and most efficient manner.

22 Open cargo doors when needed before backing.

23 Proficiently back a trailer into a space offering room to complete a “straight back” maneuver.

24 Proficiently complete offset backing to the left.*

25 Proficiently complete offset backing to the right.*

26 Proficiently back a trailer into a space that provides enough room to complete a “straight dock backing” maneuver, approaching a space on the left side.*

27 Proficiently back a trailer into a space that provides enough room to complete a “straight dock backing” maneuver, approaching a space on the right side.*

28 Proficiently back a trailer into a space that provides only enough room to complete an “alley dock backing” maneuver from the left.*

29 Proficiently back a trailer into a space that provides only enough room to complete an “alley dock backing” maneuver from the right.*

30 Proficiently back a trailer into a space that provides only enough room to complete an “angled dock backing” maneuver from the left.*

31 Proficiently back a trailer into a space that provides only enough room to complete an “angled dock backing” maneuver from the right.*

32 Proficiently back a trailer into a parallel parking space from the right.*

33 Proficiently back a trailer into a parallel parking space from the left.*

34 Proficiently back a tractor-trailer through a predetermined slalom course, maintaining the necessary clearance from course markers.*

* See Appendix B for details.

appendix



APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

"Defects" are in plain text. "Major Defects" are in bold text on grey background and include the letter 'M'.

1. Air Brake System

- 1.1 audible air leak
- 1.2 slow air pressure build-up rate
- 1.3M pushrod stroke of any brake exceeds the adjustment limit**
- 1.4M air loss rate exceeds prescribed limit**
- 1.5M inoperative towing vehicle (tractor) protection system**
- 1.6M low air warning system fails or system is activated**
- 1.7M inoperative service, parking or emergency brake**

2. Cab

- 2.1 occupant compartment door fails to open
- 2.2M any cab or sleeper door fails to close securely**

3. Cargo Securement

- 3.1 insecure or improper load covering (e.g. wrong type or flapping in the wind)
- 3.2M insecure cargo**
- 3.3M absence, failure, malfunction or deterioration of required cargo securement device or load covering**

4. Coupling Devices

- 4.1 coupler or mounting has loose or missing fastener
- 4.2M coupler is insecure or movement exceeds prescribed limit**
- 4.3M coupling or locking mechanism is damaged or fails to lock**
- 4.4M defective, incorrect or missing safety chain/cable**

5. Dangerous Goods

- 5.1M dangerous goods requirements not met**

6. Driver Controls

- 6.1 accelerator pedal, clutch, gauges, audible and visual indicators or instruments fail to function properly

7. Driver Seat

- 7.1 seat is damaged or fails to remain in set position
- 7.2M seatbelt or tether belt is insecure, missing or malfunctions**

8. Electric Brake System

- 8.1 loose or insecure wiring or electrical connection
- 8.2M inoperative breakaway device**
- 8.3M inoperative brake**

9. Emergency Equipment & Safety Devices

- 9.1 emergency equipment is missing, damaged or defective

10. Exhaust System

- 10.1 exhaust leak
- 10.2M leak that causes exhaust gas to enter the occupant compartment**

11. Frame and Cargo Body

- 11.1 damaged frame or cargo body
- 11.2M visibly shifted, cracked, collapsing or sagging frame member(s)**

12. Fuel System

- 12.1 missing fuel tank cap
- 12.2M insecure fuel tank**
- 12.3M dripping fuel leak**

13. General

- 13.1M serious damage or deterioration that is noticeable and may affect the vehicle's safe operation**

14. Glass and Mirrors

- 14.1 required mirror or window glass fails to provide the required view to the driver as a result of being cracked, broken, damaged, missing or maladjusted.
- 14.2 required mirror or glass has broken or damaged attachments onto vehicle body

15. Heater/Defroster

- 15.1 control or system failure
- 15.2M defroster fails to provide unobstructed view through the windshield**

16. Horn

- 16.1 vehicle has no operative horn

17. Hydraulic Brake System

- 17.1 brake fluid level is below indicated minimum level
- 17.2M parking brake is inoperative**
- 17.3M brake boost or power assist is not operative**
- 17.4M brake fluid leak**
- 17.5M brake pedal fade or insufficient pedal reserve**
- 17.6M activated (other than ABS) warning device**
- 17.7M brake fluid reservoir is less than 1/4 full**

18. Lamps and Reflectors

- 18.1 required lamp does not function as intended
- 18.2 required reflector is missing or partially missing
- When use of lamps is required:*
- 18.3M failure of both low-beam headlamps**
- 18.4M failure of both rearmost tail lamps**
- At all times:*
- 18.5M failure of a rearmost turn-indicator lamp**

- 18.6M failure of both rearmost brake lamps**

19. Steering

- 19.1 steering wheel lash (free-play) is greater than normal
- 19.2M steering wheel is insecure, or does not respond normally**
- 19.3M steering wheel lash (free-play) exceeds prescribed limit**

20. Suspension System

- 20.1 air leak in air suspension system
- 20.2 broken spring leaf
- 20.3 suspension fastener is loose, missing or broken
- 20.4M damaged* or deflated air bag [*patched, cut, bruised, cracked to braid, mounted insecurely]**
- 20.5M cracked or broken main spring leaf or more than one broken spring leaf**
- 20.6M part of spring leaf or suspension is missing, shifted out of place or in contact with another vehicle component**
- 20.7M loose U-bolt**

21. Tires

- 21.1 damaged tread or sidewall of tire
- 21.2 tire leaking (if leak can be felt or heard, tire is to be treated as flat)
- 21.3M flat tire**
- 21.4M tire tread depth is less than wear limit**
- 21.5M tire is in contact with another tire or any vehicle component other than mud-flap**
- 21.6M tire is marked "Not for high way use"**
- 21.7M tire has exposed cords in the tread or outer side wall area**

22. Wheels, Hubs and Fasteners

- 22.1 hub oil below minimum level (When fitted with sight glass)
- 22.2 leaking wheel seal
- 22.3M wheel has loose, missing or ineffective fastener**
- 22.4M damaged, cracked or broken wheel, rim or attaching part**
- 22.5M evidence of imminent wheel, hub or bearing failure**

23. Windshield Wiper/Washer

- 23.1 control or system malfunction.
- 23.2 wiper blade damaged, missing or fails to adequately clear driver's field of vision
- When use of wipers or washer is required:*
- 23.3M wiper or washer fails to adequately clear driver's field of vision in area swept by driver's side wiper**

APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

appendix

This appendix details the knowledge of minor and major defects for each inspection item contained in National Safety Code Standard 13, Schedule 1. Minor defects are shown in black. Major defects are listed with the letter M after the number of the defect, and are shown in blue.

Some defects are relevant only to certain vehicles. For example: vehicles normally will have either air or hydraulic brakes. Similarly, some vehicles are equipped to tow trailers, and others are not. Drivers should know all of the items and defects that pertain to the vehicles they operate.

appendix



APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

DAILY VEHICLE INSPECTION – SCHEDULE 1 MINOR AND MAJOR DEFECTS

1. AIR BRAKE SYSTEM

1.1 Audible air leak

The driver of a vehicle with air brakes knows that it's necessary to check for leaks regularly and a vehicle has this defect when an air leak can be heard.

1.2 Slow air pressure build-up rate

The driver of a vehicle with air brakes knows the proper method for testing the air loss rate, and that a vehicle has this defect when it takes longer than two minutes for air pressure to build up from 85 to 100 psi.

1.3M Pushrod stroke of any brake exceeds adjustment limit

The driver of a vehicle with air brakes knows the proper method for checking brake pushrod stroke, and that a vehicle has this **major defect** when the pushrod stroke of any brake is longer than the prescribed limit.

