

Texas Driver Education Classroom and In-car Instruction Model Curriculum

Module Two

Texas Driver Responsibilities:

Preparing to Operate a Vehicle

- **DRIVER PREPARATION PROCEDURES**
- **IDENTIFYING VEHICLE CONTROL DEVICES**
- **OPERATING VEHICLE CONTROL DEVICES**
- **VEHICLE BALANCE CONSIDERATIONS**
- **STANDARD VEHICLE REFERENCE POINTS**

GRADE HS

Module Two Introduction

Module Two—Texas Driving Responsibilities: Preparing to Operate a Vehicle. The student recognizes the necessity of making routine vehicle checks and adjustments prior to and after entering the vehicle; identifies and responds appropriately to alert symbols, warning symbols, vehicle control devices, and safety devices; understands and controls vehicle balance and vehicle operating space; and appropriately applies the techniques of vehicle reference points to establish roadway position and vehicle placement.

NOTE: TEA rules require that students without a valid driver's license or instruction permit in his/her possession shall not receive behind-the-wheel instruction no matter where the instruction is provided.

Topic 1 - Driver Preparation Procedures. The student utilizes basic procedures and readiness techniques to enter, start, or secure the vehicle and performs basic vehicle maintenance checks.

Topic 2 - Identifying Vehicle Control Devices. The student recognizes and understands the function and operation of each vehicular alert or warning symbol, control device, information device, and comfort system.

Topic 3 - Operating Vehicle Control Devices. The student demonstrates proper steering, braking, and acceleration techniques and is capable of operating the vehicular systems and devices while seated in the driver seat.

Topic 4 - Vehicle Balance Considerations. The student recognizes the effects of steering, braking, and acceleration inputs on the balance of a vehicle and demonstrates vehicular control utilizing vehicle balance techniques.

Topic 5 - Standard Vehicle Reference Points. The student utilizes standard vehicle reference points to determine and execute lane placement, stopping position, and turning maneuvers.

In-car Activities. The student utilizes a controlled risk environment to view vehicle information and safety, comfort, communication, and convenience devices. The student uses vehicle controls and demonstrates vehicle placement techniques using standard vehicle reference points. The student utilizes simulation techniques to support classroom and in-car activities.

Minimum Time Frames Module Two–3 Hours (Non-required)

Module Two	Recommended Instructional Objective	Recommended Time Frames (Min)		
		Noncredit	Multi-phase	Credit
CLASSROOM INSTRUCTION				
TOPIC 1–DRIVER PREPARATION PROCEDURES	YES	25	25	25
TOPIC 2–IDENTIFYING VEHICLE CONTROL DEVICES	YES	30	30	30
TOPIC 3–OPERATING VEHICLE CONTROL DEVICES	YES	55	55	55
TOPIC 4–VEHICLE BALANCE CONSIDERATIONS	YES	25	25	25
TOPIC 5–STANDARD VEHICLE REFERENCE POINTS	YES	30	30	30
INSTRUCTIONAL BREAKS	No	15	15	15
SUPPLEMENT–PARENT PARTICIPATION ACTIVITIES	No	55	55	55
IN-CAR INSTRUCTION (OPTION 1)				
BEHIND THE WHEEL INSTRUCTION/BREAK (2)	YES	60	60	60
OBSERVATION (TWICE)	YES	60	60	60
IN-CAR INSTRUCTION MULTIPHASE (OPTION 2)				
BEHIND THE WHEEL INSTRUCTION/BREAK (2)	YES	40	40	40
OBSERVATION (TWICE)	YES	80	80	80
SIMULATION/BREAK (2)	YES	120	120	120
PARENTAL INVOLVEMENT	No	60	60	60

Module Two Prerequisites:

- Qualifies for Texas Driver Learner's Permit

Topic Title: Driver Preparation Procedures

Topic 1 Time Frame:
25 minutes instructional time
0 minutes discretionary break time
6.5 Non-credit course (32 hrs)
6.5 Multiphase course (40 hrs)
6.5 Credit course (56 hrs/semester)
Module Two, Topic 1 is not a required program element.

Needed Resources	Instructor Activities	Time Frame
Transparencies T-2.0, T-2.1, T-2.2, T-2.3, T-2.4, T-2.5, T-2.6, T-2.7, T-2.8, T-2.9, and T-2.10.	. Review recommended Module Two Lesson Plans	15 minute (prior to lesson)
Fact Sheets F-2.1	. Review Introductory Video Segment	10 minutes (prior to lesson)
Student Worksheets W-2.1 and W-2.2	. Use Topic 1 Transparencies	20 minutes
Optional Video: "Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control"	T-2.0, "Introductory Transparency" T-2.1, "Pre-Drive Tasks" T-2.2, "Pre-Drive Tasks" T-2.3, "Pre-Drive Tasks" T-2.4, "Under the Hood Checks" T-2.5, "Driver Readiness Tasks" T-2.6, "Driver Readiness Tasks" T-2.7, "Starting Tasks" T-2.8, "Starting Tasks" T-2.9, "Securing Tasks" T-2.10, "Securing Tasks"	(1-2 minutes) (2-3 minutes) (2-3 minutes) (2-3 minutes) (2-5 minutes) (2-3 minutes) (2-3 minutes) (2-3 minutes) (2-3 minutes) (2-3 minutes) (2-3 minutes) (1-2 minutes)
"Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control" Parent/Teen Handbook	. Review Student Worksheet W-2.1, "Your License to Drive" W-2.2, "Under the Hood Checks"	(2-5 minutes) (2-5 minutes)
Module Assessment MA-2.1 Test	. Review Fact Sheets F-1.1, "Preventive Maintenance Checks"	5-10 minutes
Textbook Resources "Drive Right" Ch. 3 "Empower Yourself" pp. 1-15 "How to Drive" Ch. 5 "Handbook Plus" Ch. 2 "License to Drive" Ch. 5 "Responsible Driving" Ch. 6	. Review Assessment MA-2.1 "Preparing to Drive"	For instructor use or additional information
		10-15 minutes

GRADE: **HS** MODULE: **TWO** TOPIC: **1**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills

The student is expected to:

(A) describe and demonstrate pre-drive tasks;

The Instructor:

. Shows Transparency T-2.0, “Module Two Transparencies” to initiate a discussion about the topics associated with Module Two in Preparing to Operate a Vehicle.

. Distributes Worksheet W-2.1, “Driver Preparations” to students for completion during this section.

- Pre-Drive Tasks
- Driver Readiness Tasks
- Starting Tasks
- Securing Tasks

Worksheet W-2.1
“Driver
Preparations”

. Shows Transparency T-2.1, “Pre-Drive Tasks” to initiate discussion of pre-drive checks around the vehicle.

- Check around outside of vehicle
- Check for small children and pets

. Shows Transparency T-2.2, “Pre-Drive Tasks” to continue discussion of pre-drive checks around the vehicle.

- Store valuables in the trunk
- Approach driver’s door from front

Module Two Transparencies

Texas Driver Responsibilities:
Preparing to Operate a Vehicle

- Topic 1 Driver Preparation Procedures
- Topic 2 Identifying Vehicle Control Devices
- Topic 3 Operating Vehicle Control Devices
- Topic 4 Vehicle Balance Considerations
- Topic 5 Standard Vehicle Reference Points



T-2.0

Transparency T-2.0
Module Two Transparencies

Pre-Drive Tasks

■ Check around the outside of vehicle for:

- broken glass (windows, lights)
- body damage
- condition of tires
- fluid leaks
- direction front tires are turned
- which way will vehicle move when placed in gear?
- debris on the ground that could interfere with movement.



■ Check for small children or pets near vehicle.



T-2.1

Transparency T-2.1
Pre-Drive Tasks

Pre-Drive Tasks

■ Store valuables in trunk of vehicle

- books and book bags have less chance of slipping off seats
- the vehicle is a classroom with no room for
 - food, candy, and sodas
 - homework and inattention in the rear



■ When parked at the curb

- approach from front of car
- increase awareness of oncoming traffic
- approach driver’s door with key in hand



T-2.2

Transparency T-2.2
Pre-Drive Tasks

Driver Preparation Procedures**LESSON CONTENT (Instructor Support Information)**

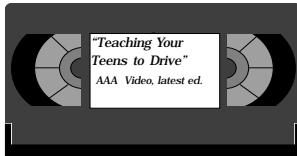
The driver preparation section involves all the tasks which lead up to putting the car in motion and securing the vehicle. The topics will review pre-drive, driver readiness, starting, and securing tasks. The novice will be introduced to the preventive maintenance responsibilities associated with using a vehicle. The driver will review the meaning of vehicle controls, locations, and appropriate use of each are described. The module concludes with a discussion of targeting skills and the relationship of the vehicle operating space to standard vehicle reference points. A mirroring technique is introduced that will eliminate mirror blind spots and reduce night glare in the side view mirrors.

Module Two, Topic 1 starts with pre-drive tasks and concludes with developing standard reference points. This topic prepares the novice for the first in-car lesson.

Pre-Drive Tasks. The driver will become familiar with the specific tasks of approaching the vehicle in a safe manner. The tasks are not numbered for sequence or importance. The student will develop a sequence or procedure on Worksheet W-2.1 with the guidance of the instructor.

Tasks include:

- check outside of vehicle;
- check for small children and pets;
- storing valuables;
- when parked at curb, approach driver's door from front;
- when parked in a parking lot, approach from rear;
- look into vehicle and check traffic flow;
- unlock and enter quickly.



"Teaching Your Teens To Drive" (1998) AAA Association Communication provides a video, student guide, and parent guide that has three lesson segments devoted to driver preparation, starting, and moving the vehicle. This resource adds to the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **1**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills**The student is expected to:**

(B) summarize basic maintenance checks performed on a vehicle using the vehicle owner's manual;

The Instructor:

. **Shows Transparency T-2.3, “Pre-Drive Checks” to continue** discussion of pre-drive checks around the vehicle.

