

# COMMERCIAL TRUCK DRIVING MISSISSIPPI CURRICULUM FRAMEWORK

Commercial Truck Driving - CIP: 49.0205 (Truck and Bus Driver/Commercial Vehicle Operator  
and Instruction)

2020-2021  
Initial Board May 2021



**Published by:**  
Mississippi Community College Board  
Division of Workforce, Career, and Technical Education  
3825 Ridgewood Road  
Jackson, MS 39211  
Phone: 601-432-6155  
Email: [curriculum@mccb.edu](mailto:curriculum@mccb.edu)

## FACULTY WRITING TEAM MEMBERS

Terry Munn, Copiah-Lincoln Community College, Wesson, MS, Instructor  
Solomon Gray, Coahoma Community College, Clarksdale, MS, Instructor  
Josh Denson, Hinds Community College, Instructor  
Randy Beets, Jones County Junior College  
Millie Bordelon, Mississippi Gulf Coast Community College, Program Director  
Art Adkins, Mississippi Gulf Coast Community College, Long Beach, MS Instructor  
Otis Gowdys, Meridian Community College, Meridian, MS Program Director  
Jimmy Rigdon, Meridian Community College, Meridian, MS Instructor  
Keith Wilbanks, Northwest Mississippi Community College, Instructor  
Gregory Magee, Southwest Mississippi Community College, Summit, MS Instructor

## ADMINISTRATOR WRITING TEAM MEMBERS

Joe Cook, East Mississippi Community College, Dean  
Cindy West, Hinds Community College, Dean  
Rod Tolbert, Jones County Junior College  
Richie McAllister, Meridian Community College, Vice President  
John A. Shows, Mississippi Gulf Coast Community College, Associate Vice President  
Millie Bordelon, Mississippi Gulf Coast Community College, Director

## BUSINESS AND INDUSTRY CONTRIBUTING TEAM MEMBERS

David Bilbo, Hinds Community College, Instructor\*  
Paulette Hosick, McLane Southern, Brookhaven, MS  
Tina Glenn, Howard Transportation, Recruiter, Ellisville, MS  
Tom Buchanan, Howard Transportation, Ellisville, MS  
Carol Simmons Sanderson Farms, Laurel, MS\*  
Henry Gaugler, Sanderson Farms, Laurel, MS \*  
Edward Bynum, Sanderson Farms, Laurel, MS\*  
Carol Huggins, Royal Trucking Company, Meridian, MS  
Levi Buck, Atlas Roofing, Meridian, MS  
Scott Pace, D&D Transportation, Meridian, MS  
Jerry Swanger, Industry Professional, Olive Branch, MS

**\*Denotes industry members who attended the writing meeting**

## OFFICE OF CURRICULUM AND INSTRUCTION TEAM MEMBERS

Scott Kolle, Ph.D., Director, Office of Curriculum and Instruction, Mississippi Community College Board  
LaToya Sterling, Curriculum Specialist, Mississippi Community College Board  
Sheriece Robinson, Curriculum Specialist, Mississippi Community College Board

The Office of Curriculum and Instruction (OCI) was founded in 2013 under the Division of Workforce, Career, and Technical Education at the Mississippi Community College Board (MCCB). The office is funded through a partnership with The Mississippi Department of Education (MDE), who serves as Mississippi's fiscal agent for state and federal Career and Technical Education (CTE) Funds. The OCI is tasked with developing statewide CTE curriculum, programming, and professional development designed to meet the local and statewide economic demand.

Copyright© 2018 by Mississippi Community College Board  
For information, please contact [curriculum@mccb.edu](mailto:curriculum@mccb.edu)

# Contents

NATIONAL CERTIFICATION & STANDARDS .....	5
INDUSTRY JOB PROJECTION DATA .....	6
ARTICULATION .....	8
TECHNICAL SKILLS ASSESSMENT .....	8
ONLINE AND BLENDED LEARNING OPPORTUNITIES .....	8
INSTRUCTIONAL STRATEGIES .....	8
ASSESSMENT STRATEGIES .....	8
RESEARCH ABSTRACT .....	9
REVISION HISTORY .....	9
PROGRAM DESCRIPTION .....	10
SUGGESTED COURSE SEQUENCE .....	11
Accelerated Integrated Career Pathway.....	11
Required Courses .....	11
COMMERCIAL TRUCK DRIVING COURSES.....	12
COURSE DESCRIPTIONS.....	13
DTV 111(4-6) Commercial Truck Driving I .....	13
DTV 112(4-6) Commercial Truck Driving II .....	15
DTV 1137 Commercial Truck Driving Internship.....	17
DTV 1312 Hazardous Materials .....	18
DTV 1322 Professional Truck Driving.....	19
DTV 1212 Commercial Truck Driving Refresher Course .....	20
APPENDIX A: .....	45
RECOMMENDED TOOLS AND EQUIPMENT .....	45
APPENDIX B: CURRICULUM DEFINITIONS AND TERMS .....	46
COURSE CROSSWALK .....	48
APPENDIX D: RECOMMENDED TEXTBOOK LIST .....	49

# NATIONAL CERTIFICATION & STANDARDS

Obtaining the driver manual is your first step toward becoming a licensed driver in Mississippi.

The Mississippi Highway Patrol Commercial Driver's Manual Class A, B, & C manual<sup>®</sup> are the rules that govern the operation of motor vehicles on Mississippi roadways.

## **SKILLS TEST**

All skills tests are done by appointment only, you may call any CDL testing office to schedule an appointment. Pre-test, off-road tests are included. If a test is failed, the applicant must make another appointment. The second appointment will be made depending upon the severity of the violations during the test procedure.

## **Third Party Testing**

72 third party testers – 100% open to the public. 20% of total tests are administered by third party testers. Third party testers' fees not regulated by the State.

## **School Bus Test**

Must pass General Knowledge, Passenger Test and an S Endorsement Test must be completed/passed. Skill Tests applicable to class of vehicle brought in for testing.

## **LICENSING PROCEDURES**

### **License Renewal**

Every Four Years. Only "H" endorsements require retesting.

### **CDL Learner's Permit**

Must pass vision and class-required written tests. Valid for six months. Only three renewals shall be granted within a three-year period.

## **TESTING PROGRAM**

### **Knowledge Test**

Offices administering

Test content

Model test as authorized by Essex Corporation

### **Group Testing**

By appointment. Maximum 25 applicants.

### **Out-of-State CDL Applicants**

Present valid state's commercial driver license, Social Security Card, and proof of Mississippi residence. Pay application fee, endorsement fees (if any), and license fees. If HazMat endorsement, will be required to retest and submit fingerprints for a federal background check. Must be accomplished within 30 days after applicant has established residence in Mississippi.

### **Medical Requirements (Intrastate CDL Applicants)**

**Adopted Part 391 of FMCSR.**

## **DRIVER DISQUALIFICATION RULES**

State Provisions

Same Federal minimum

Method of Adjudication-Administrative/Criminal Administrative

# INDUSTRY JOB PROJECTION DATA

The Commercial Truck Driving curriculum requires Postsecondary Career and Technical Award. There is expected to be a 4.49% increase in occupational demand at the regional level and the state level and 4.49% increase at the national level. Median annual income for this occupation is \$29,185.20 at the state level. A summary of occupational data from [www.swib.ms.gov/DataCenter/](http://www.swib.ms.gov/DataCenter/) is displayed below:

**Table 1: Education Level**

Program Occupations	Education Level
BUS DRIVERS, TRANSIT AND INTERCITY	MODERATE-TERM ON-THE-JOB TRAINING
BUS DRIVERS, SCHOOL	SHORT-TERM ON-THE-JOB TRAINING
TRUCK DRIVERS, HEAVY AND TRACTOR-TRAILER	MODERATE-TERM ON-THE-JOB TRAINING
TRUCK DRIVERS, LIGHT OR DELIVERY SERVICES	SHORT-TERM ON-THE-JOB TRAINING

**Table 2: Occupational Overview**

Program Occupations	Region	State	United States
2014 Occupational Jobs	34363	34363	3370080
2024 Occupational Jobs	35905	35905	3846575
Total Change	1542	1542	476495
Total % Change	4.49%	4.49%	14.14%
2014 Median Hourly Earnings	\$13.18	\$14.03	\$16.53
2014 Median Annual Earnings	\$27,409.20	\$29,185.20	\$34,379.76
Annual Openings	154	154	47649

**Table 3: Occupational Breakdown**

Description	2014 Jobs	2024 Jobs	Annual Openings	2014 Hourly Earnings	2014 Annual Earnings 2,080 Work Hours
BUS DRIVERS, TRANSIT AND INTERCITY	398	410	1	\$14.22	\$29,577.60
BUS DRIVERS, SCHOOL	4665	4877	21	\$8.88	\$18,470.40
TRUCK DRIVERS, HEAVY AND TRACTOR-TRAILER	22399	23552	115	\$17.67	\$36,753.60
TRUCK DRIVERS, LIGHT OR DELIVERY SERVICES	6901	7066	16	\$11.94	\$24,835.20
<b>TOTAL</b>	<b>34363</b>	<b>35905</b>	<b>154</b>	<b>\$13.18</b>	<b>\$27,409.20</b>

**Table 4: Occupational Change**

<b>Description</b>	<b>Regional Change</b>	<b>Regional % Change</b>	<b>State % Change</b>	<b>National % Change</b>
BUS DRIVERS, TRANSIT AND INTERCITY	12	3.02%	3.02%	4.18%
BUS DRIVERS, SCHOOL	212	4.54%	4.54%	10.31%
TRUCK DRIVERS, HEAVY AND TRACTOR-TRAILER	1153	5.15%	5.15%	23.09%
TRUCK DRIVERS, LIGHT OR DELIVERY SERVICES	165	2.39%	2.39%	2.24%

## ARTICULATION

Presently there are no secondary programs that articulate with the Commercial Truck Driving program.

## TECHNICAL SKILLS ASSESSMENT

Colleges should report the following for students who complete the program with a career certificate, technical certificate, or an Associate of Applied Science Degrees for technical skills attainment. To use the approved Alternate Assessment for the following programs of study, colleges should provide a Letter of Notification to the Director of Career Technical Education at the MS Community College Board. Please see the following link for further instructions: <http://www.mccb.edu/wkfEdu/CTDefault.aspx>.

<b>CIP Code</b>	<b>Program of Study</b>	
49.0205	Commercial Truck Driving	
<b>Level</b>	<b>Standard Assessment</b>	<b>Alternate Assessment</b>
<b>Career</b>	Mississippi Highway Patrol Commercial Driver's Manual Class A, B, & C manual <sup>®</sup>	

## ONLINE AND BLENDED LEARNING OPPORTUNITIES

Course content includes lecture and laboratory semester credit hours. Faculty members are encouraged to present lecture related content to students in an online or blended learning environment. Training related to online and blended learning will be available to faculty members through the MS Community College Board.

## INSTRUCTIONAL STRATEGIES

Instructional strategies for faculty members implementing the curriculum can be found through the Office of Curriculum and Instruction's professional development.