1.4M Air loss rate exceeds the prescribed limit

The driver of a vehicle with air brakes knows the proper method for testing the air loss rate, and that a vehicle has this **major defect** when the air pressure drop in one minute is more than the prescribed limit of:

- 3 psi in one minute for a straight truck or tractor
- 4 psi in one minute for a tractor with 1 trailer
- 6 psi in one minute for a tractor with 2 or more trailers

1.5M Inoperative towing vehicle (tractor) protection system

The driver of a vehicle with air brakes knows the proper method for testing the tractor (towing vehicle) protection system, and that a vehicle has this **major defect** when any of the following things happen:

- Air escapes from the service line during service brake application, when the trailer supply valve is closed
- Air pressure drops below 20 psi before the trailer supply valve closes automatically
- The trailer supply valve doesn't close automatically when there is a sudden loss of air from the trailer emergency line (such as when the line is removed from the trailer)

1.6M Low air warning system fails or system is activated

The driver of a vehicle with air brakes knows the proper method for testing the low air warning, and that a vehicle has this **major defect** when the low air warning stays on above 80 psi, or it fails to activate before air pressure drops below 55 psi.

1.7M Inoperative service, parking or emergency brake

The driver of a vehicle with air brakes knows the proper method for checking and confirming that brakes are working properly, and that a vehicle has this **major defect** when any service, parking or emergency brake fails to produce brake force when it is applied.

2. CAB

2.1 Occupant compartment door fails to open

The driver knows that occupant doors must be able to be opened in an emergency, and that a vehicle has this defect when any door meant for someone to enter or exit the cab fails to open.

2.2M Any cab or sleeper door fails to close securely

The driver knows that doors must remain securely closed when a vehicle is moving, and that a vehicle has this **major defect** when any door meant for someone to enter or exit the cab fails to close properly and securely.

3. CARGO SECUREMENT

3.1 Insecure or improper load covering

The driver knows that some cargo requires covering during transport, and that a vehicle has this defect when any required load covering is used improperly, or covering is loose enough that cargo could be lost.

APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

appendix



DAILY VEHICLE INSPECTION – SCHEDULE 1 MINOR AND MAJOR DEFECTS

3.2M Insecure cargo

The driver knows the requirements for properly secure the cargo being transported, and that a vehicle has this **major defect** when any cargo does, or is able to:

- a) leak, spill, blow off, fall from, fall through or otherwise become dislodged from the vehicle, or
- b) shift upon or within the vehicle to such an extent that the vehicle's stability or maneuverability is adversely affected

4. COUPLING DEVICES

4.1 Coupler or mounting has loose or missing fastener

The driver of a vehicle towing a trailer knows that the condition of couplers and mounting structure need to be inspected visually, and that a vehicle has this defect when any coupler or the mounting structure that supports a coupler, has a fastener that is loose or missing.

4.2M Coupler insecure or movement exceeds prescribed limit

The driver of a vehicle towing a trailer knows the symptoms of couplers that are loose or are developing abnormal amounts of movement, methods for measure the amount of movement, or having it measured, and that a vehicle has this **major defect** when:

- a) Movement between the upper and lower coupler of a fifth wheel is more than 1/2 in (13mm) in the forward-rearward direction.
- b) Movement between the pintle hook and a drawbar eye is more than 3/8 in (10mm) in the forward-rearward direction.

4.3M Coupling or locking mechanism damaged, fails to lock

The driver of a vehicle towing a trailer knows the importance of having couplers properly locked, the locking methods used by couplers, knows how to visually inspect these locks, and also knows that a vehicle has this **major defect** when any coupler or lock is damaged or isn't properly locked.

4.4M Defective, incorrect or missing safety chain/cable

The driver of a vehicle towing a trailer knows the importance of safety chains and cables, the type that must be used as well as the condition they need to be in, and that a vehicle has this **major defect** when a safety chain or cable is missing, is the wrong type or size, or it is noticeably damaged or worn out.

5. DANGEROUS GOODS

5.1M Dangerous goods requirements not met

The driver transporting dangerous goods has been trained, and knows the regulatory requirements for any dangerous goods being transported, and that a vehicle has this **major defect** when any single requirement is not fully complied with.

6. DRIVER CONTROLS

6.1 Accelerator pedal, clutch, gauges, audible and visual indicators or instruments fail to function.

The driver knows the normal operation and function of primary vehicle controls, methods to test and verify their normal function, and that a vehicle has this defect when the accelerator pedal, clutch, gauges, any audible or visual indicator or instrument fails to work properly.

7. DRIVER SEAT

7.1 Seat is damaged or fails to remain in set position

The driver knows that the driver seat must be properly positioned to be able to control the vehicle, and knows methods for confirming the seating positions as well as the locking methods, and that the vehicle has this defect when the seat is damaged or it won't stay in the position needed to drive.

7.2M Seatbelt or tether belt is insecure, missing or malfunctions

The driver knows the importance of seatbelts, how to properly wear them and the condition they must be in to function properly. The driver also knows that a vehicle has this **major defect** when any seatbelt or tether belt is insecure, missing or malfunctions.

appendix



APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

DAILY VEHICLE INSPECTION – SCHEDULE 1 MINOR AND MAJOR DEFECTS

8. ELECTRIC BRAKE SYSTEM

8.1 Loose or insecure wiring or electrical connection

The driver of a vehicle towing a trailer knows that some trailers use electric brakes with wiring and connections that need to be inspected regularly, and that vehicle has this defect when the wiring or the connection for the electric brake system is loose or insecure.

8.2M Inoperative breakaway device

The driver of a vehicle towing a trailer knows that trailers with electric brakes normally have a feature, known as a “breakaway device”, that automatically applies the trailer’s brakes in the event the trailer detaches from the towing vehicle, while the trailer is being towed. The driver also knows how to check and confirm the device is properly set up and functional, and that vehicle has this **major defect** when the breakaway device isn’t able to work properly.

8.3M Inoperative brake

The driver of a vehicle towing a trailer knows the effect of electric trailer brakes that are operating correctly and the symptoms that indicate they may not be operating correctly. The driver also knows how to confirm they are working, or have a qualified person inspect them, and that a vehicle has this **major defect** when the electric brakes aren’t operating properly.

9. EMERGENCY EQUIPMENT AND SAFETY DEVICES

9.1 Emergency equipment is missing, damaged or defective

The driver knows what emergency equipment is required for the type of transport they are involved in, how to check it, and that a vehicle has this defect when any necessary emergency equipment is missing, damaged or doesn’t work properly.

10. EXHAUST SYSTEM

10.1 Exhaust leak

The driver knows how to visually inspect the exhaust system, and that a vehicle has this defect when there’s a noticeable exhaust leak.

10.2M Leak that causes exhaust gas to enter the occupant compartment

The driver knows the hazard of prolonged exposure to engine exhaust gases, and that vehicle has this **major defect** when exhaust gases from an exhaust system leak are getting into the cab.

11. FRAME AND CARGO BODY

11.1 Damaged frame or cargo body

The driver knows that the condition of the vehicle and any cargo body frame need to be inspected visually, and that a vehicle has this defect when there’s any noticeable or suspected damage such as a crack, bent or deformed part or section, in the frame or cargo body.

11.2M Visibly shifted, cracked, collapsing or sagging frame member(s)

The driver knows that some conditions of the frame or cargo body can be very serious safety concerns, and that a vehicle has this **major defect** when it is visible that any frame component has shifted, is cracked, collapsing or is sagging.

12. FUEL SYSTEM

12.1 Missing fuel tank cap

The driver knows the hazards of fuel spillage and fuel contamination, and that a vehicle has this defect when the fuel tank cap is missing.

12.2M Insecure fuel tank

The driver knows that fuel tanks must be securely attached to a vehicle and how to visually inspect fuel tank security, and that a vehicle has this **major defect** when a fuel tank isn’t securely mounted or otherwise attached to the vehicle.

12.3M Dripping fuel leak

The driver knows the hazards of fuel that is flammable and an environmental hazard, and that a vehicle has this **major defect** when there is fuel dripping anywhere from it.

APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

appendix



DAILY VEHICLE INSPECTION – SCHEDULE 1

MINOR AND MAJOR DEFECTS

13. GENERAL

13.1M Serious damage or deterioration that is noticeable and may affect the vehicle's safe operation

The driver knows that not every safety defect can be predicted and listed in this schedule, and that all drivers need to use their experience and judgment to identify other types of safety defects, and that a vehicle has this **major defect** when it has serious damage or deterioration that is noticeable and may affect the vehicle's safe operation.