- Approach door from rear in parking lot
- Check Vehicle and Traffic Flow
- Unlock and enter quickly

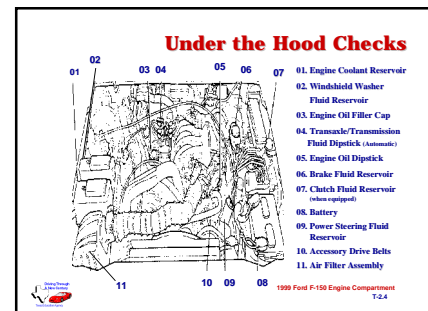


Transparency T-2.3
Pre-Drive Checks

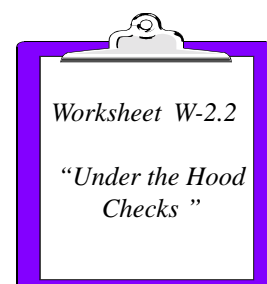
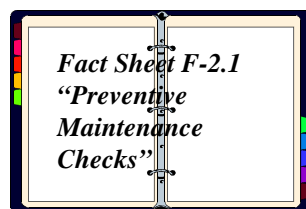
. **Shows Transparency T-2.4, “Under the Hood Checks” to initiate** discussion of basic maintenance self-checks under the hood.

. **Distributes Worksheet W-2.2, “Under the Hood Checks”** to students for completion during this section.

. **Reviews Fact Sheet F-2.1, “Preventive Maintenance Checks”** to provide some background information about basic maintenance requirements. The vehicle owner's manual is the recommended resource for maintenance information.



Transparency T-2.4
Under the Hood Checks



. **Asks the students to bring copies of family vehicle owner's manual** to class for comparison of information provided.

Driver Preparation Procedures**LESSON CONTENT (Instructor Support Information)**

Under the Hood Checks. Each driver should have an idea of his/her responsibility for vehicle maintenance. The owner's manual of any vehicle will provide information about periodic maintenance. Emphasize need for periodic maintenance to be completed by qualified service personnel. Many vehicles can be driven 100,000 miles before the first scheduled engine tune-up. However, it is important to remember that certain items require service on a more frequent schedule. For instance, Ford and General Motor Companies 1999 maintenance schedules for most of the passenger cars, minivans, light trucks, sport utilities, vans, and 4x4s extend over 150,000 miles and include the following examples:

Weekly self-checks:

Tire pressure options

- Maximum pressure listed on tire side-wall
- Vehicle manufacturer's recommendation for smooth ride

Tire tread wear or damage

- Tread wear bars showing
- Bald spots
- Cuffing (uneven wear on inside or outside tread areas)
- Bald center or side treads
- Cuts, stones or metal fragments

Safety and Communication Accessories

- Headlights, tail lights, and turn signals
- Emergency lights and markers
- Emergency kit
- Windshield wipers

Heating Ventilation and Air Conditioner (HVAC)

- Air flow
- Temperature

Fact Sheet F-2.1 provides additional information on periodic maintenance checks as does any new vehicle owner's manual. Use the owner's manual for the driver education vehicle available and ask students to bring in copies of their family vehicle owner's manual for comparisons.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **1**

TOPIC ACTIVITIES

TOPIC RESOURCES


Knowledge and Skills

The student is expected to:

(C) describe and demonstrate the driver readiness tasks;

The Instructor:

. Shows Transparency T-2.5, “Driver Readiness Tasks” to initiate discussion of driver seating position, restraints, and mirror adjustments made prior to starting and moving a motor vehicle.




Driver Readiness Tasks

- Security**
 - Check passengers for safe entry
 - Lock doors
 - Place key in appropriate location
- Seating Position**
 - Adjust for driver foot pedal and dead pedal position
 - Adjust for driver steering wheel reach and hand position
 - Adjust for driver visual needs

T-2.5

Transparency T-2.5
Driver Readiness Tasks

. Shows Transparency T-2.6, “Driver Readiness Tasks” to continue discussion of driver seating position, restraints, and mirror adjustments made prior to starting and moving a motor vehicle. Encourages students to list the procedures on Worksheet W-2.1.



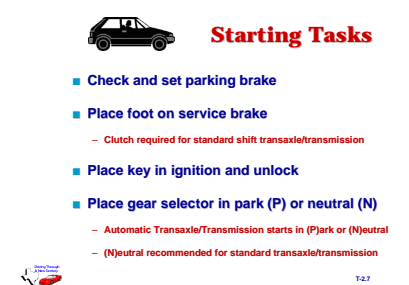
Driver Readiness Tasks

- Restraints**
 - Safety belt adjustment and appropriate air bag position
 - Head restraint position (rear and side protection)
- Mirrors**
 - Rear view mirror settings (200 feet to rear)
 - Side view mirror settings (15 degrees out will gain side views)
 - may be adjusted to view sides rather than rear view
 - rear view needed when inside mirror view is blocked to rear

T-2.6

Transparency T-2.6
Driver Readiness Tasks

. Shows Transparency T-2.7, “Starting Tasks” to initiate discussion of driver tasks necessary to start a motor vehicle. Encourage students to list the procedures on Worksheet W-2.1.



Starting Tasks

- Check and set parking brake**
- Place foot on service brake**
 - Clutch required for standard shift transaxle/transmission
- Place key in ignition and unlock**
- Place gear selector in park (P) or neutral (N)**
 - Automatic Transaxle/Transmission starts in (P)ark or (N)eutral
 - (N)eutral recommended for standard transaxle/transmission

T-2.7

Transparency T-2.7
Starting Tasks

Driver Preparation Procedures**LESSON CONTENT (Instructor Support Information)**

Driver Readiness Tasks (recommended for use in-car)

- Security needs
 - entry checks
 - locking doors
- Seating Position
 - feet position
 - arm position
 - hand position
 - visual needs
- Active Restraints
 - safety belts
 - head restraints
- Mirror Settings
 - rear mirror setting position
 - side mirror setting to reduce mirror blind zone and glare elimination (BGE)

Starting Tasks (recommended for use in-car)

- Check parking brake
- Foot on brake
- Key in ignition
- Gear in “Park or Neutral”
- Check for fuel injection or automatic choke
- Turn key to “on” position
- Check alert lights and gauges
- Turn key to start engine
- Adjust Heating, Ventilation, and Air Conditioning (HVAC)
- Set accessories (headlights or daylight running lights are recommended)
- Check for warning lights and gauges

It is recommended that the “Owner’s Manual” for the driver education vehicle be used as supplemental text materials in this session. The owner’s manual often has starting and securing procedures as an integral part of the getting to know your vehicle section.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker’s message.



GRADE: **HS** MODULE: **TWO** TOPIC: **1**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills**The student is expected to:**

- (D) describe and demonstrate the vehicle starting tasks; and
- (E) describe and demonstrate the vehicle securing tasks.

The Instructor:


. Shows Transparency T-2.8, “Starting Tasks” to continue discussion of driver tasks needed to start a motor vehicle and guides student in listing the procedures on Worksheet W-2.1.

. Shows Transparency T-2.9, “Securing Tasks” to initiate discussion of driver tasks needed to secure a motor vehicle and guides student in listing the procedures on Worksheet W-2.1.

Note: Current vehicle owner’s manuals require that the parking brake be set prior to placing the vehicle in (P)ark.

. Shows Transparency T-2.8, “Securing Tasks” to continue discussion of driver tasks needed to start a motor vehicle and guides student in listing the procedures on Worksheet W-2.1..

. Collects Worksheets W-2.1, Driver Preparation and W-2.2, Under the Hood Checks as assessment tools for this topic area. Additional evaluation and assessment questions for this topic are located on Module Assessment MA-2.1, Preparing To Drive.



Starting Tasks

- Check for choke/fuel injection needs
 - does vehicle need choke (carburetor) to start?
 - fuel injection (DO NOT PUSH ON ACCELERATOR BEFORE START)
- Turn ignition to “on” for alert/warning lights
 - airbag, seat belts, ABS, traction alerts, etc.
- Turn ignition to “start”
- Check alert lights and gauges
 - are all systems functioning and ready to use?
- Set needed accessories
 - heating, ventilation, and air conditioning (HVAC), wipers, lights, etc.

T-2.8

*Transparency T-2.8
Starting Tasks*




Securing Tasks

- Stop within a legal, secure parking space
 - parked within appropriate distances of fire hydrant, intersection, RR crossing, legal parking zone, etc.
 - keep foot on service brake
- Set parking brake
 - recommended in most new vehicle owner’s manuals
 - protects transaxle and constant velocity joints
- Place gear selector in (P)ark.
 - place in recommended gear for standard shift transaxle or transmission
- Turn off any vehicle accessories
 - are all systems functioning and ready to use for next time?

T-2.9

*Transparency T-2.9
Securing Tasks*



Securing Tasks

- Turn ignition switch to “off”
 - the engine should shut off at this time with all accessories off
- Lock ignition switch and remove key
 - required to remove the key in most vehicles
- Remove occupant restraints
 - Some shoulder restraints operate when the door is opened
- Check traffic and exit vehicle
 - check traffic flow to rear prior to opening the door
 - rear child safety door locks may need to be opened from the driver’s door
- Secure doors and windows
 - protects valuables and unauthorized entry by others

T-2.10

*Transparency T-2.10
Securing Tasks*

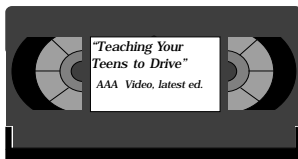
Driver Preparation Procedures**LESSON CONTENT (Instructor Support Information)****Starting Tasks (recommended for use in-car)**

- Check parking brake
- Foot on brake
- Key in ignition
- Gear in "Park or Neutral"
- Check for fuel injection or automatic choke
- Turn key to "on" position
- Check alert lights and gauges
- Turn key to start engine
- Adjust Heating, Ventilation, and Air Conditioning (HVAC)
- Set accessories
- Check for warning lights and gauges

It is recommended that the "Owner's Manual" for the driver education vehicle be used as supplemental text materials in this session. The owner's manual often has starting and securing procedures as an integral part of the getting to know your vehicle section.