## ASSESSMENT STRATEGIES

The Office of Curriculum and Instruction's professional development offer assessment strategies to faculty members implementing the curriculum. Additionally, standards were included in course content when appropriate.



## RESEARCH ABSTRACT

In the spring of 2018, the Office of Curriculum and Instruction (OCI) met with the different industry members who made up the advisory committees for the Commercial Truck Driving program. An industry questionnaire was used to gather feedback concerning the trends and needs, both current and future, of their field. Program faculty, administrators, and industry members were consulted regarding industry workforce needs and trends.

Industry advisory team members from the college involved with this program were asked to give input related to changes to be made to the curriculum framework. Specific comments related to soft skills needed in this program include having a positive attitude, being at work every day and on time. Occupation-specific skills stated include knowing how to communicate with the customers and dispatch, map reading, coupling and uncoupling, load securing, proper inspection of equipment, pass a background check, certificate from a certified program, and have a CDL license.

## REVISION HISTORY

2011, Research and Curriculum Unit, Mississippi State University

2018, Office of Curriculum and Instruction, Mississippi Community College Board

## PROGRAM DESCRIPTION

This instructional program prepares individuals to drive trucks and other commercial vehicles. It includes instruction in operating diesel powered vehicles, loading and unloading cargo, reporting delays or accidents on the road, verifying loads against shipping records, and keeping necessary records and hours of service. Postsecondary Commercial Truck Driving is a certificate program designed to provide advanced skills to its students. The program consists of up to four levels of instruction which must be obtained at the community/junior college level. Industry standards referenced are from the Mississippi Professional Driver's Manual for Class A, B, & C<sup>®</sup> Commercial Driver's License, Department of Public Safety, and State of Mississippi.

### PROGRAM REQUIREMENTS

**ENROLLMENT SHOULD BE LIMITED TO A NUMBER OF FOUR STUDENTS PER INSTRUCTOR WHICH WILL PROVIDE FOR PERSONAL SUPERVISION, TRAINING, AND SAFETY. THE CLASS SIZES ARE SMALL TO ENCOURAGE INDIVIDUAL ATTENTION. CHECK LOCAL INSURANCE REGULATIONS AND SEAT BELT LAWS CONCERNING THE NUMBER OF OCCUPANTS IN THE VEHICLE.**

A certificate in Commercial Truck Driving will be awarded at the culmination of a minimum of eight semester credit hours of satisfactory study. This curriculum is based upon data as collected from curricula guides, input from the business, requirements of the Commercial Driver's License (CDL), and a revision team. Students will be expected to obtain a Commercial Driver's License and to pass the DOT Commercial Driver Written Examination in order to complete the course. The listing of tasks within these documents served as baseline data for the development of this curriculum. The program requires a minimum of eight semester credit hours of instruction over a minimum of an eight-week period. Each student is expected to log a minimum of 20 contact hours of driving time under various loads, roads, and driving conditions. The task list used in this curriculum is based upon the following assumptions:

1. In all areas, appropriate theory, safety, and support instruction will be provided for each task. It is essential that all instruction include the use of appropriate equipment needed to accomplish certain tasks. It is also assumed that each student will receive instruction to locate and use current reference materials from publications which present manufacturers' recommended or required specifications and procedures for doing the various tasks.
2. The individual program should have written and detailed evaluation standards for each task covered in the curriculum. Learning progress of students should be monitored and evaluated against these stated standards. A system should be in place which informs all students of their progress throughout the program.
3. It is recognized that individual courses will differ across the technical programs. The development of appropriate learning activities and tests will be the responsibility of the individual program.
4. These standards require that tasks contained in the list be included in the program to validate that the program is meeting the needs of the business.

# SUGGESTED COURSE SEQUENCE

## Accelerated Integrated Career Pathway

		SCH Breakdown				Program Certifications
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Contact Hours	
DTV 1114-6	Commercial Truck Driving I	4-6	1	6-10	105-165	
DTV 1124-6	Commercial Truck Driving II	4-6	1	6-10	105-165	
<b>Total</b>		<b>8-12</b>				

## Required Courses

		SCH Breakdown				Program Certifications
Course Number	Course Name	Semester Credit Hours	Lecture	Lab/Internship	Total Contact Hours	Mississippi Highway Safety Patrol Commercial Exam
DTV 1114-6	Commercial Truck Driving I	4-6	1	6-10	105-165	
DTV 1124-6	Commercial Truck Driving II	4-6	1	6-10	105-165	
	Elective	3-7	0	0	0	
<b>TOTAL</b>		<b>8-19</b>				

\*Upon successful completion of the required courses certificate students may sit for the commercial driver's license exam.

\*\*Internship options may be offered at the discretion of the colleges.

# COMMERCIAL TRUCK DRIVING COURSES

\*Any course not listed as a required course may be used as an elective.

						Program Certifications
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Contact Hours	
DTV 1114-6	Commercial Truck Driving I	4-6	1	6-10	105- 165	
DTV 1124-6	Commercial Truck Driving II	4-6	1	6-10	105- 165	
DTV 1137	Commercial Truck Driving Internship	7	7	12	315	
DTV 1312	Hazardous Materials	2	2	0	30	
DTV 1322	Professional Truck Driving	2	2	0	30	
DTV 1212	Commercial Truck Driving Refresher Course	2	1	2	48	

# COURSE DESCRIPTIONS

**Course Number and Name:** DTV 111(4-6) Commercial Truck Driving I

**Description:** Fundamental instruction on safety, rules and regulations, driving practices, air brakes, hazardous materials, and emergencies. Includes instruction and practice in performing vehicle inspections, coupling and uncoupling, maneuvering, backing, and driving a tractor-trailer truck under varying road and climate conditions.

**Hour Breakdown:**

Semester Credit Hours	Lecture	Lab	Contact Hours
4	1	6	105
5	1	8	135
6	1	10	165

**Prerequisite:** Instructor Approved

**Student Learning Outcomes:**

1. Demonstrate safety precautions in the operation of a tractor-trailer truck.
  - a. Discuss rules of the road.
  - b. Discuss precautions to take in driving during daylight and nighttime under various road conditions.
  - c. Identify and discuss highway signs and the meaning of each.
  - d. Discuss DOT rules and regulations to include CSA2010.
2. Demonstrate trip planning procedures.
  - a. Demonstrate knowledge of hours of service.
  - b. Demonstrate map reading skills.
  - c. Discuss shipping papers and bills of lading.
3. Perform a satisfactory pre-trip inspection.
  - a. Identify safety precautions needed prior to a trip.
  - b. Demonstrate and discuss the procedures to follow prior to a trip.
  - c. Pass a pre-trip inspection
  - d. Perform air brake check.
4. Perform basic operations of the tractor-trailer truck.
  - a. Demonstrate safely couple and uncoupling a trailer from a tractor.
  - b. Demonstrate upshift and downshift a manual transmission.
  - c. Explain and demonstrate the use of rear and side mirrors while driving.
  - d. Explain and demonstrate the correct spacing behind vehicles.
  - e. Demonstrate parking of a combination vehicle.
5. Safely maneuver a combination vehicle.
  - a. Discuss and demonstrate a combination through a 12-foot opening.
  - b. Discuss and demonstrate a combination through a left-hand turn at an intersection.
  - c. Discuss and demonstrate a combination through a right-hand turn at an intersection.
  - d. Discuss and demonstrate a combination through a U-turn.

**Mississippi Highway Safety Patrol Commercial Driver's Manual Class A, B, & C  
Section 13-On-road Driving**

**13.1.14-Lane Usage**

Do not put vehicle over curbs, sidewalks, or lane markings.

Stop behind stop lines, crosswalks, or stop signs.

Complete a turn in the proper lane on a multiple lane road (vehicle should finish a left turn in the land directly to the right-most (curb) lane.

Move to or remain in right-most lane unless lane is blocked.

#### **13.1.15-Steering**

Do not over or under steer the vehicle.

Keep both hands on the steering wheel at all times unless shifting. Once you have completed shift, return both hands to the steering wheel.

#### **13.1.16-Regular Traffic Checks**

Check traffic regularly.

Check mirrors regularly.

Check mirrors and traffic before, while in and after an intersection.

Scan and check traffic in high volume areas and areas where pedestrians are expected to be present.

#### **13.1.17-Use of Turn Signals**

Use turn signals properly.

Activate turn signals when required.

Activate turn signals at appropriate times.

Cancel turn signals upon completion of a turn or lane Change.

#### **2.15-Railroad-highway Crossing**

Railroad-highway grade crossings are a special kind of intersection where the roadway crosses train tracks.

These crossings are always dangerous. Every such crossing must be approached with the expectation that a train is coming.

**Course Number and Name:** DTV 112(4-6) Commercial Truck Driving II

**Description:** Continuation of Commercial Truck Driving I with additional instruction on safety, rules and regulations, driving practices, air brakes, hazardous materials, and emergencies. Includes instruction and practice in performing vehicle inspections, coupling and uncoupling, maneuvering, backing, and driving a tractor-trailer truck under varying road and climate conditions.

**Hour Breakdown:**

Semester Credit Hours	Lecture	Lab	Contact Hours
4	1	6	105
5	1	8	135
6	1	10	165

**Prerequisite:** Instructor Approved

**Student Learning Outcomes:**

1. Demonstrate safe backing of a combination vehicle.
  - a. Perform straight line backing.
  - b. Perform an offset back to the left or right.
  - c. Perform a conventional and sight side parallel park.
  - e. Perform a 90° alley dock.
2. Make adjustments according to a variety of loads.
  - a. Discuss the safety procedures needed in making load adjustments.
  - b. Discuss how to secure and balance a variety of loads for transport.
  - c. Perform how to adjust the fifth wheel and trailer axles to meet load demands.
3. Safely operate a combination vehicle on various roads.
  - a. Explain the safety procedures in driving on various roads.
  - b. Demonstrate the safe operation of a vehicle on a four-lane road.
  - c. Demonstrate the safe operation of a vehicle on a three-lane road.
  - d. Demonstrate the safe operation of a vehicle on a two-lane road.
  - e. Demonstrate the safe operation of a vehicle in urban traffic (two-lane and multi-lane streets).
  - f. Demonstrate the safe operation of a vehicle through a railroad crossing.
  - g. Perform an emergency roadside stop.
4. Utilize technological advances in the trucking industry.
  - a. Discuss the newest advances in power trains.
  - b. Explore the newest advances in transmission technology.
  - c. Discuss computer communication skills.

**Mississippi Highway Safety Patrol Commercial Driver's Manual Class A, B, & C  
Section 13-On-road Driving**

**13.1.14-Lane Usage**

Do not put vehicle over curbs, sidewalks, or lane markings.

Stop behind stop lines, crosswalks, or stop signs.

Complete a turn in the proper lane on a multiple lane road (vehicle should finish a left turn in the lane directly to the right-most (curb) lane).

Move to or remain in right-most lane unless lane is blocked.

**13.1.15-Steering**

Do not over or under steer the vehicle.

