



# TEAMSTERS Safety & Health **FACTS**

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## Supplemental Information to Longer Combination Vehicle (LCV) Driver-Training and Driver-Instructor Requirements Fact Sheet

### Appendix to Part 380 LCV Driver Training Programs, Required Knowledge and Skills

The following table lists topics of instruction required for drivers of longer combination vehicles pursuant to 49 CFR part 380, subpart B. The training courses for operators of LCV Doubles and LCV Triples must be distinct and tailored to address their unique operating and handling characteristics. Each course must include the minimum topics of instruction, including behind-the-wheel training designed to provide an opportunity to develop the skills outlined under the Proficiency Development unit of the training program. Only a skills instructor may administer behind-the-wheel training involving the operation of an LCV or one of its components. A classroom instructor may only administer instruction that does not involve the operation of an LCV or one of its components.

#### Course Topics for LCV Drivers

<b>Section 1: Orientation</b>	
1.1.....	LCVs in Trucking
1.2.....	Regulatory Factors
1.3.....	Driver Qualifications
1.4.....	Vehicle Configuration Factors
<b>Section 2: Basic Operation</b>	
2.1.....	Coupling and Uncoupling
2.2.....	Basic Control and Handling
2.3.....	Basic Maneuvers
2.4.....	Turning, Steering and Tracking
2.5.....	Proficiency Development
<b>Section 3: Safe Operating Practices</b>	
3.1.....	Interacting with Traffic
3.2.....	Speed and Space Management
3.3.....	Night Operations

3.4.....	Extreme Driving Conditions
3.5.....	Security Issues
3.6.....	Proficiency Development
<b>Section 4: Advanced Operations</b>	
4.1.....	Hazard Perception
4.2.....	Hazardous Situations
4.3.....	Maintenance and Troubleshooting
<b>Section 5: Non-Driving Activities</b>	
5.1.....	Routes and Trip Planning
5.2.....	Cargo and Weight Considerations

## Section 1-Orientation

The units in this section must provide an orientation to the training curriculum and must cover the role LCVs play within the motor carrier industry, the factors that affect their operations, and the role that drivers play in the safe operation of LCVs.

*Unit 1.1-LCVs in Trucking.* This unit must provide an introduction to the emergence of LCVs in trucking and must serve as an orientation to the course content. Emphasis must be placed upon the role the driver plays in transportation.

*Unit 1.2-Regulatory factors.* This unit must provide instruction addressing the Federal, State, and local governmental bodies that propose, enact, and implement the laws, rules, and regulations that affect the trucking industry. Emphasis must be placed on those regulatory factors that affect LCVs, including 23 CFR 658.23 and Appendix C to part 658.

*Unit 1.3-Driver qualifications.* This unit must provide classroom instruction addressing the Federal and State laws, rules, and regulations that define LCV driver qualifications. It also must include a discussion on medical examinations, drug and alcohol tests, certification, and basic health and wellness issues. Emphasis must be placed upon topics essential to physical and mental health maintenance, including (1) diet, (2) exercise, (3) avoidance of alcohol and drug abuse, and caution in the use of prescription and nonprescription drugs, (4) the adverse effects of driver fatigue, and (5) effective fatigue countermeasures. Driver-trainees who have successfully completed the Entry-level training segments at §380.503(a) and (c) are considered to have satisfied the requirements of Unit 1.3.

*Unit 1.4-Vehicle configuration factors.* This unit must provide classroom instruction addressing the key vehicle components used in the configuration of longer combination vehicles. It also must familiarize the driver-trainee with various vehicle combinations, as well as provide instruction about unique characteristics and factors associated with LCV configurations.

## **Section 2-Basic Operation**

The units in this section must cover the interaction between the driver and the vehicle. They must teach driver-trainees how to couple and uncouple LCVs, ensure the vehicles are in proper operating condition, and control the motion of LCVs under various road and traffic conditions.

During the driving exercises at off-highway locations required by this section, the driver-trainee must first familiarize himself/herself with basic operating characteristics of an LCV. Utilizing an LCV, students must be able to perform the skills learned in each unit to a level of proficiency required to permit safe transition to on-street driving.

*Unit 2.1-Coupling and uncoupling.* This unit must provide instruction addressing the procedures for coupling and uncoupling LCVs. While vehicle coupling and uncoupling procedures are common to all truck-tractor/semi-trailer operations, some factors are peculiar to LCVs. Emphasis must be placed upon preplanning and safe operating procedures.

*Unit 2.2-Basic control and handling.* This unit must provide an introduction to basic vehicular control and handling as it applies to LCVs. This must include instruction addressing brake performance, handling characteristics and factors affecting LCV stability while braking, turning, and cornering. Emphasis must be placed upon safe operating procedures.

*Unit 2.3-Basic maneuvers.* This unit must provide instruction addressing the basic vehicular maneuvers that will be encountered by LCV drivers. This must include instruction relative to backing, lane positioning and path selection, merging situations, and parking LCVs. Emphasis must be placed upon safe operating procedures as they apply to brake performance and directional stability while accelerating, braking, merging, cornering, turning, and parking.

*Unit 2.4-Turning, steering, and tracking.* This unit must provide instruction addressing turning situations, steering maneuvers, and the tracking of LCV trailers. This must include instruction related to trailer sway and off-tracking. Emphasis must be placed on maintaining directional stability.

*Unit 2.5-Proficiency development: basic operations.* The purpose of this unit is to enable driver-students to gain the proficiency in basic operation needed to safely undertake on-street instruction in the Safe Operations Practices section of the curriculum.