Securing Tasks (recommended for use in-car)

- Stop within legal, secure parking space
- Set parking brake
- Place shift selector in (P)ark
- Turn off any accessories used
- Turn ignition switch to "off"
- "Lock" ignition and remove key
- Remove occupant restraints
- Check traffic prior to exiting vehicle
- Secure doors and windows



"Teaching Your Teens To Drive" (1998) AAA Association Communication provides a video, student guide, and parent guide that has three lesson segments devoted to driver preparation, starting, and moving the vehicle. This resource adds to the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



Module Two Topic 1 Resources**Module Two, Topic 1 Transparencies:**

- T-2.0, Module Two Transparencies
- T-2.1, Pre-Drive Tasks
- T-2.2, Pre-Drive Tasks
- T-2.3, Pre-Drive Tasks
- T-2.4, Under the Hood Checks
- T-2.5, Driver Readiness Tasks
- T-2.6, Driver Readiness Tasks
- T-2.7, Starting Tasks
- T-2.8, Starting Tasks
- T-2.9, Securing Tasks
- T-2.10, Securing Tasks

Worksheets

- W-2.1, Driver Preparations
- W-2.2, Under the Hood Checks

Fact Sheets

- F-2.1, Preventive Maintenance Checks

Assessment

- W-2.1, Driver Preparations
- W-2.2, Under the Hood Checks
- MA-2.1, Preparing To Drive

Optional Resources

“Teaching Your Teens To Drive.” (1996). AAA Association Communication, 1000 AAA Drive, Heathrow, FL 32746-5063, or your local AAA office, provides a video, student guide, and parent guide.

“Owners Manual” for the driver education vehicle.

Approved textbooks, videos, and laboratory manuals

- “Drive Right, Latest Edition”
- “Empower Yourself with Zone Control Driving, Latest Edition”
- “Handbook Plus, Texas Edition”
- “How to Drive, Latest Edition”
- “License To Drive, Latest Edition”
- “Responsible Driving, Latest Edition”

Module Two Prerequisites:

- Qualifies for Texas Driver's Permit

Topic Title: Identifying Vehicle Control Devices
Topic 2 Time Frame:

30 minutes instructional time (60)

0 minutes discretionary break time (5)

7.5 Non-credit course (32 hrs)

8.0 Multiphase course (40 hrs)

8.0 Credit course (56 hrs/semester)

Module Two, Topic 2 is not a required program element.

Needed Resources	Instructor Activities	Time Frame
Texas Curriculum Guide	. Review recommended Module Two, Topic 2 Lesson Plans	15 minute (prior to lesson)
Transparencies T-2.11, T-2.12, T-2.13, T-2.14, T-2.15, T-2.16, and T-2.17	. Review Module Two Topic 2 Transparencies T-2.11, "Alert/Warning Symbols and Controls" T-2.12, "Alert/Warning Symbols and Controls" T-2.13, "Control, Information, Comfort, and Safety Devices"	25 minutes (2-5 minutes) (2-5 minutes) (2-5 minutes)
Fact Sheets F-2.2	T-2.14, "Control, Information, Comfort, and Safety Devices" T-2.15, "Control, Information, Comfort, and Safety Devices" T-2.16, "Control, Information, Comfort, and Safety Devices" T-2.17, "Control, Information, Comfort, and Safety Devices"	(2-5 minutes) (2-5 minutes) (2-5 minutes) (2-5 minutes)
Optional Video: "Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control"		
"Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control" Parent/Teen Handbook	. Review Student Worksheet W-2.3, "Control and Information Devices" W-2.4, "Control, Information, Comfort, and Safety Devices" W-2.5, "Family Vehicle Instrument Cluster"	Module Two Topic 3 Assessments 2-5 minutes to collect
Module Assessment MA-2.1 Test	. Review Fact Sheets F-2.2, "Instrument Cluster of 1999 Ford F-150 Truck"	For instructor use or additional information
Textbook Resources "Drive Right" Ch. 3 "Empower Yourself" pp. 1-15 "How to Drive" Ch. 5 "Handbook Plus" Ch. 2 "License to Drive" Ch. 5 "Responsible Driving" Ch. 6	. Review Assessment W-2.3, "Control and Information Devices" W-2.4, "Control, Information, Comfort, and Safety Devices" W-2.5, "Family Vehicle Instrument Cluster" MA-2.1 "Preparing to Drive"	10-15 minutes at the end of Module Two

GRADE: **HS** MODULE: **TWO** TOPIC: **2**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills**The student is expected to:**

(A) recognize each vehicular alert or warning symbol and explain the symbol's function and operation;

nience, safety and communication devices with attention to their safe and proper use.

. **Shows Transparencies T-2.11 “Alert/Warning Symbols and Controls” to identify and continue a class discussion concerning the alert and warning symbols.**

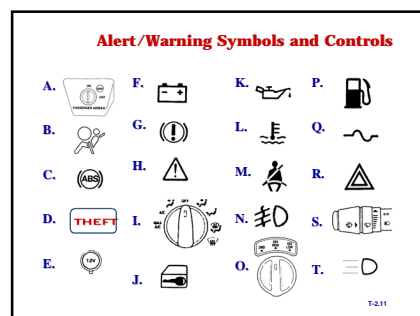
. **Uses Worksheet W-2.3, “Control and Information Devices” during classroom discussion to illustrate the various operational controls.**

. **Provides W-2.5, “Family Vehicle Instrument Cluster” for use as a parent involvement activity utilizing the owner’s manual for the family vehicle (or that of a friend) to compare the control and information devices and symbols included in the dashboard of the vehicle with the one illustrated on the worksheet.**

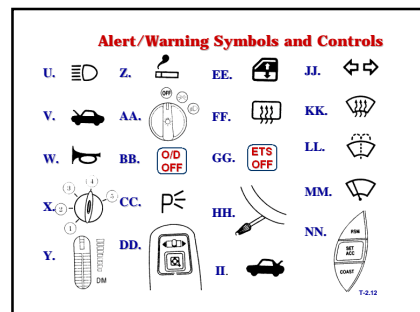
Note: W-2.5, “Family Vehicle Instrument Cluster” may be used as a Topic 3 assessment tool, which gives students a longer time period to complete the exercise.

The Instructor:

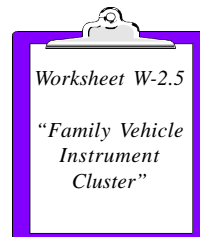
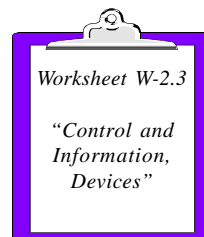
. **Shows Transparencies T-2.11 “Alert/Warning Symbols and Controls” to identify and initiate a class discussion concerning the alert and warning symbols found in motor vehicles that provide information on vehicular control, convenience,**



*Transparency T-2.11
Alert/Warning Symbols and Controls*



*Transparency T-2.12
Alert/Warning Symbols and Controls*



Identifying Vehicle Control Devices**LESSON CONTENT (Instructor Support Information)**

The purpose of this lesson is to:

- Assist students in recognizing the symbols used to identify the operation, safety, communication, and control devices found in motor vehicles
- Assist students to correctly respond to and operate the various safety, communication, and control devices found in motor vehicles

Transparency answers include:

A. Air Bag On/Off Switch	B. Air Bag Activation
C. Antilock Brake System Activation	D. Theft Deterrent System Activation
E. 12 Volt Extension Outlet	F. Battery Warning Light
G. Brake Warning Light	H. Safety Alert Symbol
I. Vent and Air Flow Control	J. Door Locks
K. Low Oil Pressure Warning Light	L. Temperature Indicator
M. Seat Belt Reminder	N. Fog Lamps
O. Drive Wheel Selector	P. Fuel Indicator
Q. Fuse / Fuse Box	R. Emergency Flashers
S. Turn Signal/Wipers Stalk	T. Daytime Running Lights
U. Headlights/High Beam Indicator	V. Hood Release
W. Horn	X. Fan Speed Indicator
Y. Interior Light Adjustment	Z. Lighter Indicator
AA. Exterior Lights	BB. Overdrive On/Off switch
CC. Parking Lamp Indicator	DD. Adjust Left/Right Side Mirror
EE. Power Window Controls	FF. Rear Defroster Indicator
GG. Electronic Traction System Control	HH. Steering Wheel Height Adjustment
II. Trunk Release	JJ. Left/Right Signal Indicator
KK. Front Windshield Defroster	LL. Windshield Washer
MM. Windshield Wipers	NN. Cruise Control Device

Use of the driver education vehicle owner's manual to illustrate specific differences recommended for this lesson activity.



“Teaching Your Teens To Drive” (1998) AAA Association Communication provides a video, student guide, and parent guide that have three lesson segments devoted to driver preparation, starting, and moving the vehicle. This resource adds to the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **2**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills

The student is expected to:

(B) recognize each vehicular information device and explain the devices function and operation;

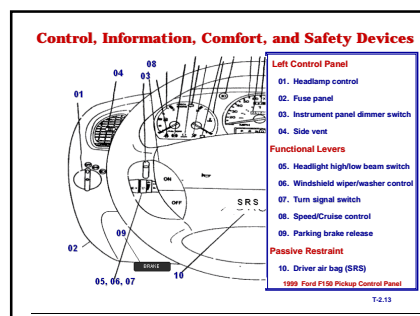
The Instructor:

. **Distributes Worksheet W-2.4, “Control, Information, Comfort, and Safety Devices”** and instructs student to use for note taking during this session.

Worksheet W-2.4

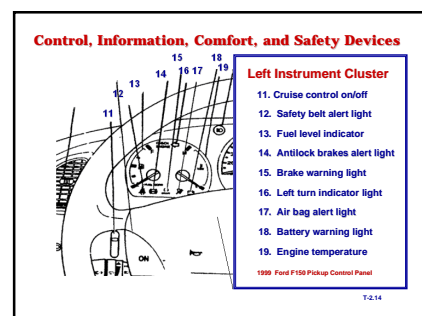
“Control,
Information,
Comfort, and
Safety Devices”

. **Shows Transparency T-2.13 “Control, Information, Comfort, and Safety Devices”** to identify the location and function of the various communication, comfort, information, and controls. The switches, dials, gauges, and levers confronting a driver are identified, and the instructor explains the need to be aware of the information, warnings, and control that they each provides.