Keep both hands on the steering wheel at all times unless shifting. Once you have completed shift, return both hands to the steering wheel.

**13.1.16-Regular Traffic Checks**

Check traffic regularly.

Check mirrors regularly.

Check mirrors and traffic before, while in and after an intersection.

Scan and check traffic in high volume areas and areas where pedestrians are expected to be present.

**13.1.17-Use of Turn Signals**

Use turn signals properly.

Activate turn signals when required.

Activate turn signals at appropriate times.

Cancel turn signals upon completion of a turn or lane Change.

**2.15-Railroad-highway Crossing**

Railroad-highway grade crossings are a special kind of intersection where the roadway crosses train tracks. These crossings are always dangerous. Every such crossing must be approached with the expectation that a train is coming.



**Course Number and Name:**        **DTV 1137        Commercial Truck Driving Internship**

**Description:**                                Under the supervision of a company trainer, this course will enable the student to apply the training he/she received at the Community/Junior College program they attended with the company of his/her choice. The successful completion of this course will enable the student to drive independently with minimum supervision with the company of his/her choice.

**Hour Breakdown:**

Semester Credit Hours	Lecture	Internship	Contact Hours
7	0	21	315

**Prerequisite:**                                Instructor Approved

- Student Learning Outcomes:**
1. Utilize a written plan that details the activities to be completed.
    - a. Perform written occupational objectives.
  2. Assess accomplishment of objectives.
    - a. Prepare weekly written assessment of accomplishment of objectives.
    - b. Present/mail weekly written reports of activities performed and objectives accomplished to the instructor.
    - c. Submit final Safety Procedure Checklist to the instructor (Company Supervisor).

**Mississippi Highway Safety Patrol Commercial Driver’s Manual Class A, B, & C**

\*The students will have a review of the Mississippi Highway Safety Patrol Commercial Driver’s Manual for Class A,B,&C

**Course Number and Name:**         **DTV 1312**         **Hazardous Materials**

**Description:**     This course is designed to meet the theory instruction training requirements for drivers pursuing their hazmat endorsement

**Hour Breakdown:**

Semester Credit Hours	Lecture	Internship	Contact Hours
2	0	0	30

**Prerequisite:**     Instructor Approved

**Student Learning Outcomes:**

1.     Discuss the importance and contents of the Hazardous Materials Table
2.     Describe the information contain in shipping papers and where to store shipping papers during the transportation of hazardous materials.
3.     Explain the requirements for markings, labels, and placards.
4.     Identify when and how to submit an incident report via telephone and/or written to the Pipeline & Hazardous Materials Safety Administration.
5.     Discuss the procedures, consequences, and appropriate actions to take in the event of a railroad-related emergency.
6.     Discuss and describe loading and unloading requirements for specific hazard classes.
7.     Develop an understanding for the types of hazardous materials that are/are not allowed on passenger vehicles and where they may be stored during transport.
8.     Describe precautions to driving vehicles transporting bulk packages.
9.     Discuss how to use a fire extinguisher and how to put out different types of vehicle fires.
10.    Describe what information can be found in the Emergency Response Guidebook
11.    Explain how to properly fuel a vehicle containing hazardous materials
12.    Describe where to find a listing of all designated and restricted roads and preferred highway routes for the transportation of radioactive and non-radioactive hazardous materials.
13.    Understand when a Hazardous Materials Safety Permit is required and the steps to obtain such permit.

**Mississippi Highway Safety Patrol Commercial Driver’s Manual Class A, B, & C**

\*The students will have a review of the Mississippi Highway Safety Patrol Commercial Driver’s Manual for Class A,B,&C

**Course Number and Name:        DTV 1322        Professional Truck Driving**

**Description:**     This course is designed to cover life on the road topics as it pertains to professional truck driving.

**Hour Breakdown:**

Semester Credit Hours	Lecture	Internship	Contact Hours
2	0	0	30

**Prerequisite:**     Instructor Approved

**Student Learning Outcomes:**

1.     Describe ways you can maintain a healthy diet and good exercise habits while on the road.
2.     Discuss how to manage stress.
3.     Identify signs of driver fatigue.
4.     Identify and describe safe work practices.
5.     Explain steps you can take to ensure your personal security.
6.     Recognize the effects of alcohol abuse and drug use and how they impair driving abilities.
7.     Describe the alcohol and drug prohibitions that apply to CMV operators and consequences of violating the prohibitions.
8.     Describe human trafficking and identify those who are most at risk.
9.     Discuss how to recognize the signs of human trafficking.
10.    Explain how to appropriately respond when you suspect human trafficking is taking place.

**Mississippi Highway Safety Patrol Commercial Driver’s Manual Class A, B, & C**

\*The students will have a review of the Mississippi Highway Safety Patrol Commercial Driver’s Manual for Class A,B,&C

**Course Number and Name:** DTV 1212 Commercial Truck Driving Refresher Course

**Description:** Provides individuals that hold a current Class A, CDL a review of skills and knowledge which relate to fundamental instruction on safety, rules and regulations, driving practices, air brakes, hazardous materials, and emergencies. Includes instruction and practice in performing vehicle inspections, coupling and uncoupling, maneuvering, backing and driving a tractor-trailer truck under varying road and climate conditions

Hour Breakdown:	Semester Credit Hours	Lecture	Lab	Contact Hours
	2	1	2	48

**Prerequisite:** Instructor Approved

**Student Learning Outcomes:**

1. Perform a satisfactory pre-trip inspection
  - a. Identify safety precautions needed prior to trip
  - b. Discuss the procedures to follow prior to a trip
  - c. Pass a pre-trip inspection
2. Perform basic operations of the tractor-trailer truck
  - a. Safely couple and uncouple a trailer from a tractor
  - b. Upshift and downshift a manual truck transmission
  - c. Explain and demonstrate the use of rear and side mirrors while driving
  - d. Explain and demonstrate the correct spacing behind vehicles
  - e. Park a combination vehicle, by performing alley dock maneuvers.
3. Safely maneuver a combination vehicle
  - a. Maneuver a combination vehicle through a 12' opening
  - b. Maneuver a combination vehicle through a left-hand turn at an intersection.
  - c. Maneuver a combination vehicle through a right-hand turn at an intersection.
  - d. Maneuver a combination vehicle through a U-turn
4. Safely operate a combination vehicle on various roads
  - a. Explain the safety procedures on driving on various roads
  - b. Operate a vehicle on a four-lane road.
  - c. Operate a vehicle on a three-lane road.
  - d. Operate a vehicle on a two-lane road.
  - e. Operate a vehicle on in urban traffic (two-lane and multi-lane streets).
  - f. Operate a vehicle through a railroad crossing.
  - g. Perform an emergency roadside stop.
5. Utilize technological advances in the trucking industry.
  - a. Discuss the newest advances in power trains.
  - b. Explore the newest advances in transmission technology.
  - c. Discuss computer communication skills

**Mississippi Highway Safety Patrol Commercial Driver's Manual Class A, B, & C**  
**6.1 – Driving Combination Vehicles Safety**

Combination vehicles are usually heavier, longer, and require more driving skill than single commercial vehicles. This means that drivers of combination vehicles need more knowledge and skill than drivers of single vehicles. In this section, we talk about some important safety factors that apply specifically to combination vehicles.

### 6.1.1 – Rollover Risks

More than half of truck driver deaths in crashes are the result of truck rollovers. When more cargo is piled up in a truck, the “center of gravity” moves high up from the road. The truck becomes easier to turn over. Fully loaded rigs are ten times more likely to roll over in a crash than empty rigs.

The following two things will help you prevent rollover-keep the cargo as close to the ground as possible, and drive slowly around turns. Keeping cargo low is even more important in combination vehicles than in straight trucks. Also, keep the load centered on your rig. If the load is to one side so it makes a trailer lean, a rollover is more likely. Make sure your cargo is centered and spread out as much as possible. (Cargo distribution is covered in Section 3 of this manual.)

Rollovers happen when you turn too fast. Drive slowly around corners, on ramps, and off ramps. Avoid quick lane changes, especially when fully loaded.

### 6.1.2 – Steer Gently

Trucks with trailers have a dangerous “crack-the-whip” effect. When you make a quick lane change, the crack-the-whip effect can turn the trailer over. There are many accidents where only the trailer has overturned.

“Rearward amplification” causes the crack-the-whip effect. Figure 6.1 shows eight types of combination vehicles and the rearward amplification each has in a quick lane change. Rigs with the least crack-the-whip effect are shown at the top and those with the most, at the bottom. Rearward amplification of 2.0 in the chart means that the rear trailer is twice as likely to turn over as the tractor. You can see that triples have rearward amplification of 3.5. This means you can roll the last trailer of triples 3.5 times as easily as a five-axle tractor.

Steer gently and smoothly when you are pulling trailers. If you make a sudden movement with your steering wheel, your trailer could tip over. Follow far enough behind other vehicles (at least 1 second for each 10 feet of your vehicle length, plus another second if going over 40 mph). Look far enough down the road to avoid being surprised and having to make a sudden lane change. At night, drive slowly enough to see obstacles with your headlights before it is too late to change lanes or stop gently. Slow down to a safe speed before going into a turn.

### 6.1.3 – Brake Early

Control your speed whether fully loaded or empty. Large combination vehicles take longer to stop when they are empty than when they are fully loaded. When lightly loaded, the very stiff suspension springs and strong brakes give poor traction and make it very easy to lock up the wheels. Your trailer can swing out and strike other vehicles. Your tractor can jackknife very quickly. You also must be very careful about driving “bobtail” tractors (tractors without semitrailers). Tests have shown that bobtails can be very hard to stop smoothly. It takes them longer to stop smoothly. It takes them longer to stop than a tractor-semitrailer loaded to maximum gross weight.

In any combination rig, allow lots of following distance and look far ahead, so you can brake early. Don’t be caught by surprise and have to make a “panic” stop.

**11.1 All Vehicles** Study the following vehicle parts for the type of vehicle you will be using during the CDL skills test. You should be able to identify each part and tell the examiner what you are looking for or inspecting.

#### **11. 1.1 Engine Compartment (Engine Off)**

##### **Leaks/ Hoses**

Look for puddles on the ground.

Look for dripping fluids on underside of engine and transmission.

Inspect hoses for condition and leaks  
Inspect hoses for condition and leaks.

#### **Oil Level**

Indicate where dipstick is located.  
See what oil level is within safe operating range.  
Level must be above refill mark.

#### **Coolant Level**

Inspect reservoir sight glass, or (If engine is not hot), remove radiator cap and check for visible coolant level.

#### **Power Steering Fluid**

Indicate where power steering fluid dipstick is located.  
Check adequate power steering fluid level.  
Level must be above refill mark.

#### **Engine Compartment Belts**

Check the following belts for snugness (up to ¼ inch play at center of belt), cracks, or frays:

- Power steering belt
- Water pump belt
- Alternator belt
- Air compressor belt

Note: If any of the components listed above are not belt driven, you must:  
Tell the examiner which component(s) are operating properly, are not damaged or leaking, and are mounted securely.