The activities of this unit must consist of driving exercises that provide practice for the development of basic control skills and mastery of basic maneuvers. Driver-students practice skills and maneuvers learned in the Basic Control and Handling; Basic Maneuvers; and Turning, Steering and Tracking units. A series of basic exercises is practiced at off-highway locations until students develop sufficient proficiency for transition to on-street driving.

Once the driver-student's skills have been measured and found adequate, the driver-student must be allowed to move to on-the-street driving.

Nearly all activity in this unit will take place on the driving range or on streets or roads that have low-density traffic conditions.

### **Section 3-Safe Operating Practices**

The units in this section must cover the interaction between student drivers, the vehicle, and the traffic environment. They must teach driver-students how to apply their basic operating skills in a way that ensures their safety and that of other road users under various road, weather, and traffic conditions.

*Unit 3.1-Interacting with traffic.* This unit must provide instruction addressing the principles of visual search, communication, and sharing the road with other traffic. Emphasis must be placed upon visual search, mirror usage, signaling and/or positioning the vehicle to communicate, and understanding the special situations encountered by LCV drivers in various traffic situations.

*Unit 3.2-Speed and space management.* This unit must provide instruction addressing the principles of speed and space management. Emphasis must be placed upon maintaining safe vehicular speed and appropriate space surrounding the vehicle under various traffic and road conditions. Particular attention must be placed upon understanding the special situations encountered by LCVs in various traffic situations.

*Unit 3.3-Night operations.* This unit must provide instruction addressing the principles of Night Operations. Emphasis must be placed upon the factors affecting operation of LCVs at night. Night driving presents specific factors that require special attention on the part of the driver. Changes in vehicle safety inspection, vision, communications, speed management, and space management are needed to deal with the special problems night driving presents.

*Unit 3.4-Extreme driving conditions.* This unit must provide instruction addressing the driving of LCVs under extreme driving conditions. Emphasis must be placed upon the factors affecting the operation of LCVs in cold, hot, and inclement weather and in the mountains and desert. Changes in basic driving habits are needed to deal with the specific problems presented by these extreme driving conditions.

*Unit 3.5-Security issues.* This unit must include a discussion of security requirements imposed by the Department of Homeland Security, Transportation Security Administration; the U.S. Department of Transportation, Research and Special Programs Administration; and any other State or Federal agency with responsibility for highway or motor carrier security.

*Unit 3.6-Proficiency development.* This unit must provide driver-students an opportunity to refine, within the on-street traffic environment, their vehicle handling skills learned in the first three sections. Driver-student performance progress must be closely monitored to determine when the level of proficiency required for carrying out the basic traffic maneuvers of stopping, turning, merging, straight driving, curves, lane changing, passing, driving on hills, driving through traffic restrictions, and parking has been attained. The driver-student must also be assessed for regulatory compliance with all traffic laws.

Nearly all activity in this unit will take place on public roadways in a full range of traffic environments applicable to this vehicle configuration. This must include urban and rural uncontrolled roadways, expressways or freeways, under light, moderate, and heavy traffic conditions. There must be a brief classroom session to familiarize driver-students with the type of on-street maneuvers they will perform and how their performance will be rated.

The instructor must assess the level of skill development of the driver-student and must increase in difficulty, based upon the level of skill attained, the types of maneuvers, roadways and traffic conditions to which the driver-student is exposed.

#### **Section 4-Advanced Operations**

The units in this section must introduce higher level skills that can be acquired only after the more fundamental skills and knowledge taught in sections two and three have been mastered. They must teach the perceptual skills necessary to recognize potential hazards, and must demonstrate the procedures needed to handle an LCV when faced with a hazard.

The Maintenance and Trouble-shooting Unit must provide instruction that addresses how to keep the vehicle in safe and efficient operating condition. The purpose of this unit is to teach the correct way to perform simple maintenance tasks, and how to troubleshoot and report those vehicle discrepancies or deficiencies that must be repaired by a qualified mechanic.

*Unit 4.1-Hazard perception.* This unit must provide instruction addressing the principles of recognizing hazards in sufficient time to reduce the severity of the hazard and neutralize a possible emergency situation. While hazards are present in all motor vehicle traffic operations, some are peculiar to LCV operations. Emphasis must be placed upon hazard recognition, visual search, and response to possible emergency-producing situations encountered by LCV drivers in various traffic situations.

*Unit 4.2-Hazardous situations.* This unit must address dealing with specific procedures appropriate for LCV emergencies. These must include evasive steering, emergency braking, off-road recovery, brake failures, tire blowouts, rearward amplification, hydroplaning, skidding, jackknifing and the rollover phenomenon. The discussion must include a review of unsafe acts and the role they play in producing hazardous situations.

*Unit 4.3-Maintenance and trouble-shooting.* This unit must introduce driver-students to the basic servicing and checking procedures for the various vehicle components and provide knowledge of conducting preventive maintenance functions, making simple emergency repairs, and diagnosing and reporting vehicle malfunctions.

#### **Section 5-Non-Driving Activities**

The units in this section must cover activities that are not directly related to the vehicle itself but must be performed by an LCV driver. The units in this section must ensure these activities are performed in a manner that ensures the safety of the driver, vehicle, cargo, and other road users.

*Unit 5.1-Routes and trip planning.* This unit must address the importance of and requirements for planning routes and trips. This must include classroom discussion of Federal and State requirements for a number of topics including permits, vehicle size and weight limitations, designated highways, local access, the reasonable access rule, staging areas, and access zones.

*Unit 5.2-Cargo and weight considerations.* This unit must address the importance of proper cargo documentation, loading, securing and unloading cargo, weight distribution, load sequencing and trailer placement. Emphasis must be placed on the importance of axle weight distribution, as well as on trailer placement and its effect on vehicle handling.