Transparency T-2.13
Control, Information, Comfort, and
Safety Devices

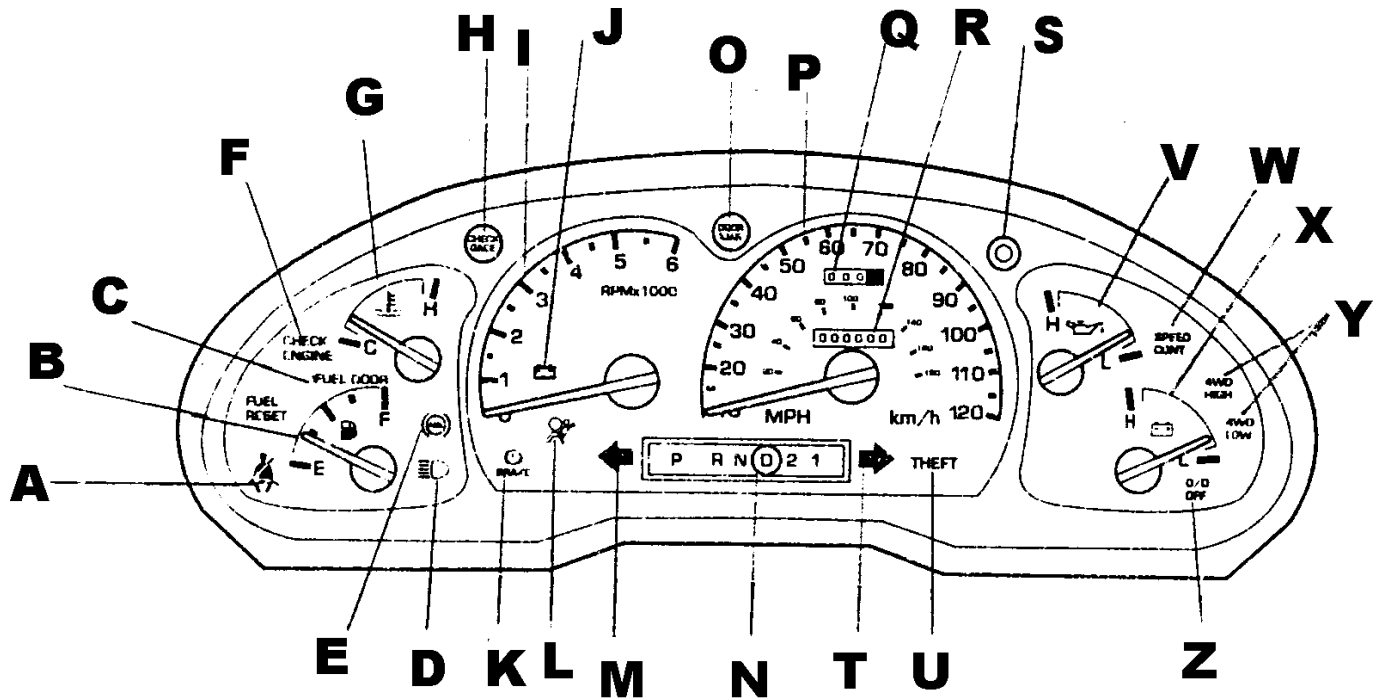
. **Shows Transparency T-2.14 “Control, Information, Comfort and Safety Devices”** to continue the discussion of the various communication, comfort, information, and controls on the left of the dash panel.



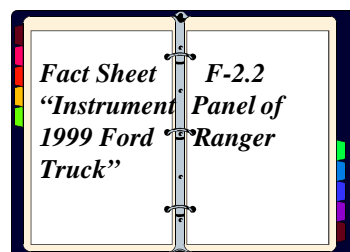
Transparency T-2.14
Control, Information, Comfort, and
Safety Devices

Identifying Vehicle Control Devices

LESSON CONTENT (Instructor Support Information)



Fact Sheet F-2.2, "Instrument Panel of 1999 Ford Ranger Truck" will provide answers to the symbols, controls, information devices, and safety devices located on the dash panel. The rest of this area is provided for use by the instructor for identifying any unusual warning or alert lights or symbols.



Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.

GRADE: **HS** MODULE: **TWO** TOPIC: **2**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills**The student is expected to:**

- (C) recognize each vehicular comfort system and explain the systems function and operation; and
- (D) recognize each vehicular safety and convenience device and explain the systems function and operation.

The Instructor:

. Shows Transparency T-2.15 “Control, Information, Comfort, and Safety Devices” to continue discussion of the location and function of the various communication, comfort, information, and control devices.

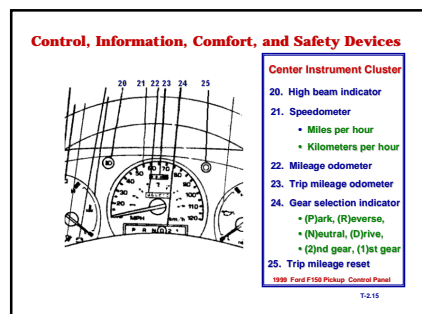
The switches, dials, gauges,

and levers confronting a driver are identified, and the need to be aware of the information, warnings, and control that they each provide is explained.

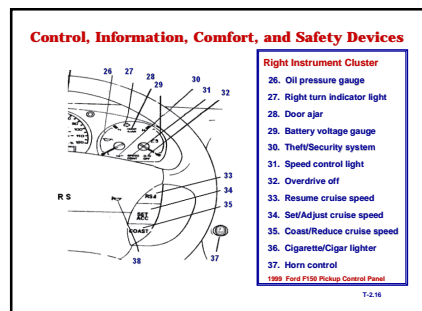
. Shows Transparency T-2.16 “Control, Information, Comfort, and Safety Devices” to continue discussion of the location and function of the various communication, comfort, information, and controls. The switches, dials, gauges, and levers confronting a driver are identified, and the need to be aware of the information, warnings, and control that they each provide is explained.

. Shows Transparency T-2.17 “Control, Information, Comfort, and Safety Devices” to continue discussion of the location and function of the various communication, comfort, information, and controls. The switches, dials, gauges, and levers confronting a driver are identified, and the need to be aware of the information, warnings, and control that they each provide is explained.

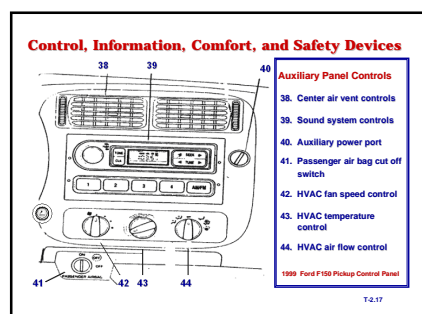
. Collects Worksheets W-2.3, W-2.4, and W-2.5 as assessment tools for this topic area. Additional evaluation and assessment questions for this topic are located in the Module Assessment MA-2.1, “Preparing To Drive.”



*Transparency T-2.15
Control, Information, Comfort, and
Safety Devices*



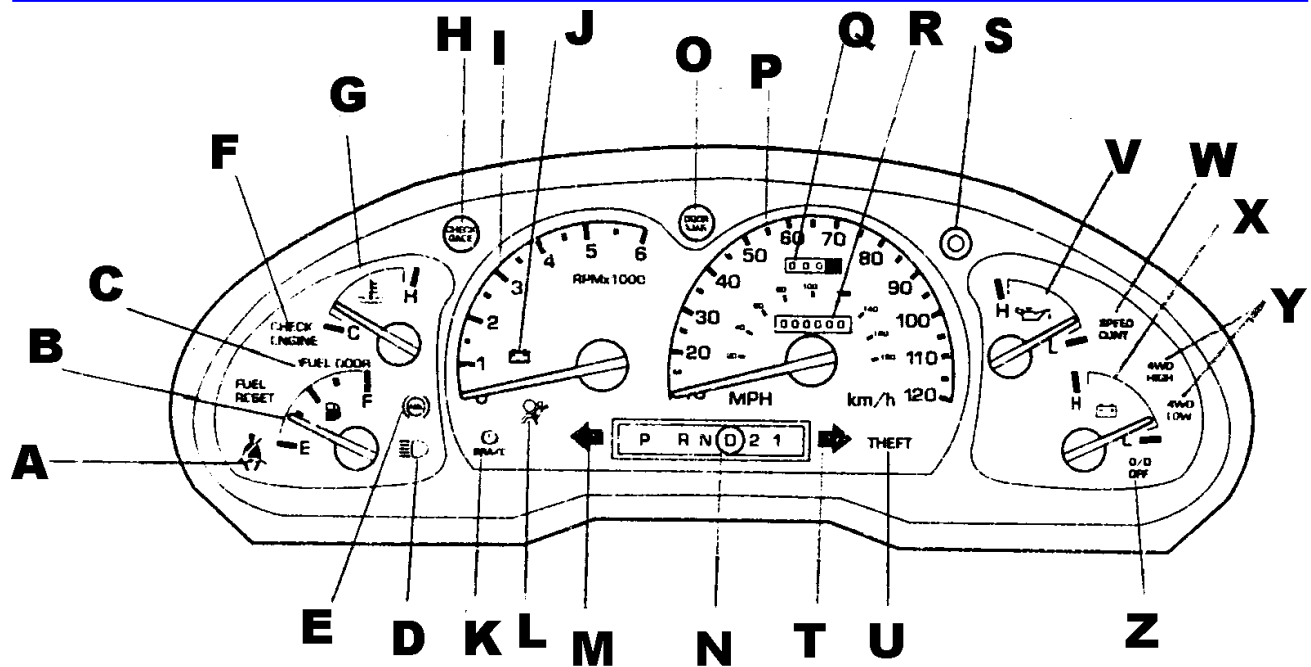
*Transparency T-2.16
Control, Information, Comfort, and
Safety Devices*



*Transparency T-2.17
Control, Information, Comfort, and
Safety Devices*

Identifying Vehicle Control Devices

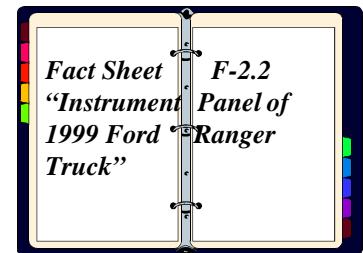
LESSON CONTENT (Instructor Support Information)



Fact Sheet F-2.2, "Instrument Panel of 1999 Ford Ranger Truck" provides answers to the symbols, controls, information devices, and safety devices located on the dash panel. The rest of this area is provided for use by the instructor for identifying any unusual warning or alert lights or symbols.