#### **Safe Start**

Depress clutch.  
Place gearshift lever in neutral (or park, for automatic transmission).  
Start engine, then release clutch slowly.

### **11.1.2-Cab Check/Engine Start**

#### **Oil Pressure Gauge**

Make sure oil pressure gauge is working.  
Check that pressure gauge shows increasing or normal oil pressure or that the warning light goes off.  
If equipped, oil temperature gauge should begin a gradual rise to the normal operating range.

#### **Temperature Gauge**

Make sure the temperature gauge is working.  
Temperature should begin to climb to the normal operating range or temperature light should be off.

#### **Air Gauge**

Make sure the air gauge is working properly.  
Build air pressure to governor cut-out, roughly 120-140 psi.

#### **Ammeter/voltmeter**

Check that gauges show alternator and/or generator is charging or that warning light is off.

#### **Mirrors and Windshield**

Mirrors should be clean and adjusted properly from the inside.

Windshield should be clean with no illegal stickers, no obstructions, or damage to the glass.

### **Emergency Equipment**

Check for spare electrical fuses.

Check for three red reflective triangles.

Check for a properly charged and rated fire extinguisher.

Note: If the vehicle is not equipped with electrical fuses, you must mention this to the examiner.

### **Steering Play**

Non-power steering: Check for excessive play by turning steering wheel back and forth. Play should not exceed 10 degrees (or about two inches on a 20-inch wheel).

Power steering: With the engine running, check for excessive play by turning the steering wheel back and forth. Play should not exceed 10 degrees ( or about two inches on a 20-inch wheel) before front left wheel barely moves.

### **Wipers/Washers**

Check that wiper arms and blades are secure, not damaged, and operate smoothly.

If equipped, windshield washers must operate correctly.

### **Lighting Indicators**

Test that dash indicators work when corresponding lights are turned on:

- Left turn signal
- Right turn signal
- Four-way emergency flashers
- High beam headlight
- Anti-lock Braking System (ABS) indicator

### **Horn**

Check that air horn and/or electric horn work.

### **Heater/Defroster**

Test that the heater and defroster work.

### **Parking Brake Check**

- With the parking brake engaged (trailer brakes released on combination vehicles), check that the parking brake will hold vehicle by gently trying to pull forward with parking brake on. With the parking brake released and the trailer parking brake engaged (combination vehicles only), check that the trailer parking brake will hold vehicle by gently trying to pull forward with the trailer parking brake on.

### **Hydraulic Brake Check**

Pump the brake pedal three times, then hold it down for five seconds. The brake pedal should not move (depress) during the five seconds. If equipped with a hydraulic brake reserve (back-up) system, with the key off, depress the brake pedal and listen for the sound of the reserve system electric motor. Check that warning buzzer or light is off.

### **Air Brake Check (Air Brake Equipped Vehicles Only)**

Failure to perform an air brake check will result in an automatic failure of the vehicle inspection test. Air brake safety devices vary. However, this procedure is designed to see that any safety device operates correctly as air pressure drops from normal to low air condition. For safety purposes, in areas where an incline is present, you will use wheel chocks during the air brake check. The proper procedures for inspecting the air brake system are as follows:

Brake check

Park truck on level ground, chock wheels  
Get in truck turn engine on build to 100-125psi  
Engine off/key on/release spring brakes  
Watch 1 minute, straight truck 2psi, combo truck 3 psi  
Pump, pump brakes @ 60psi warning buzzer (on)  
Continue to pump @ 40-20psi spring brakes release

#### **Safety Belt**

Check that the safety belt is securely mounted, adjusts, and latches properly.

#### **Lights/Reflectors**

Check that all external lights and reflective equipment are clean and functional. Light and reflector checks include:

- Clearance lights (red on rear, amber elsewhere).
- Headlight (high and low beams).
- Taillights
- Backing lights
- Turn signals
- Four-way flashers
- Brake lights
- Red reflectors (on rear) and amber reflectors (elsewhere)

Note: Checks of brake, turn signal and four-way flasher functions must be done separately.

### **11.2-External Inspection (School Bus/Truck/Tractor)**

#### **11.2.1-Steering**

Check that the steering box is securely mounted and not leaking. Look for any missing nuts, bolts, and cotter keys.

Check for power steering fluid leaks or damage to power steering hoses.

#### **Steering Linkage**

See that connecting links, arms, and rods from the steering bock to the wheel are not worn or cracked. Check that joints and sockets are not worn or loose and that there are no missing nuts, bolts, or cotter keys.

#### **11.2.2-Supsension**

##### **Springs/Air/Torque**

Look for missing, shifted, cracked, or broken leaf springs.

Look for broken or distorted coil springs.

If vehicle is equipped with torsion bars, torque arms, or other types of suspension components, check that they are not damaged and are mounted securely.

Air ride suspension should be checked for damage and leaks.

##### **Mounts**

Looks for cracked or broken spring hangers, missing or damaged bushings, and broken, loose, or missing bolts, u-bolts or other axle mounting parts. (The mounts should be checked at each point where they are secured to the vehicle frame and axle[s]).

##### **Shock Absorbers**

See that shock absorbers are secure and that there are no leaks.



Note: Be prepared to perform the same suspension components inspection on every axle (power unit and trailer, if equipped).

### **11.2.3-Brakes**

#### **Slack Adjustors and Pushrods**

Look for broken, loose, or missing parts.

For Manual slack adjustors, the brake pushrod should not move more than one inch (with the brakes released) when pulled by hand.

#### **Brake Chambers**

See that brake chambers are not leaking, cracked, or dented and are mounted securely.

#### **Brake Hoses/Lines**

Look for cracked, worn, or leaking hoses, lines, and couplings.

#### **Drum Brake**

Check for cracks, dents, or holes. Also check for loose or missing bolts.

Check for contaminants such debris or oil/grease.

Brake linings (where visible) should not be worn dangerously thin.

#### **Brake Linings**

On some brake drums, there are openings where the brake linings can be seen from outside the drum.

For this type of drum, check that visible amount of brake lining is showing.

Note: Be prepared to perform the same brake components inspection on every axle (power unit and trailer, if equipped).

### **11.2.4-Wheels**

#### **Rims**

Check for damaged or bent rims. Rims cannot have welding repairs.

#### **Tires**

The following items must be inspected on every tire:

- Tread depth: Check for minimum tread depth (4/32 on steering axle tires, 2/32 on all other tires).
- Tire condition: Check that tread is evenly worn and look for cuts or other damage to tread or sidewalls. Also, make sure that valve caps and stems are not missing, broken, or damaged.
- Tire inflation: Check for proper inflation by using a tire gauge, or inflation by striking tires with a mallet or other similar device.

Note: You will not get credit if you simply kick the tires to check for proper inflation.

#### **Hub Oils Seals/Axle Seals**

See that hub oil/grease seals and axle seals are not leaking and, if wheel has a sight glass, oil level is adequate.

#### **Lug Nuts**

Check that all lug nuts are present, free of cracks and distortions, and show no signs or looseness such as rust trails or shiny threads.

Make sure all bolt holes are not cracked or distorted.

#### **Spacers**

If equipped, check that spacers are not bent, damaged, or rusted through.

Spacers should be evenly centered, with the dual wheels and tires evenly separated.

Note: Be prepared to perform the same wheel inspection on every axle (power unit and trailer, if equipped).

#### **11.2.5-Side of Vehicle Door(s)/Mirror(s)**

Check that door(s) are not damaged and that they are open and close properly from the outside.

Hinges should be secure with seals intact.

Check that mirror(s) and mirror brackets are not damaged and are mounted securely with no loose fittings.

#### **Fuel Tank**

Check that tank(s) are secure, cap(s) are tight, and that there are no leaks from tank(s) or lines.

#### **Battery/Box**

Wherever located, see that battery(s) are secure, connections are tight, and cell caps are present.

Battery connections should not show signs of excessive corrosion.

Battery Box and cover or door must be secure.

#### **Drive Shaft**

See that drive shaft is not bent or cracked.

Couplings should be secure and free of foreign objects.

#### **Exhaust System**

Check system for damage and signs of leaks such as rust or carbon soot.

System should be connected tightly and mounted securely.

#### **Frame**

Look for cracks, broken welds, holes or other damage to the longitudinal frame members, cross members, box, and floor.

#### **11.2.6-Rear of Vehicle**

##### **Splash Guards**

If equipped, check that splash guards or mud flaps are not damaged and are mounted securely.

##### **Doors/Ties/Lifts**

Check that doors and hinges are not damaged and that they open, close, and latch properly from the outside, if equipped.

Ties, straps, chains, and binders must also be secure.

If equipped with a cargo lift, look for leaking, damaged or missing parts and explain how it should be checked for correct operation.

Lift must be fully retracted and latched securely.

#### **11.2.7-Tractor/Coupling**

##### **Air/Electric Lines**

Listen for air leaks. Check that air hoses and electrical lines are not cut, chafed, spliced, or worn (Steel braid should not show through). Make sure air and electrical lines are not tangled, pinched, or dragging against tractor parts.

##### **Catwalk**

Check that the catwalk is solid, clear of objects, and securely bolted to tractor frame.

##### **Mounting Bolts**

Look for loose or missing mounting brackets, clamps, bolts, or nuts. Both the fifth wheel and the slide mounting must be solidly attached.

On other types of coupling systems (i.e., ball hitch, pintle hook, etc.), inspect all coupling components and mounting brackets for missing or broken parts.

#### **Hitch Release Lever**

Check to see that the hitch release lever is in place and is secure.

#### **Locking Jaws**

Look into fifth wheel gap and check that locking jaws are fully closed around the kingpin.

On other types of coupling systems (i.e., ball hitch pintle hook, etc.), inspect the locking mechanism for missing or broken parts and make sure it is locked securely. If present, safety cables or chains must be secure and free of kinks and excessive slack.

#### **5<sup>th</sup> Wheel Skid Plate**

Check for proper lubrication and that 5<sup>th</sup> wheel skid plate is securely mounted to the platform and that all bolts and pins are secure and not missing.

#### **Platform (Fifth Wheel)**

Check for cracks or breaks in the platform structure which supports the fifth wheel skid plate.

#### **Release Arm (Fifth Wheel)**

If equipped, make sure the release arm is in the engaged position and the safety latch is in place.

#### **Kingpin/Apron/Gap**

Check that kingpin is not bent.

Make sure that visible part of the apron is not bent, cracked, or broken.

Check that the trailer is laying flat on the fifth wheel skid plate (no gap).

#### **Locking Pins (Fifth Wheel)**

If equipped, look for loose or missing pins in the slide mechanism of the sliding fifth wheel. If air powered, check for leaks.

Make sure locking pins are fully engaged.

Check that the fifth wheel is positioned properly so that the tractor frame will clear the landing gear during turns.

#### **Sliding Pintle**

Check that the sliding pintle is secured with no loose or missing nuts or bolts and cotter pin is in place.

#### **Tongue or Draw-bar**

Check that the tongue/draw-bar is not bent or twisted and checks for broken welds and stress cracks.

Check that the tongue/draw-bar is not worn excessively.