14. GLASS AND MIRRORS

14.1 Required mirror or window glass fails to provide the required view to the driver as a result of being cracked, broken, damaged, missing or maladjusted.

The driver knows the importance of always having a clear view of the conditions around their vehicle, the windows and mirrors that are required on the vehicle they operate, and that a vehicle has this defect when there's mirror or window glass damage that reduces this needed visibility.

14.2 Required mirror or glass has broken or damaged attachments onto vehicle body

The driver knows that the windows and mirrors that are necessary for safe operation must also be securely attached to vehicle, and that the vehicle has this defect when the attachments for any required mirror or other glass are broken or damaged.

15. HEATER/DEFROSTER

15.1 Control or system failure

The driver knows the importance of the heater/defroster always being available for keeping the windshield clear of condensation, and that a vehicle has this defect when the heater/defroster system operates incorrectly.

15.2M Defroster fails to provide unobstructed view through the windshield

The driver knows the hazard of operating when the heater/defroster fails to keep the windshield clear of condensation that blocks the driver's view of the roadway, and that a vehicle has this **major defect** when the defroster can't keep the windshield clear.

16. HORN

16.1 Vehicle has no operative horn

The driver knows that the horn can be an important hazard warning to others, and while a vehicle may have more than one horn, that it has this defect when it doesn't have at least one working horn.

17. HYDRAULIC BRAKE SYSTEM

17.1 Brake fluid level is below indicated minimum level

The driver of a vehicle with hydraulic brakes knows the location of the hydraulic brake master cylinder reservoir, how to check the level of the brake fluid, and that the vehicle has this defect when brake fluid level is below the mark indicating the minimum level as determined by the manufacturer.

17.2M Parking brake is inoperative

The driver of a vehicle with hydraulic brakes knows that the parking brake is provided to secure a vehicle whenever it is parked, how to operate the parking brake actuator, and how to check that the vehicle is actually secure whenever the parking brake is applied. The driver also knows that a vehicle has this **major defect** when the parking brake fails to hold normally.

17.3M Brake boost or power assist is not operative

The driver of a vehicle with hydraulic brakes knows that almost all hydraulic brake systems have some type of power assist or boost to reduce the brake pedal effort required from the driver. The driver knows how to confirm that the power assist or boost is working properly, and the symptoms of a malfunction, and that a vehicle has this **major defect** when there is no brake boost or power assist.

17.4M Brake fluid leak

The driver of a vehicle with hydraulic brakes knows that brake fluid is required for the system to operate, that loss of brake fluid can cause the brakes to malfunction or fail completely, and the need to visually check for sign of any brake fluid leak. The driver also knows that a vehicle has this **major defect** when a brake fluid leak is noticeable.

appendix



APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

DAILY VEHICLE INSPECTION – SCHEDULE 1 MINOR AND MAJOR DEFECTS

17.5M Brake pedal fade or insufficient brake pedal reserve

The driver of a vehicle with hydraulic brakes knows the normal height of the brake pedal when brakes are firmly applied, and that the brake pedal must remain solid when it is held in the applied position. The driver also knows that a vehicle has this **major defect** when the brake pedal moves more than 80% of the distance to the floor.

17.6M Activated (other than ABS) warning device

The driver of a vehicle with hydraulic brakes knows the normal and proper operation of all of the brake indicators and warning devices, and which one is the anti-lock brake system (ABS) indicator. The driver also knows that a vehicle has this **major defect** when any warning indicator shows a brake problem.

17.6M Brake fluid reservoir is less than ¼ full

The driver of a vehicle with hydraulic brakes knows the location of the hydraulic brake master cylinder reservoir, how to check the level of the brake fluid, and that the vehicle has this **major defect** when the reservoir is less than ¼ full.

18. LAMPS AND REFLECTORS

18.1 Required lamp does not function as intended

The driver is familiar with all of the lamps that are required by regulations on the vehicles that they operate, and that a vehicle has this defect when any required lamp doesn't operate the way it is supposed to.

18.2 Required reflector is missing or partially missing

The driver is familiar with all of the reflex reflectors that are required by regulations on the vehicles that they operate, and that a vehicle has this defect when a reflector is partially or completely missing.

18.3M Failure of both low-beam headlamps

The driver knows that headlamps must be turned on from ½ hour before sunset to ½ hour after sunrise, and when driving in inclement weather, and that whenever headlamps are required, a vehicle has this **major defect** when both headlamps fail to operate.

18.4M Failure of both rearmost tail lamps

The driver knows the importance of being clearly visible from the rear, that the truck's tail lamps may not be visible when towing a trailer, and that a vehicle has this major defect when both rearmost tail lamps fail to operate.

18.5M Failure of a rearmost turn-indicator lamp

The driver knows the importance of turn signal indicators, that the truck's turn-indicator lamps may not be visible when towing a trailer, and that a vehicle has this major defect when either of the rearmost turn-indicator lamps fail to operate.

18.6M Failure of both rearmost brake lamps

The driver knows the importance of making others aware when a vehicle being followed is braking, that the truck's brake lamps may not be visible when towing a trailer, and that a vehicle has this major defect when both rearmost brake lamps fail to operate.

19. STEERING

19.1 Steering wheel lash (free-play) is greater than normal

The driver knows the amount of steering wheel lash (or free-play) that is normal for the vehicle they operate, and that a vehicle has this defect when it has more steering wheel lash (or free-play) than normal, or more than other vehicles just like it.

19.2M Steering wheel is insecure, does not respond normally

The driver knows how to confirm the security of the steering wheel, and knows how the vehicle normally responds to input, and that a vehicle has this **major defect** when the steering wheel is not securely attached to the vehicle or the steering doesn't respond in the normal way.

19.3M Steering wheel lash (free-play) exceeds required limit

The driver knows the amount of steering wheel lash (or free-play) that is normal for the vehicle they operate, the driver also knows that maximum that is allowed in safety regulations, and that a vehicle has this **major defect** when it has more steering wheel lash (or free-play) than allowed by safety regulations.

APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

appendix



DAILY VEHICLE INSPECTION – SCHEDULE 1

MINOR AND MAJOR DEFECTS

20. SUSPENSION SYSTEM

20.1 Air leak in air suspension system

The driver of a vehicle with air suspension knows that air suspension systems get their air supply from the air brake system, and that a vehicle has this defect when an air leak is noticeable in the air suspension system.

20.2 Broken spring leaf

The driver of a vehicle with air suspension knows the importance of doing a visual inspection of leaf springs and how to identify broken spring leaves, and that vehicle has this defect when any spring has a single broken leaf.

20.3 Suspension fastener is loose, missing or broken

The driver of a vehicle with air suspension knows that the condition of the suspension system components and the hardware that attaches it to the vehicle need to be inspected visually, is able to recognize the signs of loose, missing or broken components, and also knows that a vehicle has this defect when any suspension fastener is loose, missing or broken.

20.4M Damaged (patched, cut, bruised, cracked to braid or deflated) air bag

The driver knows the normal appearance of air bags used in vehicle suspensions systems, and is able to recognize the signs of damage, and identify that when it may also cause an air bag to be deflated. The driver also knows a vehicle has this **major defect** when any air bag is damaged and has no air in it.

20.5M Cracked or broken main spring leaf or more than one broken spring leaf

The driver knows which leaves in a spring are considered to be “main” leaves, and that a vehicle has this **major defect** when either a main leaf or more than one other leaf is broken.

20.6M Part of spring leaf or suspension is missing, shifted out of place, in contact with another vehicle component

The driver knows that the condition of the suspension system components and the hardware that attaches it to the vehicle need to be inspected visually, is able to recognize the signs of more serious unsafe suspension system conditions, and that a vehicle has this **major defect** when any part of a spring leaf or suspension part is missing, has shifted out of place or is in contact with another vehicle component.

20.7M Loose U-bolt

The driver knows how to locate and identify suspension u-bolts, knows the importance of ensuring they remain tight and the signs of loose u-bolts. The driver also knows that a vehicle has this **major defect** when any spring U-bolt is loose.