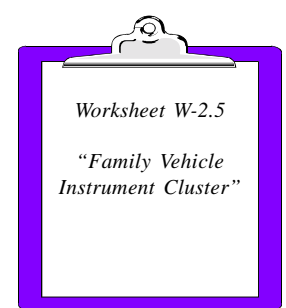
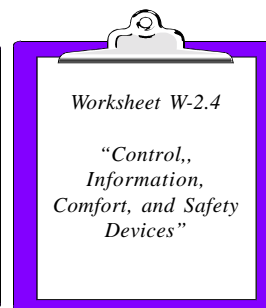
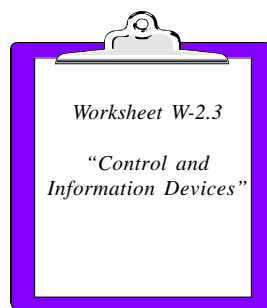
Outside Activity for 40 hour and 56 hour classroom would allow students to view under the hood items discussed in Topic 1 and dash panel symbols discussed in Topic 2. The outside activity would serve as a 30 minute classroom activity for this topic area.

The instructor will collect Worksheet W-2.3 "Control and Information Devices" Worksheet W-2.4 "Control, Information, Comfort, and Safety Devices" and Worksheet W-2.5 "Family Vehicle Instrument Cluster" and use as assessment tools for this session.



Worksheet W-2.5 "Family Vehicle Instrument Cluster" may be combined with W-2.6 in Topic 3 as an optional assessment item.

Additional questions appear in the Module Assessment, MA-2.1, "Preparing to Drive."



Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



Module Two Topic 2 Resources**Module Two, Topic 2 Transparencies:**

- T-2.11, "Alert/Warning Symbols and Controls"
- T-2.12, "Alert/Warning Symbols and Controls"
- T-2.13, "Control, Information, Comfort, and Safety Devices"
- T-2.14, "Control, Information, Comfort, and Safety Devices"
- T-2.15, "Control, Information, Comfort, and Safety Devices"
- T-2.16, "Control, Information, Comfort, and Safety Devices"
- T-2.17, "Control, Information, Comfort, and Safety Devices"

Worksheets

- W-2.3, "Control and Information Devices"
- W-2.4, "Control, Information, Comfort, and Safety Devices"
- W-2.5, "Family Vehicle Instrument Cluster"

Fact Sheets

- F-2.2, "Instrument Cluster of 1999 Ford F-150 Truck"

Assessment

- W-2.3, "Control and Information Devices"
- W-2.4, "Control, Information, Comfort, and Safety Devices"
- W-2.5, "Family Vehicle Instrument Cluster"
- MA-2.1 "Preparing to Drive"

Suggested Resources

"Teaching Your Teens To Drive." (1996). AAA Association Communication, 1000 AAA Drive, Heathrow, FL 32746-5063, or your local AAA office, provides a video, student guide, and parent guide.

"Owner's Manual" for the driver education vehicle.

Approved textbooks, videos, and laboratory manuals

- "Drive Right, Latest Edition"
- "Empower Yourself with Zone Control Driving, Latest Edition"
- "Handbook Plus, Texas Edition"
- "How to Drive, Latest Edition"
- "License To Drive, Latest Edition"
- "Responsible Driving, Latest Edition"

Module Two Prerequisites:

- Qualifies for Texas Driver's Permit

Topic Title: Operating Vehicle Control Devices
Topic 3 Time Frame:
55 minutes instructional time
5 minutes discretionary break time
8.5 Non-credit course (32 hrs)
9.0 Multiphase course (40 hrs)
9.0 Credit course (56 hrs/semester)
Module Two, Topic 3 is not a required program element.

Needed Resources	Instructor Activities	Time Frame
Textbook	. Review recommended Module Two, Topic 3 Lesson Plans	15 minute (prior to lesson)
Transparencies T-2.18, T-2.19, T-2.20, T-2.21, T-2.22, and T-2.23	. Review Module Two Topic 2 Transparencies T-2.18, "Operating Vehicle Control Devices" T-2.19, "Operating Vehicle Control Devices" T-2.20, "Operating Vehicle Control Devices" T-2.21, "Safety , Communication, and Convenience Devices" T-2.22, "Safety , Communication, and Convenience Devices" T-2.23, "Safety , Communication, and Convenience Devices"	50 minutes (5-8 minutes) (5-8 minutes) (5-8 minutes) (5-8 minutes) (5-8 minutes) (5-8 minutes)
Fact Sheet F-2.3		
Student Worksheets W-2.5 and W-2.6		
Module Assessment MA-2.1 Test	. Review Student Worksheet W-2.5, "Family Vehicle Instrument Cluster" W-2.6, "Family Vehicle Equipment"	Module Two Topic 2 Assessments 2-5 minutes to collect
Optional Video: "Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control"		
"Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control" Parent/Teen Handbook	. Review Fact Sheets F-2.3, "Operating Vehicle Control Devices"	For instructor use or additional information
Textbook Resources "Drive Right" Ch. 3 "Empower Yourself" pp. 1-15 "How to Drive" Ch. 5 "Handbook Plus" Ch. 2 "License to Drive" Ch. 5 "Responsible Driving" Ch. 6	. Review Assessment W-2.5, "Family Vehicle Instrument Cluster" W-2.6, "Family Vehicle Equipment" MA-2.1 "Preparing to Drive"	10-15 minutes at the end of Module Two

GRADE: **HS** MODULE: **TWO** TOPIC: **3**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills**The student is expected to:**

- (A) position the steering wheel and driver's seat to provide for the operation of the vehicular control devices;
- (B) explain the function and operation of the steering wheel, accelerator, and brake pedal;


The Instructor:

. Shows Transparency T-2.18, “Operating Vehicle Control Devices” to initiate discussion of the operation of control devices.

- . Steering Position
- . Moving Wheel
- . Adjusting Wheel Height and Angle

Operating Vehicle Control Devices

- **Maintain Steering Position and Control**
 - Adjusting information devices
 - Adjusting comfort devices
 - Adjusting control devices
- **Move Steering Wheel Toward Path of Travel**
 - Moving forward
 - Moving backward
- **Adjust Wheel Height/Angle**
 - Airbag deployment
 - Hand position
 - Wheel movement



T-2.18


*Transparency T-2.18
Operating Vehicle Control Devices*

. Shows Transparency T-2.19, “Operating Vehicle Control, Devices” to continue discussion of the operation of control devices.

- . Accelerator Pedal Use
- . Brake Pedal Use

Operating Vehicle Control Devices

- **Accelerator Pedal Use**
 - Used to stabilize, increase, and decrease speed
 - The driver can
 - cover accelerator, progressive acceleration, thrust acceleration, lift-off accelerator
- **Brake Pedal Use**
 - Used to stabilize, decrease, and increase speed
 - The driver can
 - cover brake, trail brake, controlled squeeze braking, threshold brake, lock brake, ABS, jab (stab) brake, lift-off brake



T-2.19


*Transparency T-2.19
Operating Vehicle Control Devices*

. Shows Transparency T-2.20, “Operating Vehicle Control Devices” to continue discussion of the operation of control devices

- . Gear Selection
- . Location and Use of Parking Brake
- . Cruise and Speed Control
- . Ignition Switch

Operating Vehicle Control Devices

- **Gear Selector Lever Use**
 - Transaxle or Transmission type
 - (O)verdrive and (D)rive gear use
- **Location of Parking Brake and Use**
 - Texas Traffic Law requires use when leaving vehicle
 - Owner's manual requests use before placing into (P)ark
- **Cruise / Speed Control**
 - Purpose of cruise control
 - Danger of cruise control
- **Ignition Switch**
 - Location
 - Function



T-2.20

*Transparency T-2.20
Operating Vehicle Control Devices*

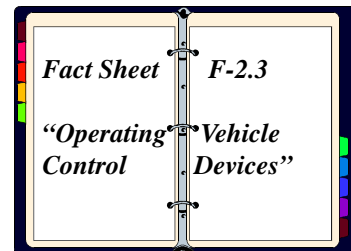
Operating Vehicle Control Devices**LESSON CONTENT (Instructor Support Information)**

It is important that students know the location, purpose, and operation of the various controls, safety, comfort, and convenience devices when driving a motor vehicle. However, it is essential that they understand the increased risk associated with directing their attention to a task other than driving, i.e., talking on a cell phone, talking to friends in the car, or tuning a radio. Any of these activities tend to lower one's level of alertness directed to driving and, typically, has an adverse effect on steering.

Operating Vehicle Control Devices

- Steering
- Steering Wheel Adjustment
- Gear Selector Lever
- Parking Brake
- Cruise/Speed Control
- Ignition Switch
- Accelerator Pedal
- Brake Pedal

Fact Sheet F-2.3, "Operating Control Devices," provides information to support each of the issues listed on the transparencies.



"Teaching Your Teens To Drive" (1998) AAA Association Communication provides a video, student guide, and parent guide that has three lesson segments devoted to driver preparation, starting, and moving the vehicle. It is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **3**

TOPIC ACTIVITIES

TOPIC RESOURCES

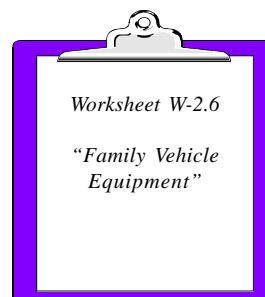
Knowledge and Skills

The student is expected to:

- (C) explain the function and operation of the gear selector lever, parking brake, cruise control, and ignition switch

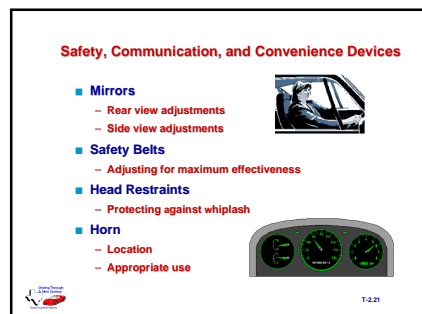
The Instructor:

- . Provides Worksheets W-2.6 “Family Vehicle Equipment” as an assessment tool for this topic area.