#### **Tongue Storage Area**

Check that the storage area is solid and secured to the tongue.

Check that cargo in the storage area i.e. chains, binders, etc. are secure.

### **11.3-School Bus Only**

#### **Emergency Equipment**

In addition to checking for spare electrical fuses (if equipped), three red reflective triangles, and a properly charged and rated fire extinguisher, school bus drivers must also inspect the following emergency equipment:

- Emergency Kit
- Body Fluid Cleanup Kit

#### **Lighting Indicators**

In addition to checking the lighting indicators listed in Section 10.2 of this manual, school bus drivers must also check the following lighting indicators (internal panel lights):

- Alternately flashing amber lights indicator, if equipped.
- Alternately flashing red lights indicator.
- Strobe light indicator, if equipped.

### **Lights/Reflectors**

In addition to checking the lights and reflective devices listed in Section 10.2 of this manual, school bus drivers must also check the following (external) lights and reflectors:

- Strobe light, if equipped
- Stop arm light, if equipped
- Alternately flashing amber lights, if equipped
- Alternately flashing red lights

### **Student Mirrors**

In addition to checking the external mirrors, school bus drivers must also check the internal and external mirrors used for observing students:

- Check for proper adjustment
- Checks that all internal and external mirrors and mirror brackets are not damaged and are mounted securely with no loose fittings.
- Checks that visibility is not impaired due to dirty mirrors.

### **Stop Arm**

If equipped, check the stop arm to see that it is mounted securely to the frame of the vehicle. Also, check for loose fittings and damage.

### **Passenger Entry/Lift**

Check that the entry door is not damaged, operates smoothly, and closes securely from the inside.

Hand rails are secure and that the step light is working, if equipped.

The entry steps must be clear with the treads not loose or worn excessively.

If equipped with a handicap lift, look for leaking, damaged, or missing parts and explain how lift should be checked for correct operation. Lift must be fully retracted and latched securely.

### **Emergency Exit**

Make sure that all emergency exits are not damaged, operate smoothly, and close securely from the inside.

Check that any emergency exit warning devices are working.

### **Seating**

Look for broken seat frames and check that seat frames are firmly attached to the floor.

Check that seat cushions are attached securely to the seat frames.

## **11.4-Trailer**

### **11.4.1-Trailer Front**

#### **Air/Electrical Connections**

Check that trailer air connectors are sealed and in good condition.

Make sure glad hands are locked in place, free of damage or air leaks.

Make sure the trailer electrical plug is firmly seated and locked in place.

#### **Header Board**

If equipped, check the header board to see that it is secure, free of damage, and strong enough to contain cargo.

If equipped, the canvas or tarp carrier must be mounted and fastened securely.

On enclosed trailers, check the front area for signs of damage such as cracks, bulges, or holes.

#### **11.4.2-Side of Trailer**

##### **Landing Gear**

Check that the landing gear is fully raised, has no missing parts, crank handle is secure, and the support frame is not damaged.

If power operated, check for air or hydraulic leaks.

##### **Doors/Ties/Lifts**

If equipped, check that doors are not damaged.

Check that doors open, close, and latch properly from the outside.

Check that ties, straps, chains, and binders are secure.

If equipped with a cargo lift, look for leaking, damaged or missing parts and explain how it should be checked for correct operation.

Lift should be fully retracted and latched securely.

##### **Frame**

Look for cracks, broken welds, holes or other damage to the frame, cross members, box, and floor.

##### **Tandem Release Arm/Locking Pins**

If equipped, make sure the locking pins are locked in place and release arm is secured.

#### **11.4.3-Remainder of Trailer**

##### **Remainder of Trailer**

Please refer to Section 11.2 of this manual for detailed inspection procedures regarding the following components:

- Wheels
- Suspension system
- Brakes
- Doors/ties/lift
- Splash guards

#### **11.5-Coach/Transit Bus**

##### **11.5.1-Passenger Items**

##### **Passenger Entry/Lift**

Check that entry doors operate smoothly and close securely from the inside.

Check that hand rails are secure and, if equipped, that the step light(s) are working.

Check that the entry steps are clear, with the treads not loose or worn excessively.

If equipped with a handicap lift, look for any leaking, damaged or missing part, and explain how it should be checked for correct operation.

Lift should be fully retracted and latched securely.

##### **Emergency Exits**

Make sure that all emergency exits are not damaged, operate smoothly, and close securely from the inside.

Check that any emergency exit warning devices are working.

##### **Passenger Seating**

Look for broken seat frames and check that seat frames are firmly attached to the floor.

Check that seat cushions are attached securely to the seat frames.

##### **11.5.2-Entry/Exit**

**Doors/Mirrors**

Check that entry/exit doors are not damaged and operate smoothly from the outside. Hinges should be secure with seals intact.

Make sure that the passenger exit mirrors and all external mirrors and mirror brackets are not damaged and are mounted securely with no loose fittings.

**11.5.3-External Inspection of Coach/Transit Bus****Level/Air Leaks**

See that the vehicle is sitting level (front and rear) and if air-equipped, check for audible air leaks from the suspension system.

**Fuel Tank(s)**

See that fuel tank(s) are secure with no leaks from tank(s) or lines.

**Baggage Compartments**

Check that baggage and all other exterior compartment doors are not damaged, operate properly, and latch securely.

**Battery/Box**

Wherever located, see that battery(s) are secure, connections are tight, and cell caps are present. Battery connections should not show signs of excessive corrosion.

Check that Battery box and cover or door is not damaged and is secure.

**11.5.4-Remainder of Coach/Transit Bus****Remainder of Vehicle**

Please refer to Section 11.2 of this manual for detailed inspection procedures regarding the wheels.

Remember, the pre-trip vehicle inspection must be passed before you can proceed to the basic vehicle control skills test.

**11.6-Taking the CDL Pre-trip Inspection Test****11.6.1-Class A Pre-trip Inspection Test**

If you are applying for a Class A CDL, you will be required to perform one of the four versions of a pre-trip inspection in the vehicle you have brought with you are testing. Each of the four tests are equivalent and you will not know which test you will take until just before the testing begins.

All of the tests include an engine start, an in-cab-inspection, and an inspection of the coupling system. Then, your test may require an inspection of the entire vehicle or only a portion of the vehicle which your CDL Examiner will explain to you.

**SECTION 2****2.1-Vehicle Inspection****2.1.1-Why Inspect**

Safety is the most important reason you inspect your vehicle, safety for yourself and for the other road users.

A vehicle defect found during an inspection could save you problems later. You could have a breakdown on the road that will cost time and dollars, or even worse, a crash caused by the defect.

Federal and state laws require that drivers inspect their vehicles. Federal and state inspectors also may inspect your vehicles. If they judge the vehicle to be unsafe, they will put it "out of service" until it is fixed.

**2.1.2-Types of Vehicle Inspection**

**Pre-trip Inspection.** A pre-trip inspection will help you find problems that could cause a crash or breakdown.

**During a Trip.** For safety you should:

Watch gauges for signs of trouble.

Use your senses to check for problems (look, listen, smell, feel).

Check critical items when you stop:

- Tires, wheels and rims
- Brakes
- Lights and reflectors
- Brake and electrical connections to trailer
- Trailer coupling devices
- Cargo securement devices

**After-trip Inspection and Report.** You should do an after-trip inspection at the end of the trip, day, or tour of duty on each vehicle you operated. It may include filling out a vehicle condition report listing any problems you find. The inspection report helps a motor carrier know when the vehicle needs repairs.

### **2.1.3-What to Look For**

#### **Tire Problems**

Too much or too little air pressure.

Bad wear. You need at least 4/32-inch tread depth in every major groove on front tires. You need 2/32 inch on other tires. No fabric should show through the tread or sidewall.

Cuts or other damage.

Tread separation.

Dual tires that come in contact with each other or parts of the vehicle.

Mismatched sizes.

Radial and bias-ply tires used together.

Cut or cracked valve stems.

Regrooved, recapped, or retreaded tires on the front wheels of a bus. These are prohibited.

#### **Wheel and Rim Problems**

Damaged rims.

Rust around wheel nuts may mean the nuts are loose-check tightness. After a tire has been changed, stop a short while later and re-check tightness of nuts.

Missing clamps, spacers, studs, or lugs means danger.

Mismatched, bent, or cracked lock rings are dangerous.

Wheels or rims that have had welding repairs are not safe.

#### **Bad Brake Drums or Shoes**

Cracked drums.

Shoes or pads with oil, grease, or brake fluid on them.

Shoes worn dangerously thin, missing, or broken.

#### **Steering System Defects**

Missing nuts, bolts, cotter keys, or other parts.

Bent, loose, or broken parts, such as steering column, steering gear box, or tie rods.

If power steering equipped, check hoses, pumps, and fluid level; check for leaks.

Steering wheel play of more than 10 degrees (approximately 2 inches movement at the rim of a 20-inch steering wheel) can make it hard to steer.

**Suspension System Defects.** The suspension system holds up the vehicle and its load. It keeps the axles in place. Therefore, broken suspension parts can be extremely dangerous. Look for: Spring hangers that allow movement of axle from proper position.

Cracked down or broken spring hangers.

Missing or broken leaves in any leaf spring. If one-fourth or more are missing, it will put the vehicle “out of service”, but any defect could be dangerous.

Broken leaves in a multi-leaf spring or leaves that have shifted so they might hit a tire or other part.

Leaking shock absorbers.

Torque rod or arm, u-bolts, spring hangers, or other axle positioning parts that are cracked, damaged, or missing.

Air suspension systems that are damaged and/or leaking.

Any loose, cracked, broken, or missing frame members.

**Exhaust System Defects.** A broken exhaust system can let poison fumes into the cab or sleeper berth. Look for: Loose, broken, or missing exhaust pipes, mufflers, tailpipes, or vertical stacks.

Loose, broken, or missing mounting brackets, clamps, bolts, or nuts.

Exhaust system parts rubbing against fuel system parts, tires, or other moving parts of vehicle.

Exhaust system parts that are leaking.

**Emergency Equipment.** Vehicles must be equipped with emergency equipment. Look for:

Fire extinguisher(s).

Spare electrical fuses (unless equipped with circuit breakers).

Warning devices for parked vehicles (for example, three reflective warning triangles).

**Cargo (Trucks).** You must make sure the truck is not overloaded and the cargo is balanced and secured before each trip. If the cargo contains hazardous materials, you must inspect for proper papers and placarding.

#### **2.1.4-CDL Pre-trip Vehicle Inspection Test**

In order to obtain a CDL you will be required to pass a pre-trip vehicle inspection test. You will be tested to see if you know whether your vehicle is safe to drive. You will be asked to do a pre-trip inspection of your vehicle and explain to the examiner what you would inspect and why. The following seven-step inspection method should be useful.

#### **2.1.5-Seven-step Inspection Method**

**Method of Inspection.** You should do a pre-trip inspection the same way each time so you will learn all the steps and be less likely to forget something.