21. TIRES

21.1 Damaged tread or sidewall of tire

The driver is able to distinguish between the tread and sidewall of a tire, and knows the visual signs of tread and sidewall damage, and knows that a vehicle has this defect when there is damage to the tread or sidewall area.

21.2 Tire leaking (if leak can be felt or heard, tire is to be treated as flat)

The driver knows the importance of keeping tires properly inflated, appreciates the need to regularly check for leaks, and that a vehicle has this defect when a leak appears evident, but cannot be felt or heard in any tire.

21.3M Flat tire

The driver knows the dangers of operating with a flat tire, and that a vehicle has this **major defect** when any tire is flat, or when a leak can be felt or heard in any tire.

21.4M Tire tread depth is less than wear limit

The driver knows how to check tire tread depth and knows the minimum allowable depth for various tire positions in vehicle safety regulations, and that a vehicle has this **major defect** when any tire’s tread depth is below the allowable wear limit.

appendix



APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

DAILY VEHICLE INSPECTION – SCHEDULE 1 MINOR AND MAJOR DEFECTS

21.5M Tire is in contact with another tire or any vehicle component other than mud-flap

The driver knows that tires should never contact other vehicle components, and while a tire contacting a mudflap is not a safety concern, that a vehicle has this **major defect** when any tire is in contact with another tire or any other vehicle component.

21.6M Tire is marked “Not for highway use”

The driver knows that certain tires are designed and constructed for slow speed or off-road use only, are marked to indicate their intended purpose, and that a vehicle has this **major defect** when it has a tire installed on it that is marked as being “not for highway use”.

21.7M Tire has exposed cords in the tread or outer side wall

The driver knows that tires are constructed with steel cords inside their casings, these cords are covered in rubber for protection, and that a vehicle has this **major defect** when cords are exposed in the tread or sidewall of any tire.

22. WHEELS, HUBS AND FASTENERS

22.1 Hub oil below minimum level (when fitted with sight glass)

The driver knows that wheel hubs use bearings that require lubrication, that oil is often used as a bearing lubricant, the hub caps used with oil lubricated bearings often have a clear window allowing a visual inspection of the oil fill level, and that a vehicle has a defect when you can see that the hub oil level is below minimum.

22.2 Leaking wheel seal

The driver knows that wheel hubs require seals to keep the lubricant inside the hub, when a wheel seal is leaking the wheel bearing can fail, and that a vehicle has this defect when there is evidence of a leaking wheel seal.

22.3M Wheel has loose, missing or ineffective fastener

The driver knows the visual features of different types of wheel systems, the importance of keeping wheel fasteners (normally nuts and bolts) properly tightened, is able to detect missing fasteners and recognize the visual signs of loose or ineffective fasteners, and knows that a vehicle has this **major defect** when any wheel has a loose, missing or ineffective fastener.

22.4M Damaged, cracked or broken wheel, rim, attaching part

The driver knows the visual features of different types of wheel systems, the normal appearance of the individual components, and that a vehicle has this **major defect** when any wheel, rim, or any part used to attach the wheel or rim, is damaged, cracked or broken.

22.5M Evidence of imminent wheel, hub or bearing failure

The driver knows the normal appearance of wheel and hub components and the visual indications of more serious unsafe conditions, and that a vehicle has this **major defect** when there is visual evidence that a wheel, hub or bearing failure could occur.

23. WINDSHIELD WIPER/WASHER

23.1 Control or system malfunction

The driver knows how to operate the windshield wipers and washers, knows that ensuring they are available at all times requires periodic testing, and that a vehicle has this defect when the control or any part of the system fails to function properly.

23.2 Wiper blade damaged, missing or fails to adequately clear driver’s field of vision

The driver knows the normal condition and function of wiper blades, and is able to recognize when they no longer function well, and that a vehicle has this defect when a wiper blade is damaged or missing, or when it won’t clear the area of the windshield in front of the driver.

APPENDIX A | NSC 13 | SCHEDULE 1 ITEMS

appendix



DAILY VEHICLE INSPECTION – SCHEDULE 1 MINOR AND MAJOR DEFECTS

23.3M Wiper or washer fails to adequately clear driver's field of vision in area swept by driver's side wiper

The driver knows that being able to see the roadway clearly in poor weather is very important, that this visibility is dependent on the wipers being able to clear water, snow and ice from the windshield, and that a vehicle has this **major defect** when the prevailing weather conditions require use of the wipers or washers, and they are not able to keep clear the area swept by the driver's side wiper.

appendix



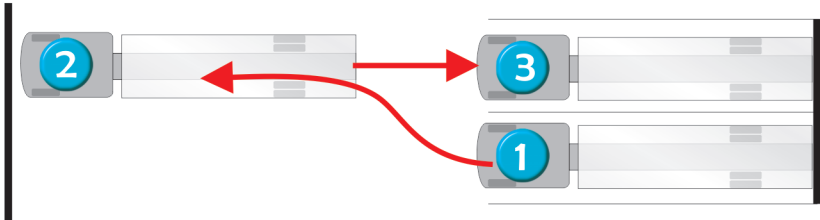
APPENDIX B | VEHICLE MANEUVERS

This appendix consists of diagrams with dimensions for each of the turning, backing and docking maneuvering tasks listed in Blocks 24 and 28.

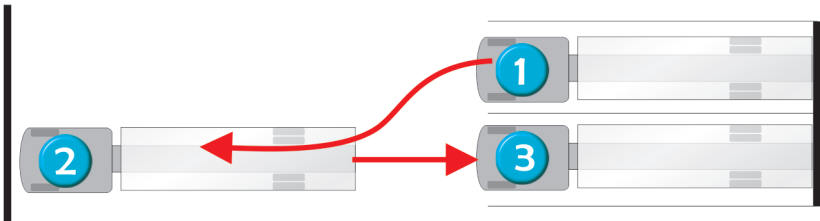
APPENDIX B | VEHICLE MANEUVERS



OFFSET BACKING – Straight Truck



Maneuver	Block	Item
Offset backing to the left.	24	14



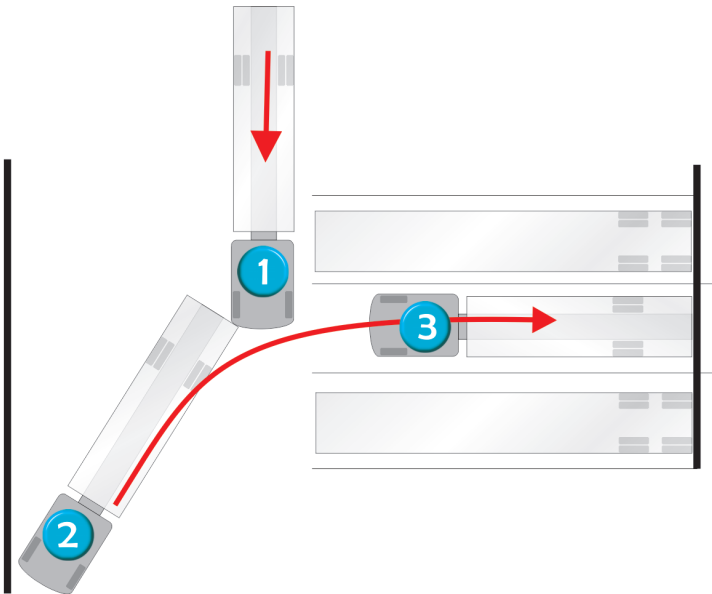
Maneuver	Block	Item
Offset backing to the right.	24	15