- . Shows Transparency T-2.21, “Safety, Communication, and Convenience Devices,” to initiate discussion of the operation of safety, communication, and convenience control devices.

- . Rear View and Side View Mirrors
- . Safety Belts
- . Head Restraints
- . Horn Location and Use



*Transparency T-2.21
Safety, Communication, and
Convenience Devices*

- . Shows Transparency T-2.22, “Safety, Communication, and Convenience Devices,” to continue discussion of the operation of control devices.

- . Turn Signal and Lane Changer Device
- . Door Locks
- . Hazard Flashers
- . Windshield Wipers and Washer
- . Headlight and Daylight Running Lights



*Transparency T-2.22
Safety, Communication, and
Convenience Devices*

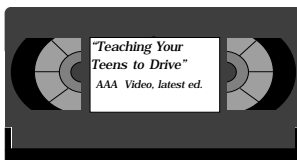
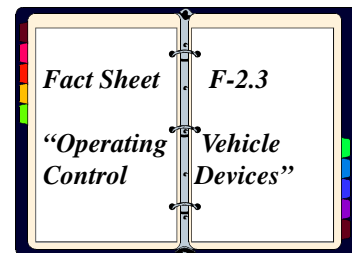
Operating Vehicle Control Devices

LESSON CONTENT (Instructor Support Information)

Safety, Communication, Comfort, and Convenience Devices

- Mirrors
- Safety Belts
- Head Restraint
- Horn
- Turn Signal Lever
- Door Locks
- Hazard Flasher
- Windshield Wipers and Washers
- Headlights

Fact Sheet F-2.3, “Operating Control Devices,” provides information to support each of the issues listed on the transparencies.



“Teaching Your Teens To Drive” (1998) AAA Association Communication provides a video, student guide, and parent guide that has three lesson segments devoted to driver preparation, starting, and moving the vehicle. It is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker’s message.



GRADE: **HS** MODULE: **TWO** TOPIC: **3**

TOPIC ACTIVITIES

TOPIC RESOURCES

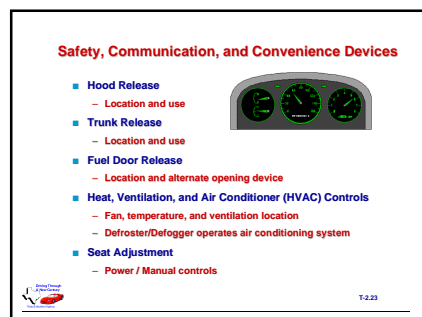
Knowledge and Skills**The student is expected to:**

(D) operate the safety, communication and convenience devices while seated in the driver's seat.

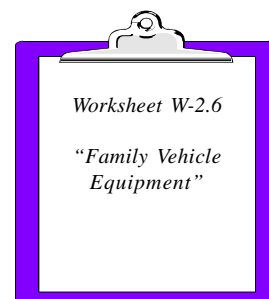
The Instructor:

- . Shows Transparency T-2.23, “**Safety, Communications, and Convenience Devices**” to continue discussion of the operation of control devices
- . Hood Release
- . Trunk Release
- . Heater, Ventilation, and Air Conditioner (HVAC)
- . Seat Adjustments

. Collects optional Worksheet W-2.5, “**Family Vehicle Instrument Cluster**” and Worksheet W-2.6, “**Family Vehicle Equipment**” as assessment tools for this topic area. Additional evaluation and assessment questions for this topic are located in the Module Assessment MA-2.1, “Preparing To Drive.”



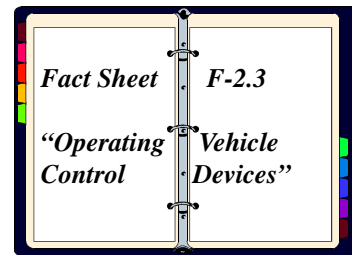
*Transparency T-2.23
Safety, Communication, and
Convenience Devices*



Operating Vehicle Control Devices**LESSON CONTENT (Instructor Support Information)****Safety, Communication, Comfort, and Convenience Devices**

- Hood Release
- Trunk Release
- Heater, Ventilation, and Air Conditioner (HVAC)
- Seat Adjustment Controls

Fact Sheet F-2.3, “Operating Control Devices,” provides information to support each of the issues listed on the transparencies.



“Teaching Your Teens To Drive” (1998) AAA Association Communication provides a video, student guide, and parent guide that has three lesson segments devoted to driver preparation, starting, and moving the vehicle. It is a resource that supplements the information presented in this segment.

The instructor is reminded to collect optional Worksheet W-2.5, “Family Vehicle Instrument Cluster” and Worksheet W-2.6, “Family Vehicle Equipment” as assessment tools for this topic area. Questions concerning this topic are located in the Module Assessment MA-2.1, “Preparing To Drive.”

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker’s message.



Module Two Topic 3 Resources

Module Two, Topic 3 Transparencies:

- T-2.18, "Operating Vehicle Control Devices"
- T-2.19, "Operating Vehicle Control Devices"
- T-2.20, "Operating Vehicle Control Devices"
- T-2.21, "Safety, Communication, and Convenience Devices"
- T-2.22, "Safety, Communication, and Convenience Devices"
- T-2.23, "Safety, Communication, and Convenience Devices"

Worksheets

- W-2.5, "Family Vehicle Instrument Cluster"
- W-2.6, "Family Vehicle Equipment"

Fact Sheets

- F-2.3, "Operating Vehicle Control Devices"

Assessments

- W-2.5, "Family Vehicle Instrument Cluster" (Optional use)
- W-2.6, "Family Vehicle Equipment"

MA-2.1 "Preparing to Drive"

Suggested Resources

"Teaching Your Teens To Drive." (1996). AAA Association Communication, 1000 AAA Drive, Heathrow, FL 32746-5063, or your local AAA office, provides a video, student guide, and parent guide.

"Owner's Manual" for the driver education vehicle.

Approved textbooks, videos, and laboratory manuals

- "Drive Right, Latest Edition"
- "Empower Yourself with Zone Control Driving, Latest Edition"
- "Handbook Plus, Texas Edition"
- "How to Drive, Latest Edition"
- "License To Drive, Latest Edition"
- "Responsible Driving, Latest Edition"

Module Two Prerequisites:

- Qualifies for Texas Driver's Permit

Topic Title: Vehicle Balance Considerations
Topic 4 Time Frame:

25 minutes instructional time

5 minutes discretionary break time

9.0 Non-credit course (32 hrs)
9.5 Multiphase course (40 hrs)
9.5 Credit course (56 hrs/semester)
Module Two, Topic 4 is not a required program element.

Needed Resources	Instructor Activities	Time Frame
Textbook	. Review recommended Module Two, Topic 4 Lesson Plans	15 minute (prior to lesson)
Transparencies T-2.24, T-2.25, T-2.26, T-2.27, T-2.28, T-2.29, T-2.30, and T-2.31	. Review Module Two Topic 2 Transparencies T-2.24, "Controlling Vehicle Balance" T-2.25, "Controlling Vehicle Balance" T-2.26, "Controlling Vehicle Balance" T-2.27, "Vehicle Control" T-2.28, "Vehicle Control" T-2.29, "Vehicle Control" T-2.30, "Vehicle Control" T-2.31, "Vehicle Control"	25 minutes (3-5 minutes) (3-5 minutes) (3-5 minutes) (3-5 minutes) (3-5 minutes) (3-5 minutes) (3-5 minutes)
Fact Sheet F-2.4		
Worksheet W-2.7		
Module Assessment MA-2.1 Test		
Optional Videos: "In Control: Technical Aspects of the Vehicle" "Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control" "Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control" Parent/Teen Handbook	. Review Fact Sheets F-2.4, "Understanding Vehicle Balance Concepts" . Review Worksheet W-2.7 "Vehicle Balance Basics" . Review Assessment W-2.7 "Vehicle Balance Basics" MA-2.1 "Preparing to Drive"	For instructor use or additional information Worksheet during session 10-15 minutes at the end of Module Two
Textbook Resources "Drive To Survive" "Survival Behind the Wheel" "How to Drive" "Handbook Plus" "Going Faster" "Bondurant Behind the Wheel"	. Review Optional Video "In Control: Technical Aspects of the Vehicle"	10-15 minutes (prior to lesson)

GRADE: **HS** MODULE: **TWO** TOPIC: **4**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills**The student is expected to:**

- (A) define and explain vehicle balance;
- (B) describe how seating position affects the ability to control vehicle balance;
- (C) describe how steering, braking, and acceleration each affect vehicle balance and list ways to compensate to maintain vehicle balance under the forces of these conditions;

The Instructor:

. Shows Transparency T-2.24, “Controlling Vehicle Balance,” to initiate discussion about vehicle balance concepts and how balance is affected by driver seating position, steering input, acceleration, and brake application

. Provides Worksheet W-2.7, “Vehicle Balance Basics,” as a Topic 4 assessment tool and classroom activity.