**Approaching the Vehicle.** Notice general condition. Look for damage or vehicle leaning to one side. Look under the vehicle for fresh oil, coolant, grease, or fuel leaks. Check the area around the vehicle for hazards to vehicle movement (people, other vehicles, objects, low-hanging wires, limbs, etc.).

#### **Vehicle Inspection Guide**

##### **Step1: Vehicle Overview**

**Review Last Vehicle Inspection Report.** Drivers may have to make a vehicle inspection report in writing each day. The motor carrier must repair any items in the report that affect safety and certify on the report that repairs were made or were unnecessary. You must sign the report only if defects were noted and certified to be repaired or not needed to be repaired.

##### **Step 2: Check Engine Compartment**

**Check that the Parking Brakes Are On and/or Wheels Chocked.** You may have to raise the hood, tilt the cab (secure loose things so they don't fall and break something), or open the engine compartment door. Check the following:

Engine oil level.

Coolant level in radiator; condition of hoses.

Power steering fluid level, connections, and tie downs (battery may be located elsewhere)

Automatic transmission fluid level (may require engine to be running).



Check belts for tightness and excessive wear (alternator, water pump, air compressor)-learn how much “give” the belts should have when adjusted right, and check each one.

Leaks in the engine compartment (fuel, coolant, oil, power steering fluid, hydraulic fluid, batter fluid).

Cracked, worn electrical wiring insulation.

Lower and secure hood, cab, or engine compartment door.

### **Step 3: Start Engine and Inspect Inside the Cab Get In and Start Engine**

Make sure parking brake is on.

Put gearshift in neutral (or “park” if automatic).

Start engine; listen for unusual noises.

If equipped, check the Anti-lock Braking System (ABS) indicator lights. Light on dash should come on and then turn off. If it stays on the ABS is not working properly. For trailers only, if the yellow light on the left rear of the trailer stays on, the ABS is not working properly.

### **Look at the Gauges**

Oil pressure. Should come up to normal within seconds after engine is started. Pressure should build from 50 to 90 psi within 3 minutes. Build air pressure to governor cut-out (usually around 120-140 psi. Know your vehicles requirements.

Ammeter and/or voltmeter. Should be in normal range(s).

Coolant temperature. Should begin gradual rise to normal operating range.

Warning lights and buzzers. Oil, coolant, charging circuit warning, and antilock brake system lights should go out right away.

**Check Condition of Controls.** Check all of the following for looseness, sticking, damage, or improper setting:

Steering wheel.

Clutch.

Accelerator (“gas pedal”).

Brake controls.

- Foot brake.
- Trailer brake (if vehicle has one).
- Parking brake.
- Retarder controls (if vehicle has them).

Transmission controls.

Interaxle differential lock (if vehicle has one).

Horn(s).

Windsheild wiper/washer.

Lights.

- Headlights
- Dimmer switch
- Turn signal
- Four-way flashers
- Parking, clearance, identification, marker switch(es).

**Check Mirrors and Windshield.** Inspect mirrors and windshield for cracks, dirt, illegal stickers, or other obstructions to seeing clearly. Clean and adjust as necessary.

### **Check Emergency Equipment**

Check for safety equipment:

- Spare electrical fuses (unless vehicle has circuit breakers).
- Three red reflective triangles.
- Properly charged and rated fire extinguisher.

Check for optional items such as:

- Chains (where winter conditions require).

- Tire changing equipment.
- List of emergency phone numbers.  
Accident reporting kit (packet).

#### **Step 4: Turn Off Engine and Check Lights**

Make sure the parking brake is set, turn off the engine, and take the key with you. Turn on headlights (low beams) and four-way emergency flashers, and get out of the vehicle.

#### **Step 5: Do Walkaround Inspection**

Go to front of vehicle and check that low beams are on and both of the four-way flashers are working.

Push dimmer switch and check that high beams work.

Turn off headlights and four-way emergency flashers.

Turn on parking, clearance, side-marker, and identification lights.

Turn on right turn signal, and start walk-around inspection.

#### **General**

Walkaround and inspect.

Clean all lights, reflectors, and glass as you go along.

#### **Left Front Side**

Driver's door glass should be clean.

Door latches or locks should work properly.

Left front wheel.

- Condition of wheel and rim-missing, bent, broken studs, clamps, lugs, or any signs of misalignment.
- Condition of tires-properly inflated, valve stem and cap OK, no serious cuts, bulges, or tread war.
- Use wrench to test rust-streaked lug nuts, indicating looseness.
- Hub oil level OK, no leaks.

Left front suspension.

- Condition of spring, spring hangers, shackles, u-bolts.
- Shock absorber condition.

Left front brake.

- Condition of brake drum or disc.
- Condition of hoses.

#### **Front**

Condition of front axle.

Condition of steering system.

- No loose, worn, bent, damaged or missing parts.
- Must grab steering mechanism to test for looseness.

Condition of windshield.

- Check for damage and clean if dirty.
- Check windshield wiper arms for proper spring tension
- Check wiper blades for damage, "stiff" rubber, and securement.

Lights and reflectors.

- Parking, clearance, and identification lights clean, operating, and proper color (amber at front).
- Reflectors clean and proper color (amber at front).
- Right front turn signal light clean, operating, and proper color (amber or white on signals facing forward).

#### **Right Side**

Right front: check all items as done on left front.

Primary and secondary safety cab locks engaged (if cab-over-engine design).

Right fuel tank(s).

- Securely mounted, not damaged, or leaking.
- Fuel crossover line secure.
- Tank(s) contain enough fuel.
- Cap(s) on and secure.

Condition of visible parts.

- Rear of engine-not leaking.
- Transmission-not leaking.
- Exhaust system-secure, not leaking, not touching wires, fuel, or air lines.
- Frame and cross members-no bends or cracks.
- Air lines and electrical wiring-secured against snagging, rubbing, wearing.
- Spare tire carrier or rack not damaged (if so equipped).
- Spare tire and/or wheel securely mounted in rack.
- Spare tire and wheel adequate (proper size, properly inflated).

Cargo securement (trucks).

- Cargo properly blocked, braced, tied, chained, etc.
- Header board adequate, secure (if required).
- Side boards, stakes strong enough, free of damage, properly set in place (if so equipped).
- Canvas or tarp (if required) properly secured to prevent tearing, billowing, or blocking of mirrors.
- If oversize, all required signs (flags, lamps, and reflectors) safety and properly mounted and all required permits in driver's possession.
- Curbside cargo compartment doors in good condition, securely closed, latched/locked and required security seals in place.

**Right Rear**

Condition of wheels and rims-no missing, bent, or broken spacers, studs, clamps, or lugs.

Condition of tires-properly inflated, valve stems and caps OK, no serious cuts, bulges, tread wear, tires not rubbing each other, and nothing stuck between them.

Tires same type, e.g., not mixed radial and bias types.

Tires evenly matched (same sizes).

Wheel bearing/seals not leaking.

Suspension.

- Condition of spring(s), spring hangers, shackles, and u-bolts.
- Axle secure.
- Powered axle(s) not leaking lube (gear oil).
- Condition of torque rod arms, bushings.
- Condition of shock absorber(s).
- If retractable axle equipped, check condition of lift mechanism. If air powered, check for leaks.
- Condition of air ride components.

Brakes.

- Brake adjustment.
- Condition of brake drum(s) or discs.
- Condition of hoses-look for any wear due to rubbing.

Lights and reflectors.

- Side-marker lights clean, operating, and proper color (red at rear, others amber).
- Side-marker reflectors clean and proper color (red at rear, others amber).

**Rear**

Lights and reflectors.

- Rear clearance and identification lights clean, operating, and proper color (red at rear).
- Reflectors clean and proper color (red at rear).
- Taillights clean, operating, and proper color (red at rear).
- Right rear turn signal operating, and proper color (red, yellow, or amber at rear).

License plate(s) present, clean, and secured.

Splash guards present, not damaged, properly fastened, not dragging on ground, or rubbing tires.  
Cargo secure (trucks).  
Cargo properly blocked, braced, tied, chained, etc.  
Tailboards up and properly secured.  
End gates free of damage, properly secured in stake sockets.  
Canvas or tarp (if required) properly secured to prevent tearing, billowing, or blocking of either the rearview mirrors or rear lights.  
If over-length, or over-width, make sure all signs and/or additional lights/flags are safely and properly mounted and all required permits are in driver's possession.  
Rear doors securely closed, latched/locked.

### **Left Side**

Check all items as done on right side, plus:

- Battery(ies)(if not mounted in engine compartment).
- Battery Box(es) securely mounted to vehicle.
- Box has secure cover.
- Battery(ies) not broken or leaking.
- Fluid in battery(ies) at proper level (except maintenance-free type).
- Vents in cell caps free of foreign material (Except maintenance-free type).

### **Step 6: Check Signal Lights**

#### **Get In and Turn Off Lights**

Turn off all lights.

Turn on stop lights (apply trailer hand brake or have a helper put on the brake pedal).

Turn on left turn signal lights.

#### **Get Out and Check Lights**

Left front turn signal light clean, operating and proper color (amber or white on signals facing the front).

Left rear turn signal light and both stop lights clean, operating, and proper color (red, yellow, or amber).

#### **Get in Vehicle**

Turn off lights not needed for driving.

Check for all required papers, trip manifests, permits, etc.

Secure all loose articles in cab (they might interfere with operation of the controls or hit you in a crash)

Start the engine.

### **Step 7: Start the Engine and Check**

**Test for Hydraulic Leaks.** If the vehicle has hydraulic brakes, pump the brake pedal three times. Then apply firm pressure to the pedal and hold for five seconds. The pedal should not move. If it does, there may be a leak or other problem. Get it fixed before driving. If the vehicle has air brakes, do the checks described in Sections 5 and 6 of the manual.

#### **Brake System**

##### **Test Parking Brake(s)**

Set parking brake (power unit only).

Release trailer parking brake (if applicable).

Place vehicle into a low gear.

Gently pull forward against parking brake to make sure the parking brake holds.

Repeat the same steps for the trailer with trailer parking brake set and power unit parking brakes release (if applicable).

If it doesn't hold vehicle, it is faulty; get it fixed.

### **Test Service Brake Stopping Action**

Go about five miles per hour.

Push brake pedal firmly “pulling” to one side or the other can mean brake trouble.

Any unusual brake pedal “feel” or delayed stopping action can mean trouble.

If you find anything unsafe during the pre-trip inspection, get it fixed. Federal and state laws forbid operating an unsafe vehicle.

### **2.1.6-Inspection During a Trip**

#### **Check Vehicle Operation Regularly**

You should check:

Instruments.

Air pressure gauge (if you have air brake).

Temperature gauges.

Pressure gauges.

Ammeter/voltmeter.

Mirrors.

Tires.

Cargo, cargo covers.

Lights.

Etc.

If you see, hear, smell, or feel anything that might mean trouble, check it out.

**Safety Inspection.** Drivers of trucks and truck tractors when transporting cargo must inspect the securement of the cargo within the first 50 miles of a trip and every 150 miles or every three hours (whichever comes first) after.