appendix

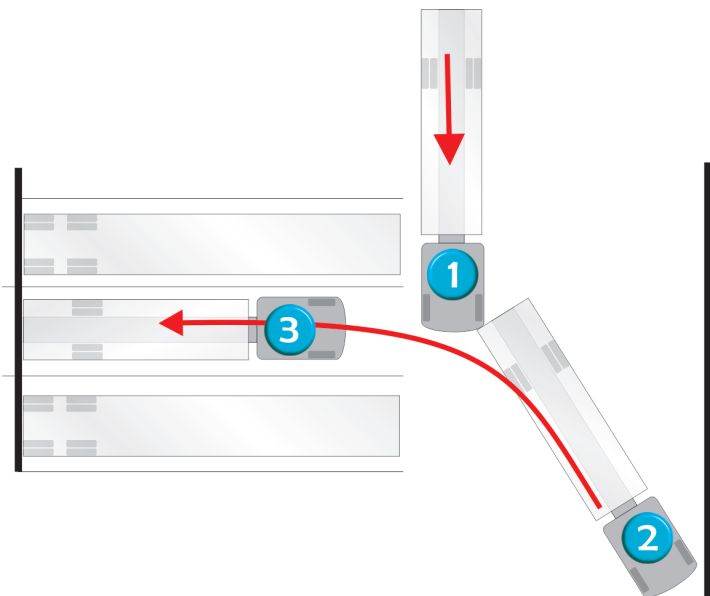
B

APPENDIX B | VEHICLE MANEUVERS

ALLEY DOCK BACKING – Straight Truck



Maneuver	Block	Item
Alley dock backing to the left.	24	16

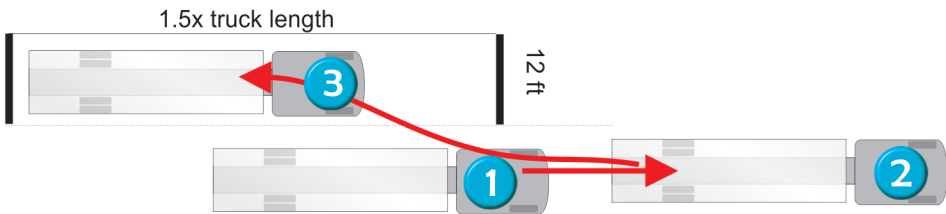


Maneuver	Block	Item
Alley dock backing to the right.	24	17

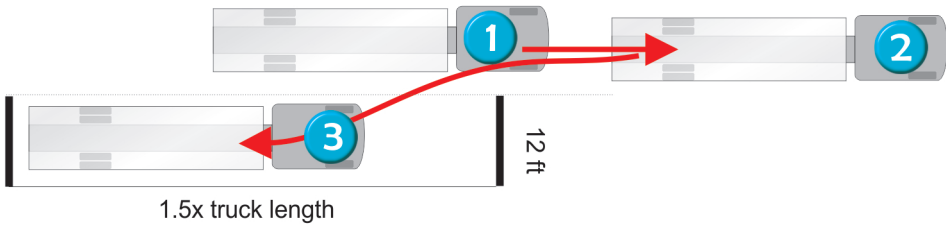
APPENDIX B | VEHICLE MANEUVERS



PARALLEL PARKING – Straight Truck



Maneuver	Block	Item
Parallel parking to the left.	24	18



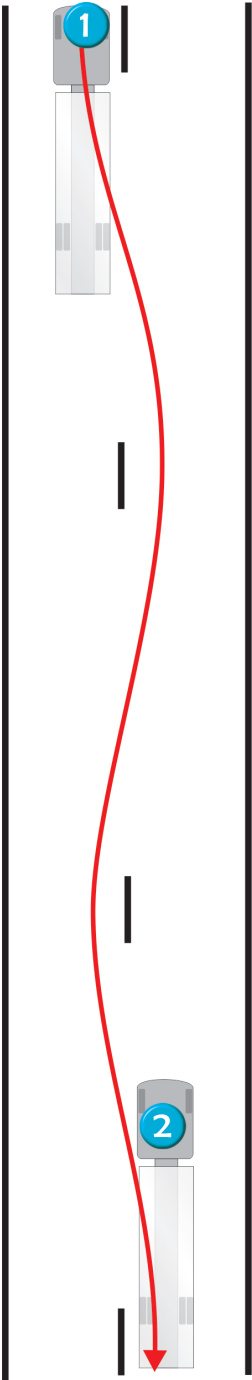
Maneuver	Block	Item
Parallel parking to the right.	24	19

appendix



APPENDIX B | VEHICLE MANEUVERS

SLALOM BACKING – Straight Truck

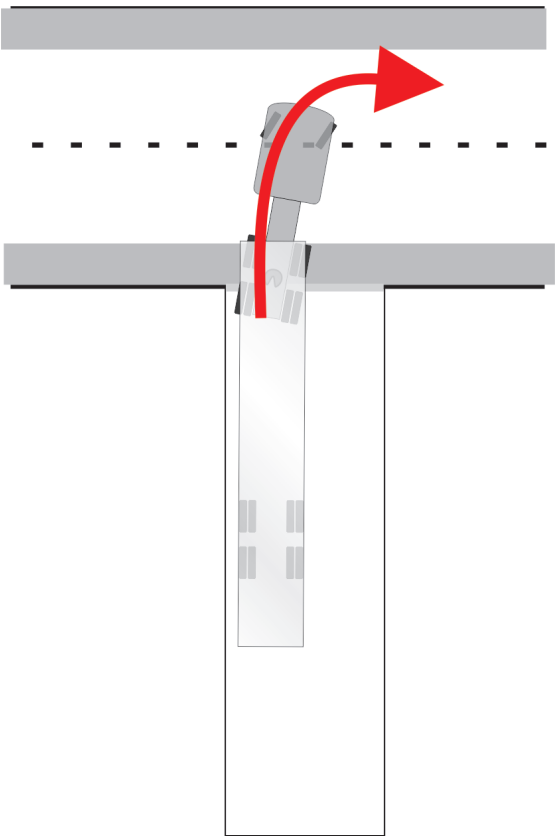
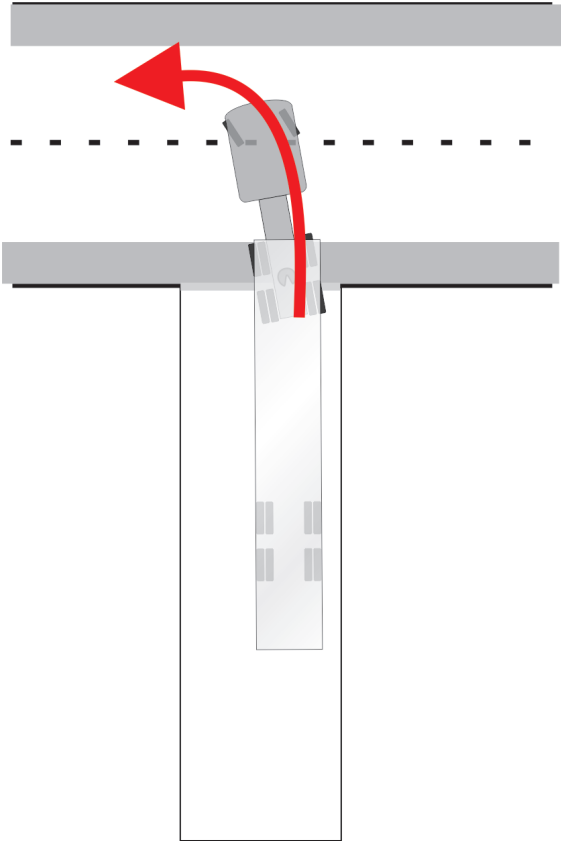