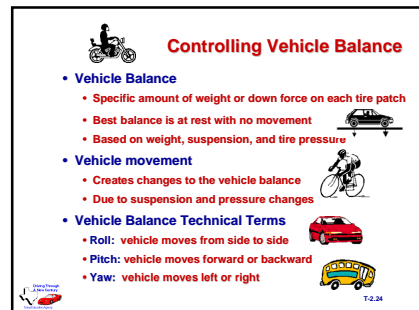
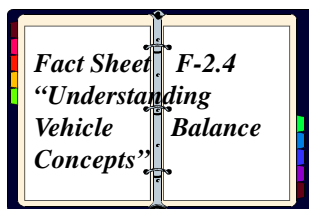
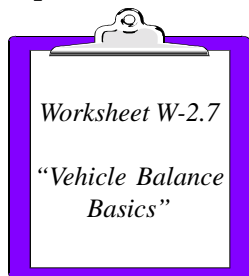
. Uses Transparency T-2.25 “Controlling Vehicle Balance” to continue discussion about vehicle balance concepts

- . Steering Wheel Balance
- . Changes in Steering Ratios
- . Precision Steering, Braking, and Acceleration

. Shows Transparency T-2.26, “Controlling Vehicle Balance” to continue discussion about vehicle balance concepts

- . Seating Position
- . Changing Balance from Side to Side (Roll)

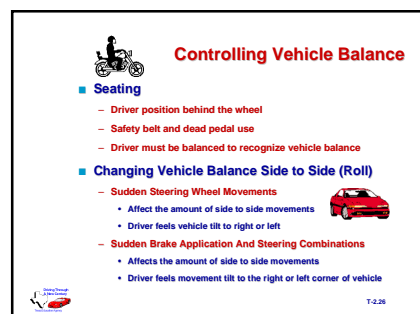
. Refers to Fact Sheet F-2.4, “Understanding Vehicle Balance Concepts, to support discussion topics and concepts.



Transparency T-2.24
Controlling Vehicle Balance



Transparency T-2.25
Controlling Vehicle Balance



Transparency T-2.26
Controlling Vehicle Balance

Vehicle Balance Considerations**LESSON CONTENT (Instructor Support Information)**

Over 50 percent of occupant fatalities occur as a result of single vehicle crashes. Basically the vehicle runs off the roadway and strikes a fixed object or overturns. Almost without exception, these crashes involve improper steering or braking or a combination of the two actions.

The purpose of this section is to introduce students to the concept of vehicle balance as it relates to vehicle control and how balance is achieved and maintained.

Vehicle Balance

Vehicle suspension balance refers to the distribution of the weight of the vehicle on the chassis or frame. A transfer of weight from one point of the vehicle to another is caused by acceleration, deceleration, cornering, or a combination of these actions.

Maintaining Vehicle Balance

- Seating Position - in order to establish vehicle balance and improve ability to see, drivers will sit in a comfortable, erect position squarely behind the steering wheel.
- Changing Vehicle Load - Side to Side
- Changing Vehicle Load - Front to Rear
- Changing Vehicle Load - Rear to Front

Steering Wheel Control

- Hand Position
- Steering Techniques
- Hand To Hand Steering
- Hand Over Hand Steering
- Limited Evasive Steering
- One Hand Steering

Fact Sheet F-2.4, "Understanding Vehicle Balance Concepts," provides information to support each of the issues listed on the transparencies.



"In Control: Vehicle Technical Aspects." (1995). J.B. Heimann Production provides information from Sam Posey and Sandy Stevens about seating position, aspects of pitch, roll, vehicle understeer, vehicle oversteer, and antilock brakes. It is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **4**

TOPIC ACTIVITIES

TOPIC RESOURCES

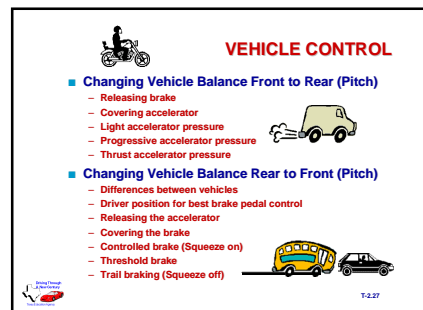
Knowledge and Skills**The student is expected to:**

(D) describe how changes in vehicle balance from side to side, front to rear, and rear to front affect vehicle balance;

(E) describe the correct hand positions and steering techniques recommended when performing driving maneuvers;

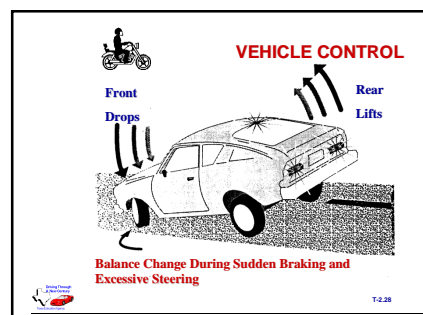
The Instructor:

. Uses Transparency T-2.27 “Vehicle Control” to illustrate and discuss how sudden steering or improper combinations of braking and steering affects vehicle balance at any speed.



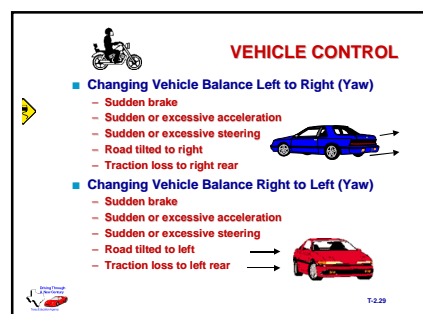
Transparency T-2.27
Vehicle Control

. Shows Transparency T-2.28 “Vehicle Control” to discuss load transfer during braking and cornering and steering at dangerously high speeds or improper combination of braking and steering.



Transparency T-2.28
Vehicle Control

. Shows Transparency T-2.29 “Vehicle Control” to discuss load transfer during rear end swings to the right or left causing a yaw (spinning) condition.



Transparency T-2.29
Vehicle Control

Vehicle Balance Considerations

LESSON CONTENT (Instructor Support Information)

Maintaining Vehicle Balance

- Seating Position - in order to establish vehicle balance and improve ability to see, drivers will sit in a comfortable, erect position squarely behind the steering wheel.
- Changing Vehicle Load - Side to Side
- Changing Vehicle Load - Front to Rear
- Changing Vehicle Load - Rear to Front

Steering Wheel Control

- Hand Position
- Steering Techniques
- Hand To Hand Steering
- Hand Over Hand Steering
- Limited Evasive Steering
- One Hand Steering

Vehicle Movement and Rotation

- Pitch... vehicle movement to the front or to the rear
 - braking drops the front and lifts the rear
 - acceleration lifts the front and drops the rear
- Roll... vehicle movement to the left or right side
 - steering to the left makes vehicle roll to the right
 - steering to the right makes vehicle roll to the left
- Yaw... vehicle movement to the left or right around the center of gravity
 - loss of traction to rear tires causes vehicle to spin
 - sudden steering, sudden braking, or sudden acceleration may cause vehicle to spin around its center of gravity due to traction loss in rear

Modern Vehicle Technology Relates to Balance

- Sudden Braking Traction Loss is enhanced by **Antilock Braking Systems**.
- Sudden Acceleration Traction Loss is enhanced by **Traction Control Systems**.
- Sudden Steering Traction Loss is enhanced by **Vehicle Stability Systems**.
- The three vehicle balance (stability) control systems are designed to work to compliment driver behavior and aid when driver exceeds limitations of balance.



"In Control: Vehicle Technical Aspects." (1995). J.B. Heimann Production provides information from Sam Posey and Sandy Stevens about seating position, aspects of pitch, roll, vehicle understeer, vehicle oversteer, and antilock brakes. It is a resource that provides supplemental information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **4**

TOPIC ACTIVITIES

TOPIC RESOURCES

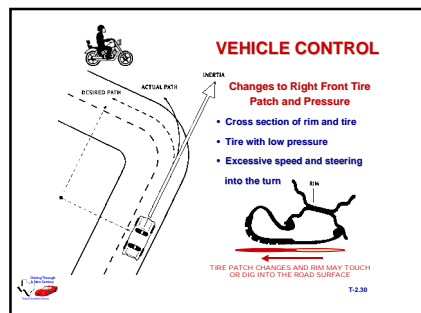
Knowledge and Skills**The student is expected to:**

(F) describe how changes in vehicle load (balance) from side to side, front to rear, and from rear to front affect vehicle performance; and

(G) describe positioning of the hands and steering techniques recommended when performing various driving maneuvers.

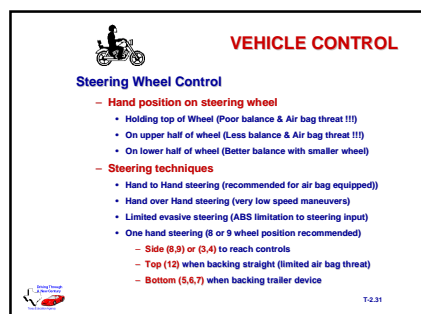
The Instructor:

. Shows Transparency T-2.30 “Vehicle Control” to discuss load transfer during braking and cornering and steering at dangerously high speeds or improper combination of braking and steering.



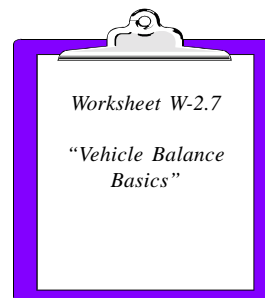
Transparency T-2.30
Vehicle Control

. Shows Transparency T-2.31 “Vehicle Control” to discuss using the steering wheel in smooth and precise manner.



Transparency T-2.31
Vehicle Control

. Collects Worksheet W-2.7, “Vehicle Balance Basics” as assessment tools for this topic area. Additional evaluation and assessment questions concerning this topic are located in the Module Assessment MA-2.1, “Preparing To Drive.”



Vehicle Balance Considerations**LESSON CONTENT (Instructor Support Information)****Maintaining Vehicle Balance**

- Seating Position - in order to establish vehicle balance and improve ability to see, drivers will sit in a comfortable, erect position squarely behind the steering wheel.
- Changing Vehicle Load - Side to Side
- Changing Vehicle Load - Front to Rear
- Changing Vehicle Load - Rear to Front

Steering Wheel Control

- Hand Position
- Steering Techniques
- Hand To Hand Steering
- Hand Over Hand Steering
- Limited Evasive Steering
- One Hand Steering

Fact Sheet F-2.4, "Understanding Vehicle Balance Concepts," provides information to support each of the issues listed on the transparencies.



"In Control: Vehicle Technical Aspects." (1995). J.B. Heimann Production provides information from Sam Posey and Sandy Stevens about seating position, aspects of pitch, roll, vehicle understeer, vehicle oversteer, and antilock brakes. It is a resource that supplements the information presented in this segment.

The instructor is reminded to collect optional Worksheet W-2.7, "Vehicle Balance Basics" as assessment tools for this topic area. Additional evaluation and assessment questions concerning this topic are located in the Module Assessment MA-2.1, "Preparing To Drive."