### **2.1.7-After-trip Inspection and Report**

You may have to make a written report each day on the condition of the vehicle(s) you drove. Report anything affecting safety or possibly leading to mechanical breakdown.

### **11.6.2-Class B and C Pre-trip Inspection Test**

If you are applying for a Class B CDL, you will be required to perform one of the three versions of a pre-trip inspection in the vehicle you have brought with you for testing. Each of the three tests are equivalent and you will not know which test you will take until just before the testing begins.

All of the tests include an engine start and an in-cab inspection. Then, your test may require an inspection of the entire vehicle or only a portion of the vehicle which your CDL Examiner will explain to you. You will also have to inspect any special features of your vehicle (e.g, school or transit bus).

### **6.4-Coupling and Uncoupling**

Knowing how to couple and uncouple correctly is basic to safe operation of combination vehicles. Wrong coupling and uncoupling can be very dangerous. General coupling and uncoupling steps are listed below. There are differences between different rigs, so learn the details of coupling and uncoupling the truck(s) you will operate.

#### **6.4.1-Coupling Tractor-Semitrailers**

##### **Step 1. Inspect Fifth Wheel**

Check for damaged/missing parts.

Check to see that mounting to tractor is secure, no cracks in frame, etc.

Be sure that the fifth wheel plate is greased as required. Failure to keep the fifth wheel plate lubricated could cause steering problems because of friction between the tractor and trailer.

Check if fifth wheel is in proper position for coupling.

- Wheel tilted down toward rear of tractor.
- Jaws open.
- Safety unlocking handle in the automatic lock position.
- If you have a sliding fifth wheel, make sure it is locked.
- Make sure the trailer kingpin is not bent or broken.

**Step 2. Inspect Area and Chock Wheels**

Make sure area around the vehicle is clear.

Be sure trailer wheels are chocked or spring brakes are on.

Check that cargo (if any) is secured against movement due to tractor being coupled to the trailer.

**Step 3. Position Tractor**

Put the tractor directly in front of the trailer. (Never back under the trailer at an angle because you might push the trailer sideways and break the landing gear).

Check position, using outside mirrors, by looking down both sides of the trailer.

**Step 4. Back Slowly**

Back until fifth wheel just touches the trailer. Don't hit the trailer.

**Step 5. Secure Tractor**

Put on the parking brake.

Put transmission in neutral.

**Step 6. Check Trailer Height**

The trailer should be low enough that it is raised slightly by the tractor when the tractor is backed under it. Raise or lower the trailer as needed. (If the trailer is too low, the tractor may strike and damage the trailer nose; if the trailer is too high, it may not couple correctly.)

Check that the kingpin and fifth wheel are aligned.

**Step 7. Connect Air Lines to Trailer**

Check glad hand seals and connect tractor emergency air line to trailer emergency glad hand. Check glad hand seals and connect tractor service airline to trailer service glad hand.

Make sure air lines are safely supported where they won't be crushed or caught while tractor is backing under the trailer.

**Step 8. Supply Air to Trailer**

From cab, push in "air supply" knob or move tractor protection valve control from the "emergency" to the "normal" position to supply air to the trailer brake system.

Wait until the air pressure is normal.

Check brake system for crossed air lines.

- Shut engine off so you can hear the brakes.
- Apply and release trailer brakes and listen for sound of trailer brakes being applied and released. You should hear the brakes move when applied and air escape when the brakes are released.
- Check air brake system pressure gauge for signs of major air loss.

When you are sure trailer brakes are working, start engine.

Make sure air pressure is up to normal.

**Step 9. Lock Trailer Brakes**

Pull out the "air supply" knob or move the tractor protection valve control from "normal" to "emergency."

**Step 10. Back Under Trailer**

Use lowest reverse gear.

Back tractor slowly under trailer to avoid hitting kingpin too hard.

Stop when the kingpin is locked into the fifth wheel.

**Step 11. Check Connection for Security**

Raise trailer landing gear slightly off ground.

Pull tractor gently forward while the trailer brakes are still locked to check that the trailer is locked onto the tractor.

**Step 12. Secure Vehicle**

Put transmission in neutral.

Put parking brakes on.

Shut off engine and take key with you so someone else won't move truck while you are under it.

**Step 13. Inspect Coupling**

Use a flashlight, if necessary.

Make sure there is no space between upper and lower fifth wheel. If there is space, something is wrong (kingpin may be on top of the closed fifth wheel jaws, and trailer would come loose very easily).

Go under trailer and look into the back of the fifth wheel. Make sure the fifth wheel jaws have closed around the shank of the kingpin.

Check that the locking lever is in the "lock" position.

Check that the safety latch is in position over locking lever. (On some fifth wheels the catch must be put in place by hand.)

If the coupling isn't right, don't drive the coupled unit; get it fixed.

**Step 14. Connect the Electrical Cord and Check Air Lines**

Plug the electrical cord into the trailer and fasten the safety catch.

Check both airlines and electrical line for signs of damage.

Make sure air and electrical lines will not hit any moving parts of vehicle.

**Step 15. Raise Front Trailer Supports (Landing Gear)**

Use low gear range (if so equipped) to begin raising the landing gear. Once free of weight, switch to the high gear range.

Raise the landing gear all the way up. (Never drive with landing gear only part way up as it may catch on railroad tracks or other things.)

After raising landing gear, secure the crank handle safely.

When full weight of trailer is resting on tractor:

- Check for enough clearance between rear of tractor frame and landing gear. (When tractor turns sharply, it must not hit landing gear).
- Check that there is enough clearance between the top of the tractor tires and the nose of the trailer.

**Step 16. Remove Trailer Wheel Chocks**

Remove and store wheel chocks in a safe place.

**6.2.8 – Trailer Service, Parking and Emergency Brakes**

Newer trailers have spring brakes just like trucks and truck tractors. However, converter dollies and trailers built before 1975 are not required to have spring brakes. Those that do not have spring brakes have emergency brakes, which work from the air stored in the trailer air tank. The emergency brakes come on whenever air pressure in the emergency line is lost. These trailers have no parking brake. The emergency brakes come on whenever the air supply knob is pulled out or the trailer is disconnected. A major leak in the emergency line will cause the tractor protection valve to close and the trailer emergency brakes to come on. But the brakes will hold only as long as there is air pressure in the trailer air tank. Eventually, the air will leak away and then there will be no brakes. Therefore, it is very important for safety that you use wheel chocks when you park trailers without spring brakes.

You may not notice a major leak in the service line until you try to put the brakes on. Then, the air loss from the leak will lower the air tank pressure quickly. If it goes low enough, the trailer emergency brakes will come on.

#### **6.4.2-Uncoupling Tractor-Semitrailers**

The following steps will help you to uncouple safely.

##### **Step 1. Position Rig**

Make sure surface of parking area can support weight of trailer.

Have tractor lined up with the trailer. (pulling out at an angle can damage landing gear).

##### **Step 2. Ease Pressure on Locking Jaws**

Shut off trailer air supply to lock trailer brakes.

Ease pressure on fifth wheel locking jaws by backing up gently. (This will help you release the fifth wheel locking lever).

Put parking brakes on while tractor is pushing against the kingpin. (This will hold rig with pressure off the locking jaws).

##### **Step 3. Chock Trailer Wheels**

Chock the trailer wheels if the trailer doesn't have spring brakes or if you're not sure. (The air could leak out of the trailer air tank, releasing its emergency brakes. Without chocks, the trailer could move).

##### **Step 4. Lower the Landing Gear**

If trailer is empty, lower the landing gear until it makes firm contact with the ground.

If trailer is loaded, after the landing gear makes firm contact with the ground, turn crank in low gear a few extra turns. This will lift some weight off the tractor. (Do not lift trailer off the fifth wheel). This will:

- Make it easier to unlatch fifth wheel.
- Make it easier to couple next time.

##### **Step 5. Disconnect Air Lines and Electrical Cable.**

Disconnect air lines from trailer. Connect airline glad hands to dummy couplers at back of cab or couple them together.

Hang electrical cable with plug down to prevent moisture from entering it.

Make sure lines are supported so they won't be damaged while driving the tractor.

##### **Step 6. Unlock Fifth Wheel**

Raise the release handle lock.

Pull the release handle to "open" position.

Keep legs and feet clear of the rear tractor wheels to avoid serious injury to case the vehicle moves.

##### **Step 7. Pull Tractor Partially Clear of Trailer**

Pull tractor forward until fifth wheel comes out from under the trailer.

Stop with tractor frame under trailer (prevents trailer from falling to ground if landing gear should collapse or sink).

##### **Step 8. Secure Tractor**

Apply parking brake.

Place transmission in neutral.

##### **Step 9. Inspect Trailer Supports**

Make sure ground is supporting trailer.

Make sure landing gear is not damaged.



## **Step 10. Pull Tractor Clear of Trailer**

Release parking brakes.

Check the area and drive tractor forward until it clears.

### **2.3-Shifting Gears**

Correct shifting of gears is important. If you can't get your vehicle into the right gear while driving, you will have less control.

#### **2.4.2 – Seeing to the Sides and Rear**

It's important to know what's going on behind and to the sides. Check your mirrors regularly. Check more often in special situations.

**Mirror Adjustment.** Mirror adjustment should be checked prior to the start of any trip and can only be checked accurately when the trailer(s) are straight. You should check and adjust each mirror to show some part of the vehicle. This will give you a reference point for judging the position of the other images.

**Regular Checks.** You need to make regular checks of your mirrors to be aware of traffic and to check your vehicle.

**Traffic.** Check your mirrors for vehicles on either side and in back of you. In an emergency, you may need to know whether you can make a quick lane change. Use your mirrors to spot overtaking vehicles. There are "blind spots" that your mirrors cannot show you. Check your mirrors regularly to know where other vehicles are around you, and to see if they move into your blind spots.

**Check Your Vehicle.** Use the mirrors to keep an eye on your tires. It's one way to spot a tire fire. If you're carrying open cargo, you can use the mirrors to check it. Look for loose straps, ropes, or chains. Watch for a flapping or ballooning tarp.

**Special Situations.** Special situations require more than regular mirror checks. These are lane changes, turns, merges, and tight maneuvers.

**Lane Changes.** You need to check your mirrors to make sure no one is alongside you or about to pass you. Check your mirrors:

Before you change lanes to make sure there is enough room.

After you have signaled, to check that no one has moved into your blind spot.

Right after you start the lane change, to double-check that your path is clear.

After you complete the lane change.

**Turns.** In turns, check your mirrors to make sure the rear of your vehicle will not hit anything.

**Merges.** When merging, use your mirrors to make sure the gap in traffic is large enough for you to enter safely.

**Tight Maneuvers.** Any time you are driving in close quarters, check your mirrors often. Make sure you have enough clearance.

**How to Use Mirrors.** Use mirrors correctly by checking them quickly and understanding what you see.

When you use your mirrors while driving on the road, check quickly. Look back and forth between the mirrors and the road ahead. Don't focus on the mirrors for too long. Otherwise, you will travel quite a distance without knowing what's happening ahead.