Maneuver	Block	Item
Slalom backing course for straight truck.	24	20

APPENDIX B | VEHICLE MANEUVERS



LANE-WAY TURN – Tractor-Trailer



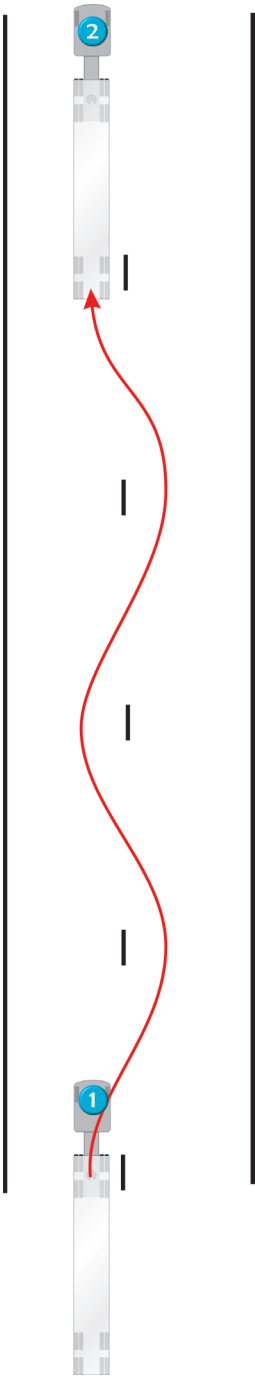
Maneuver	Block	Item
Laneway Turn Left and Laneway Turn Right.	24	14

appendix

B

APPENDIX B | VEHICLE MANEUVERS

LANE-WAY TURN – Tractor-Trailer

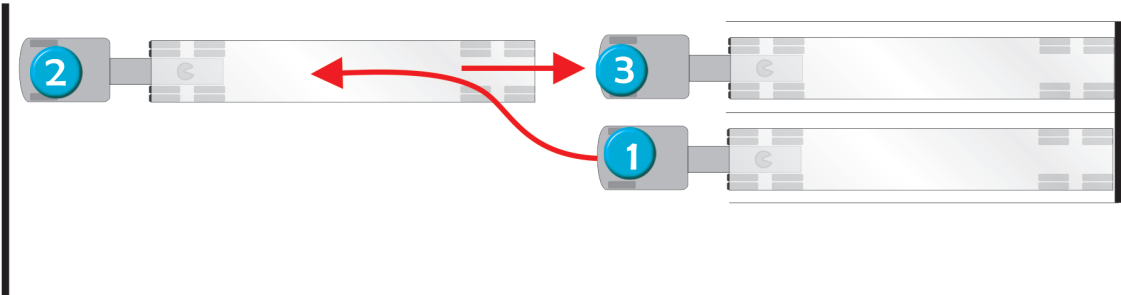


Maneuver	Block	Item
Slalom Maneuver.	28	15

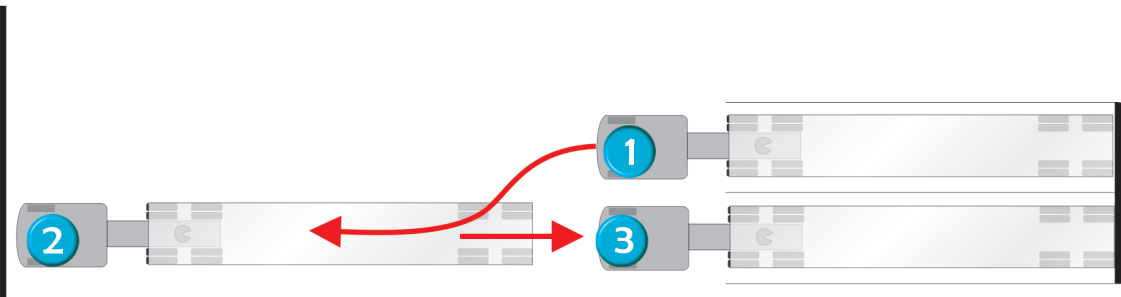
APPENDIX B | VEHICLE MANEUVERS



OFFSET BACKING – Tractor-Trailer



Maneuver	Block	Item
Offset backing to the left.	29	12



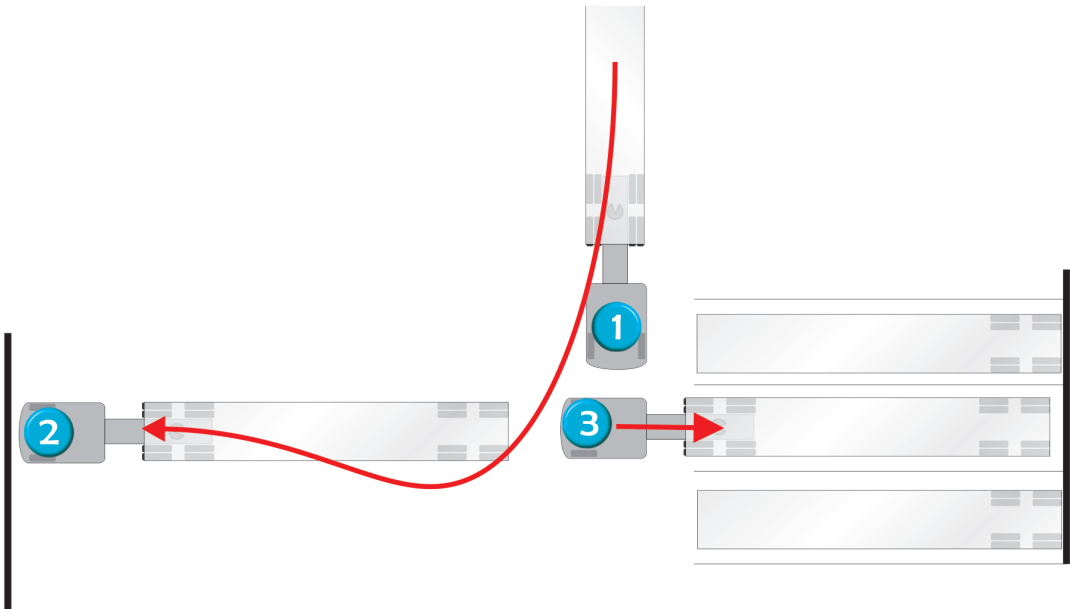
Maneuver	Block	Item
Offset backing to the right.	29	13

appendix

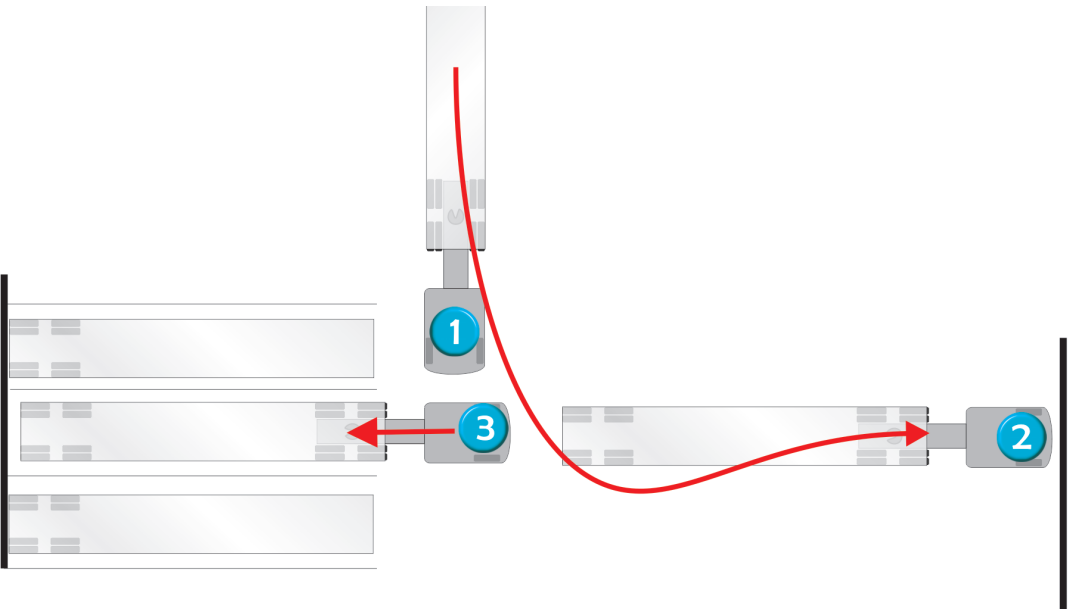
B

APPENDIX B | VEHICLE MANEUVERS

STRAIGHT DOCK BACKING – Tractor-Trailer



Maneuver	Block	Item
Straight dock backing, to space on left.	29	14

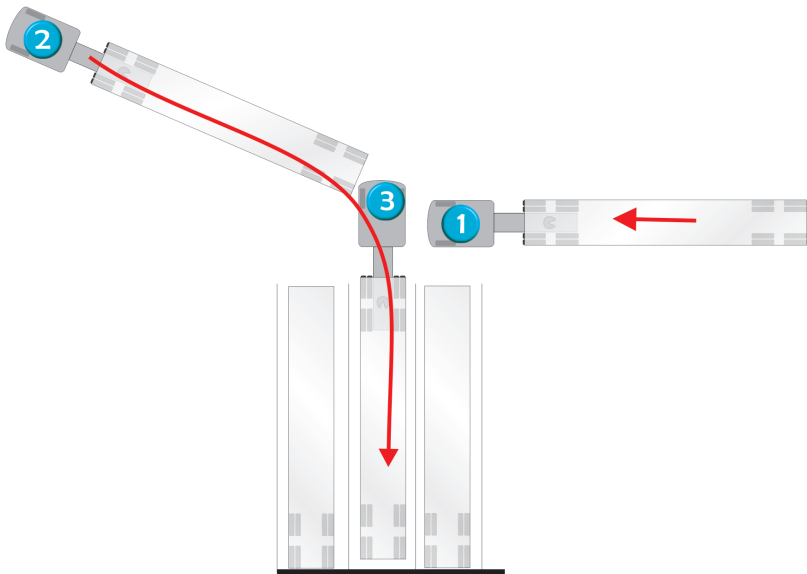


Maneuver	Block	Item
Straight dock backing, to space on right.	29	15

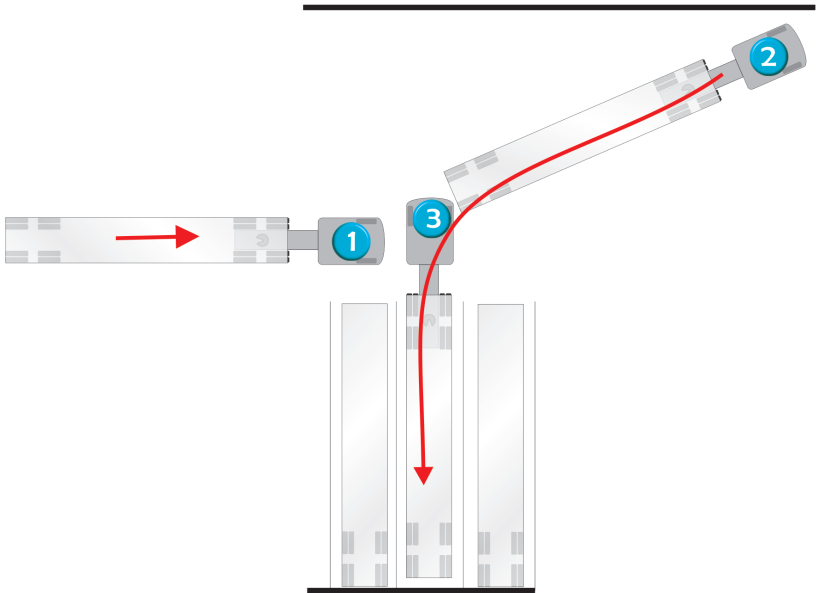
APPENDIX B | VEHICLE MANEUVERS



ALLEY DOCK BACKING – Tractor-Trailer



Maneuver	Block	Item
Alley dock backing from the left.	29	16



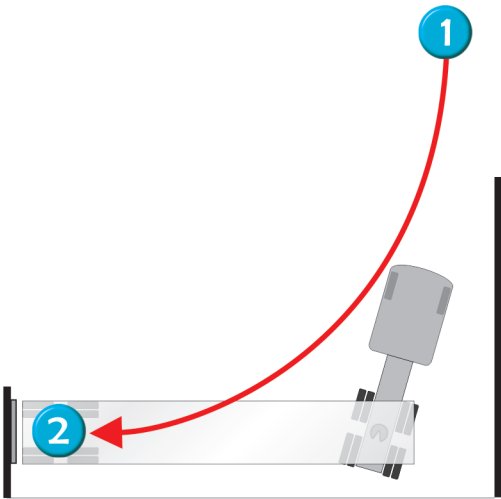
Maneuver	Block	Item
Alley dock backing from the right.	29	17

appendix

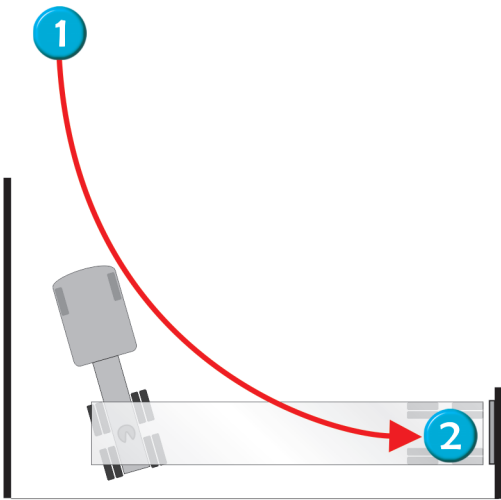
B

APPENDIX B | VEHICLE MANEUVERS

ANGLED DOCK BACKING – Tractor-Trailer



Maneuver	Block	Item
Angled dock backing from the left.	29	18

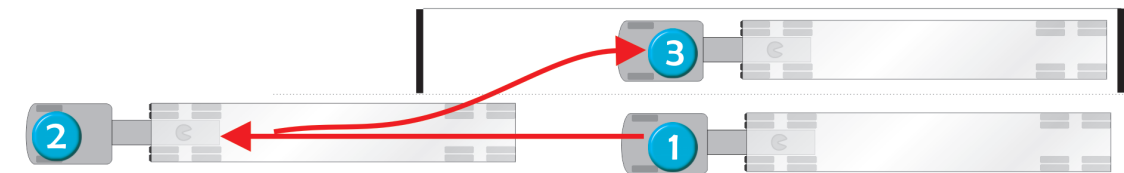


Maneuver	Block	Item
Angled dock backing from the left.	29	19

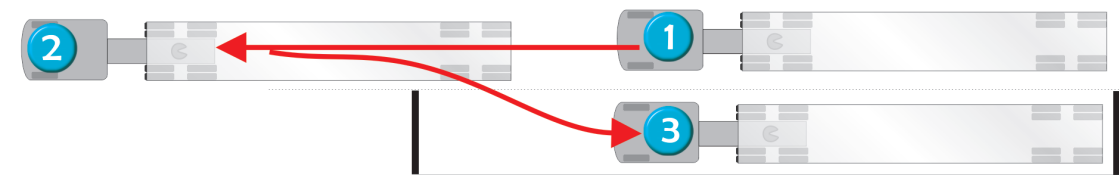
APPENDIX B | VEHICLE MANEUVERS



PARALLEL PARKING – Tractor-Trailer



Maneuver	Block	Item
Parallel parking to the right.	29	20



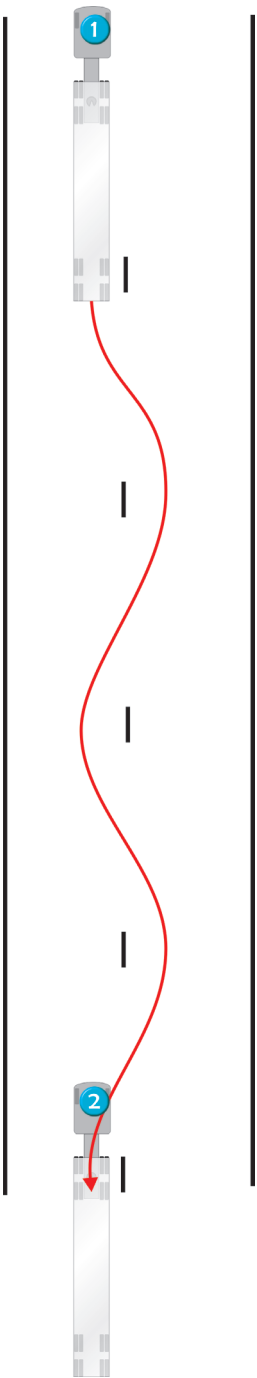
Maneuver	Block	Item
Parallel parking to the left.	29	21

appendix



APPENDIX B | VEHICLE MANEUVERS

SLALOM BACKING – Tractor-Trailer



Maneuver	Block	Item
Slalom backing course for tractor-trailer.	29	22

APPENDIX C | GLOSSARY

appendix



This appendix explains the meaning of terms used within the context of this document.