Many large vehicles have curved (convex, "fisheye," "spot," "bugeye") mirrors that show a wider area than flat mirrors. This is often helpful. But everything appears smaller in convex mirror than it would if you were looking at it directly. Things also seem farther away than they really are. It's important to realize this and to allow for it. Figure 2.7 shows the field of vision using a convex mirror.

#### **2.7.2 – Space Behind**

You can't stop others from following you too closely. But there are things you can do to make it safer.

**Stay to the Right.** Heavy vehicles are often tailgated when they can't keep up with the speed of traffic. This often happens when you're going uphill. If a heavy load is slowing you down, stay in the right lane if you can. Going uphill, you should not pass another slow vehicle unless you can get around quickly and safely.

**Dealing with Tailgaters.** In a large vehicle, it's often hard to see whether a vehicle is close behind you. You may be tailgated:

When you are traveling slowly. Drivers trapped behind slow vehicles often follow closely.

In bad weather. Many car drivers follow large vehicles closely during bad weather, especially when it is hard to see the road ahead.

If you find yourself being tailgated, here are some things you can do to reduce the chances of a crash.

Avoid quick changes. If you have to slow down or turn, signal early, and reduce speed very gradually. Increase your following distance. Opening up room in front of you will help you to avoid having to make sudden speed or direction changes. It also makes it easier for the tailgater to get around you.

Don't speed up. It's safer to be tailgated at a low speed than a high speed.

Avoid tricks. Don't turn on your taillights or flash your brake lights. Follow the suggestions above.

## **12.2 – Exercises**

### **12.2.1 – Straight Line Backing**

You may be asked to back your vehicle in a straight line between two rows of cones without touching or crossing over the exercise boundaries. (See Figure 12.1)

### **12.2.2 – Offset Back/Right**

You may be asked to back into a space that is to the right rear of your vehicle. You will drive straight forward and back your vehicle into that space without striking the side or rear boundaries marked by cones. You must place your vehicle completely into the space. (See Figure 12.2)

### **12.2.3 – Offset Back/Left**

You may be asked to back into a space that is to the left rear of your vehicle. You will drive straight forward and back your vehicle into that space without striking the side or rear boundaries marked by cones. You must place your vehicle completely into the space. (See Figure 12.3)

### **12.2.4 – Parallel Park (Driver Side)**

You may be asked to park in a parallel parking space that is on your left. You are to drive past the parking space and back into it bringing the rear of your vehicle as close as possible to the rear of the space without crossing side or rear boundaries marked by cones. You are required to get your vehicle completely into the space. (See Figure 12.4)

### **12.2.5 – Parallel Park (Conventional)**

You may be asked to park in a parallel parking space that is on your right. You are to drive past the parking space and back into it bringing the rear of your vehicle as close as possible to the rear of the space without crossing side or rear boundaries marked by cones. You are required to get your vehicle completely into the space. (See Figure 12.5)

### **12.2.6 – Alley Dock**

You may be asked to sight-side back your vehicle into an alley, bringing the rear of your vehicle as close as possible to the rear of the alley without going beyond the exercise boundary marked by a line or row of cones. You are required to get your vehicle completely into the space with your entire vehicle straight with the alley. (See Figure 12.6)

## **13.1 – How You Will Be Tested**

### **13.1.1 – Turns**

You have been asked to make a turn:

Check traffic in all directions.

Use turn signals and safely get into the lane needed for the turn.

As you approach the turn:

Use turn signals to warn other of your turn.

Slow down smoothly, change gears as needed to keep power, but do not coast unsafely. Unsafe coasting occurs when your vehicle is out of gear (clutch depressed or gearshift in neutral) for more than the length of your vehicle.

If you must stop before making the turn:

Come to a smooth stop without skidding.

Come to a complete stop behind the stop line, crosswalk, or stop sign.

If stopping behind another vehicle, stop where you can see the rear tires on the vehicle ahead of you (safe gap).

Do not let your vehicle roll.

Keep the front wheels aimed straight ahead.

When ready to turn:

Check traffic in all directions.

Keep both hands on the steering wheel during the turn.

Do not change gears during the turn.

Keep checking your mirror to make sure the vehicle does not hit anything on the inside of the turn.

Vehicle should not move into oncoming traffic.

Vehicle should finish turn in correct lane.

After turn:

Make sure turn signal is off.

Get up to speed of traffic, use turn signal, and move into right-most lane when safe to do so (if not already there).

Check mirrors and traffic.

### **13.1.6 – Stop/Start**

For this maneuver, you will be asked to pull your vehicle over to the side of the road and stop as if you were going to get out and check something on your vehicle. You must check traffic thoroughly in all directions and move to the right-most lane or shoulder of road.

As you prepare for the stop:

Check traffic.

Activate your right turn signal.

Decelerate smoothly, brake evenly, change gears as necessary.

Bring your vehicle to a full stop without coasting.

Once stopped:

Vehicle must be parallel to the curb or shoulder of the road and safely out of the traffic flow.

Vehicle should not be blocking driveways, fire hydrants, intersections, signs, etc.

Cancel your turn signal.

Activate your four-way emergency flashers.

Apply the parking brake.

Move the gear shift to neutral or park.

Remove your feet from the brake and clutch pedals.

When instructed to resume:

Check traffic and your mirrors thoroughly in all directions.

Turn off your four-way flashers.

Activate the left turn signal.

When the traffic permits, you should release the parking brake and pull straight ahead.

Do not turn the wheel before your vehicle moves. Check traffic from all directions, especially to the left.

Steer and accelerate smoothly into the proper lane when safe to do so.

Once your vehicle is back into the flow of traffic, cancel your left turn signal.

### ***13.1.8 – Railroad Crossing***

**Before** reaching the crossing, all commercial drivers should:

Decelerate, brake smoothly, and shift gears as necessary.

Look and listen for the presence of trains.

Check traffic in all directions.

**Do not** stop, change gears, pass another vehicle, or change lanes while any part of your vehicle is in the crossing.

If you are driving a bus, a school bus, or a vehicle displaying placards, you should be prepared to observe the following procedures at every railroad crossing (unless the crossing is exempt):

As the vehicle approaches a railroad crossing, activate the four-way flashers.

Stop the vehicle within 50 feet but not less than 15 feet from the nearest rail.

Listen and look in both directions along the track for an approaching train and for signals indicating the approach of a train. If operating a bus, you may also be required to open the window and door prior to crossing tracks.

Keep hands on the steering wheel as the vehicle crosses the tracks.

Do not stop, change gears, or change lanes while any part of your vehicle is proceeding across the tracks.

Four-way flashers should be deactivated after the vehicle crosses the tracks.

Continue to check mirrors and traffic.

Not all driving road test routes will have a railroad crossing. You may be asked to explain and demonstrate to proper railroad crossing procedures to the examiner at a simulated location.

## APPENDIX A:

### RECOMMENDED TOOLS AND EQUIPMENT

#### Capitalized Items

1. Computers with CD/DVD capabilities (1 per student)
2. Conventional tractors - 3 axle (1 per 4 students)
3. Drop deck trailer (1)
4. Dry van trailer – 53 ft x 102 in. (1)
5. Dummy load, palletized; 35,000 lb, minimum (1)
6. Flat bed trailer – 48 ft x 102 in. (spread axle) (1)
7. Forklift, 6,000 lb, rubber tires (1)
8. Laptop computer with wireless/satellite Internet capabilities (1)
9. Loading dock (1)
10. Portable hot water, high pressure washer (1)
11. Refrigerated trailer – 48 ft x 102 in. (1)
12. Simulators, driving and shifting accessories (2)
13. Single van trailers, 28 ft, with converter dolly (doubles) (2)
14. Electronic log book (1)
15. Single axle scale (1)

#### Non-Capitalized Items

1. Orange barrels, plastic (10)
2. Orange traffic cones, 18 in., plastic (50)
3. Pallet jacks (2)
4. Chock blocks (2 per truck)
5. Motor Carrier Road Atlas (1 per student)
6. Printers (2)
7. Dust collection system for shop (1)

### RECOMMENDED INSTRUCTIONAL AIDS

It is recommended that instructors have access to the following items:

1. Cart, AV (for data projector) (1)
2. Cart, AV (for TV-VCR/CD/DVD) (1)
3. CDL practice test software (1 per computer)
4. Computer and printer (1)
5. Data projector (1)
6. Internet access (1 per computer)
7. Instructional software (1 per computer)
8. Mapping/mileage software (1 per computer)
9. TV-VCR/DVD (1)

## APPENDIX B: CURRICULUM DEFINITIONS AND TERMS

- Course Name – A common name that will be used by all community colleges in reporting students
- Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students
- Classification – Courses may be classified as the following:
  - Career Certificate Required Course – A required course for all students completing a career certificate.
  - Technical Certificate Required Course – A required course for all students completing a technical certificate.
  - Technical Elective – Elective courses that are available for colleges to offer to students.
- Description – A short narrative that includes the major purpose(s) of the course
- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course
- Corequisites – A listing of courses that may be taken while enrolled in the course
- Student Learning Outcomes – A listing of the student outcomes (major concepts and performances) that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
  - Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
  - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
  - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed or revised
  - Activities that include integration of academic and career–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary career–technical programs
  - Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas
- Sequencing of the course within a program is left to the discretion of the local college. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors. Program must include a minimum of 15 semester hours of General Education Core Courses. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester. Each community college specifies the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college.

- In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:
  - Adding new student learning outcomes to complement the existing competencies and suggested objectives in the program framework
  - Revising or extending the student learning outcomes
  - Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change)

Appendix C: COURSE CROSSWALK

<p style="text-align: center;"><b>COURSE CROSSWALK</b>  <b>Commercial Truck Driving (CIP: 49.0205)</b></p>					
<p style="text-align: center;"><i>Note: Courses that have been added or changed in the 2018 curriculum are highlighted.</i></p>					
Existing			Revised		
2011 MS Curriculum Framework			2018 MS Curriculum Framework		
Course Number	Course Title	Hours	Course Number	Course Title	Hours
DTV 1114-6	Commercial Truck Driving I	4-6	DTV 1114-6	Commercial Truck Driving I	4-6
DTV 1124-6	Commercial Truck Driving II	4-6	DTV 1124-6	Commercial Truck Driving II	4-6
DTV 1137	Commercial Truck Driving Internship	7	DTV 1137	Commercial Truck Driving Internship	7
			DTV1212	Commercial Truck Driver Refresher Course	2



APPENDIX D: RECOMMENDED TEXTBOOK LIST

<b>Recommended Commercial Truck Driving Text Book List</b> <b>CIP: 49.0205-Truck and Bus Driver/Commercial Vehicle Operator and Instruction</b>		
<b>Book Title</b>	<b>Author (s)</b>	<b>ISBN</b>
Tractor- Trailer Driver Training Manuel 3 <sup>rd</sup> Edition	J.J. Keller & Associates, Inc.	13:978-1-68008-047-6
Delmar's Tractor- Trailer Truck Driver Training 4 <sup>th</sup> Edition	Alice Adams	13:978-1-111-03648-5 10:1-111-03648-9