Ability

The competence to perform an observable behaviour.

Bill of Lading

A document which acknowledges that goods have been received for transportation, typically identifying facts such as the amount, nature, origin and destination of cargo.

Bridge formula

A mathematical formula which calculates allowable weights based on the number of vehicle axles and the distance between the axles.

Canada Labour Code

A federal act that consolidates labour-focused statutes which govern such things as occupational health and safety, employment standards, etc.

Cargo

Goods transported by a commercial vehicle.

Cargo handling equipment

Tools such as forklifts and pallet jacks which are used to move cargo on and off a commercial vehicle.

Cargo seals

Mechanical devices which seal trailer and container doors, offering added security and evidence of any tampering after the cargo has been loaded.

Combination vehicle

Two or more vehicles that have been joined together at an articulated point. A common example includes a powered tractor and unpowered semitrailer.

Curtain-sided trailer

A trailer with “walls” consisting of a frame and moveable tarp.

Dangerous goods

Cargo such as explosive, hazardous or otherwise dangerous goods which must be transported by drivers who have been trained in requirements specific to these goods. Vehicles carrying this cargo must also be labelled with warning placards.

Day cab

A truck without a sleeper.

Differential lock

A device that improves traction by disabling a vehicle’s differential.

Dry van

An enclosed trailer which is used to transport non-refrigerated cargo.

Electronic On-Board Recorder (EOBR)

A device which records operational data such as a driver’s duty status, truck location and speed.

Engine brake

A system that uses an engine’s back pressure to helps to slow a vehicle.

Fifth wheel

A pivoting plate which supports the front of a trailer and creates an articulation point by locking around a kingpin.

Fit for Work

A physical, mental and emotional state which reflects someone who is prepared to perform tasks or subtasks.

Flatbed

A trailer without sides.

Gladhands

The connectors at the end of hoses which supply compressed air between tractors and trailers.

Gross Vehicle Weight (GVW)

The combined weight of the vehicle and cargo.

Hazard assessment

A process used to identify workplace hazards so they can be eliminated or controlled.

Heated loads

Cargo which is heated during transport, typically to prevent freezing.

Highway

All highways, roads and streets.

Hours of Service (HOS) regulations

Rules which govern the maximum number of hours in which a driver can perform different types of work, as well as minimum periods of rest.

Intermodal container

A non-wheeled cargo-carrying container that is moved using multiple modes of transportation.

King pin

A trailer’s vertical pivot that is coupled within the jaws of a tractor’s fifth wheel.

appendix



APPENDIX C | GLOSSARY

Knowledge

The understanding of information applied to perform tasks and subtasks.

Landing gear

Retractable legs which support the front of a semitrailer that is not connected to a tractor.

Less-than-Truckload (LTL)

A shipment which includes several types of cargo – each weighing less than 4,500 kg and destined for different locations.

Lift axle

An axle that can be raised or lowered to increase allowable cargo weight or comply with regulations governing weights and dimensions.

Logbook

A record of the duties a driver performs, and the time at which they were performed. The document is used to confirm compliance with Hours of Service (HOS) regulations.

Long Combination Vehicle (LCV)

A vehicle combining two 53-foot trailers and typically restricted to specific routes.

Manifest

A document which describes the contents of a shipment in the detail required during loading and unloading procedures.

National Safety Code (NSC)

A set of national standards, adopted through provincial regulations, which establish the minimum safety standards for commercial vehicles and drivers. These govern:

- NSC 1 – Single driver licence concept
- NSC 2 – Knowledge and performance tests (drivers)
- NSC 3 – Driver examiner training program
- NSC 4 – Classified driver licensing system
- NSC 5 – Self-certification standards and procedures
- NSC 6 – Medical standards for drivers
- NSC 7 – Carrier and driver profiles
- NSC 8 – Short-term suspension
- NSC 9 – Hours of Service
- NSC 10 – Cargo securement
- NSC 11 – Commercial vehicle maintenance and inspection (PMVI)
- NSC 12 – Commercial Vehicle Safety Alliance on-road inspections
- NSC 13 – Trip inspections
- NSC 14 – Safety ratings
- NSC 15 – Facility audits
- NSC 16 – First aid training

Operating fluids

Fluids including the fuel, engine oil, engine coolant, power steering oil, windshield washer, and Diesel Exhaust Fluid needed to operate a commercial vehicle.

Overweight and over-dimensional vehicles

Vehicles which can only be moved with a special permit because they exceed sizes as defined under regulated weights and dimensions.

Owner-operator

A commercial vehicle operator (truck driver) who runs a vehicle as an independent business and is typically contracted to a motor carrier.

Pallet

A portable platform on which smaller pieces of cargo (such as individual boxes) are stacked.

Pavement markings

Painted lines which identify traffic lanes, pedestrian crossings, etc.

Personal Protective Equipment (PPE)

Protective clothing and equipment which helps to shield the user from workplace hazards.

Pintle hook

A tow ring on a non-powered vehicle which couples to a hook on a leading vehicle.

PSI

Pounds per Square Inch.

Receiver

The party responsible for receiving a shipment.

Reefer

A refrigerated and insulated trailer.

Regional

A defined operating area that is larger than a single urban area, and can typically be served by a driver who returns to a point of origin more frequently than a long-haul driver.

Retarder

A device, in addition to foundation brakes (or friction material), which helps to slow the vehicle.

RPM

Revolutions per Minute.

Safety Data Sheets

Documents which explain hazards of workplace chemicals, with content defined by the Globally Harmonized System of Classification and Labelling of Chemicals for Workplace Chemicals.

APPENDIX C | GLOSSARY

appendix

**Semitrailer**

A trailer which places a substantial amount of its weight on a truck tractor, another trailer, or converter dolly.

Shipper

The party responsible for initiating a shipment.

Shore power

A source of electrical power, typically available at a truck stop, which can be connected to a parked truck. It is used to power vehicle amenities without requiring an idling engine.

Situational awareness

A general awareness of hazards and potential hazards in and around a vehicle.

Skill

The ability to apply knowledge to perform a task or subtask.

Sleeper

The area inside a tractor which includes a bed for sleeping.

Soft skills

Interpersonal skills and general knowledge applied in the workplace.

Straight truck

A single vehicle with all the axles attached to a single frame.

Subtasks

The individual steps taken to perform a task.

Suspension

A system of springs, shock absorbers, and/or air bags used to cushion a vehicle from the road.

Tailgate deliveries

Deliveries which require a driver to move cargo to the back or "tail" of a vehicle, where the goods can be transferred using cargo-handling equipment.

Tandem

A pair of closely spaced axles sharing a load.

Task

A clearly defined piece of work.

TDG Act

The Transportation of Dangerous Goods Act, governing dangerous commodities which can only be moved by specially certified drivers.

Team drivers

Two drivers who ride together and take shifts operating the same truck.

Terminal

The location from which cargo originates or terminates, or the location of a motor carrier's operating facility.

Tire chains

Devices fitted around tires to increase traction on snow and ice.

Tractor

A motor vehicle equipped with the lower half of a fifth-wheel coupler.

Trailer drift

The actual path followed by the rear of a trailer. This differs from the vehicle's apparent line of travel because a trailer pivots around the king pin and its axles.

Truck cab

The enclosed area from which the driver operates the vehicle.

Truck crane

A vehicle which includes a permanently mounted crane.

Unitized cargo

Multiple pieces of cargo which have been combined into larger individual units of cargo. An example of this includes several boxes which are stacked on a pallet and secured with shrink wrap.

Urban

Densely populated geographic area.

Video event recording device

Truck-mounted video camera and recorder, typically activated by factors such as sudden changes in vehicle speed.

Weights and dimensions regulations

Regional regulations that govern the height, length and weight of vehicles.

Working Load Limit (WLL)

The defined maximum working load of a cargo securement device such as a strap or chain.

Worker(s)

Commercial vehicle operator[s] (truck driver[s]) in a workplace setting.

Workplace

Any location – including a truck, highway or warehouse, etc. – where a commercial vehicle operator (truck driver) performs work.



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