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



Module Two Topic 4 Resources**Module Two, Topic 4 Transparencies:**

T-2.24, "Controlling Vehicle Balance"
T-2.25, "Controlling Vehicle Balance"
T-2.26, "Controlling Vehicle Balance"
T-2.27, "Vehicle Control"
T-2.28, "Vehicle Control"
T-2.29, "Vehicle Control"
T-2.30, "Vehicle Control"
T-2.31, "Vehicle Control"

Worksheets

W-2.7 "Vehicle Balance Basics"

Fact Sheets

F-2.4, "Understanding Vehicle Balance Concepts"

Assessment

W-2.7 "Vehicle Balance Basics"
MA-2.1 "Preparing to Drive"

Suggested Resources

"In Control: America's Driving Reference " (1995) video from J. B. Heimann Productions (Technical Aspects of Vehicle)

"Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control"

"Teaching Your Teens to Drive" Lesson One: Developing Basic Vehicle Control" Parent/Teen Handbook

Textbook Resources

"Drive To Survive"
"Survival Behind the Wheel"
"How to Drive"
"Handbook Plus"
"Going Faster"
"Bondurant Behind the Wheel"

GRADE: **HS** MODULE: **TWO** TOPIC: **5**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills

The student is expected to:

- (A) define visual target in association to path of travel;
- (B) assess and analyze the path of travel of a vehicle;
- (C) assess and analyze the line of sight while seated in a vehicle;

The Instructor:

. Uses Transparency T-2.32 “Targeting and Visual Requirements” to discuss the vision and perception requirements necessary for the safe operation of a vehicle.

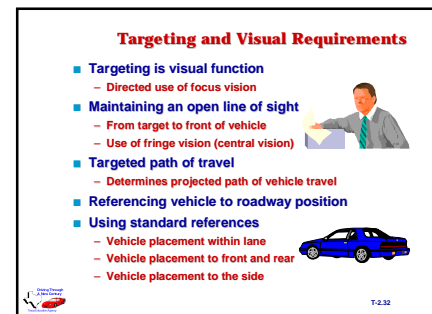
. Shows Transparency T-2.33, “Determining Vehicle Operating Space,” to discuss the space visible and not visible around the vehicle for the safe operation. Explain the space to be:

- . one carlength to the front;
- . two carlengths to the rear;
- . one carwidth to the left; and
- . two carwidths to the right.

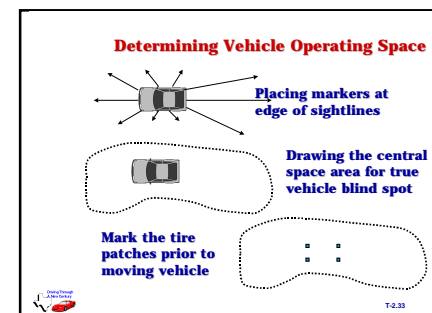
. A supplemental activity for programs with more than 32 hours of classroom is to take the students onto a parking lot and demonstrate the vehicle operating space and mirror settings. Look to Supplemental Activity BTW 2.1 and the sample BTW lesson for instructions.

. Shows Transparency T-2.34, “Traditional Mirror Views and Blind Spots,” to discuss the vision and perception requirements necessary for the safe operation of a vehicle.

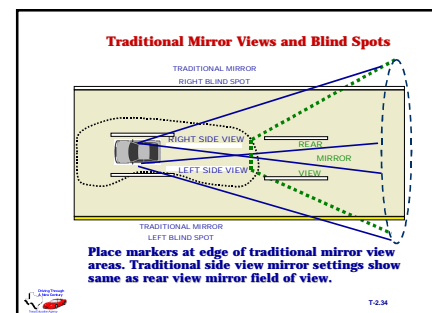
. Uses Fact Sheets 2.5, “Introducing Targeting Concepts,” and T-2.6, “Preventing Blind Spot Crashes and Eliminating Mirror Glare,” to explain the need to utilize targeting techniques and adjust mirrors to the outside, so that the side view mirrors do not show the same information as the rear view mirror.



Transparency T-2.32
Targeting and Visual Requirements



Transparency T-2.33
Determining Vehicle Operating Space



Transparency T-2.34
Traditional Mirror Views and Blind Spots

Standard Vehicle Reference Points

LESSON CONTENT (Instructor Support Information)

Vision and Perception Requirements

In this module, the instructor emphasizes the importance of directed attention, maintaining an open line of sight, searching skills, and targeting a line to maintain a safe path of travel. It is critical that students understand how an inadequate or improper visual search, lack of understanding of vehicle dynamics, failure to respond or a delayed response to a threatening object or condition contributes to driver crash involvement.

Referencing Vehicle to Path of Travel

Visual Functions

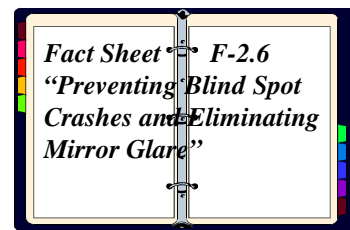
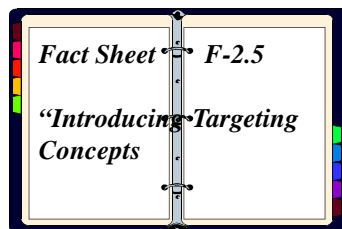
- Central (Focal) Vision is used to read and identify distinct objects and covers about three percent of one's visual field.
- Fringe Vision is used to judge depth and position.
- Peripheral Vision is conical in shape around the other vision fields.

Maintaining an Open Line of Sight

Searching Skills

- Using visual references and turn points to make turns.
- Forward visual turning point.
- Rear visual turning point.
- Targeted line of sight, paths of travel.
- Referencing vehicle to paths of travel.

Fact Sheets F-2.5, "Introducing Targeting Concepts" and F-2.6, "Preventing Blind Spot Crashes and Eliminating Mirror Glare" provide information to support each of the issues listed on the transparencies.



"Targeting" (1997). by Interactive Driving Systems, Inc., Chesire, CT 06410 (203) 272-9391 may be used as a visual technique to introduce or review targeting skills. The video is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **5**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills**The student is expected to:**

(D) demonstrate a side view mirror setting and describe how the setting reduces mirror blind spots and eliminates glare;

(E) describe how to place the front bumper of the vehicle at a line or curb utilizing visual reference points;

The Instructor:

. **Uses Transparency T-2.35 “Mirror Blind Spot and Glare Elimination” to lead a discussion** of the vision and perception requirements necessary in regard to mirror settings that eliminate blind spots and reduce

headlight glare when driving at night.

. **Provides Worksheet W-2.8, “Standard Vehicle Reference Points,”** as a class activity and topic assessment.

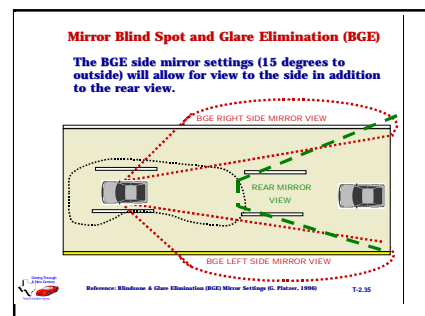
Worksheet W-2.8

“Standard Vehicle Reference Points”

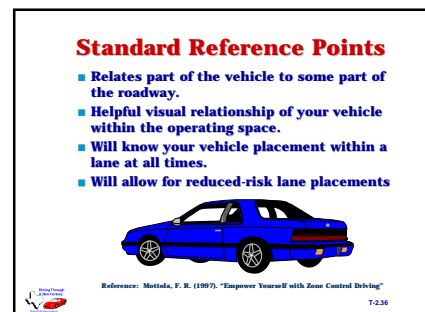
. **Uses Transparency T-2.36 “Standard Vehicle Reference Points”** to lead a discussion of the vision and perception requirements necessary for establishing reference points from the roadway to the vehicle.

. **Uses Transparency T-2.37 “Front Limitations”** to lead a discussion of the vision and perception requirements necessary to establish front reference points for

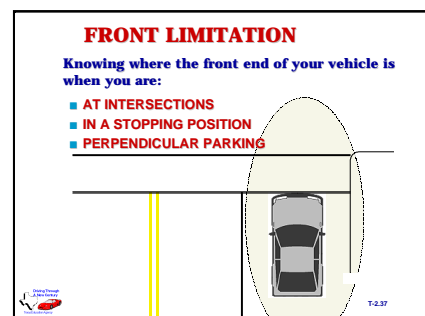
- . intersections;
- . stopping position;
- . perpendicular parking.



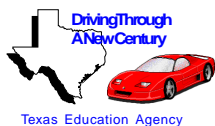
Transparency T-2.35
Mirror Blind Spot and Glare Elimination



Transparency T-2.36
Standard Vehicle Reference Points



Transparency T-2.37
Front Limitation



Module Two—Texas Driving Responsibilities: Preparing to Operate a Vehicle. The student recognizes the necessity of making routine vehicle checks and adjustments prior to and after entering the vehicle; identifies and responds appropriately to alert symbols, warning symbols, vehicle control devices, and safety devices; understands and controls vehicle balance and vehicle operating space; and appropriately applies the techniques of vehicle reference points to establish roadway position and vehicle placement.

Standard Vehicle Reference Points

LESSON CONTENT (Instructor Support Information)

Application of Vehicle Space Demonstration

- Student gains a perspective of space that is visible to driver.
- Student learns that the driver must look for things that can be seen.
- Because the area to the front, side, and rear is so large, reference points will help.
- Student will recognize that driving takes place in the future (targeting) and the past (mirrors). It is critical not to try to look where the vehicle is as this area is not visible to the driver.

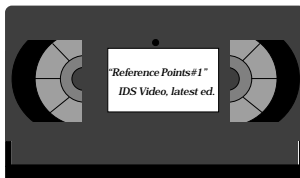
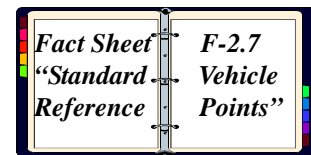
Application of Mirror Spaces and Blind Spots

- Mirrors are detection devices and should not be used for extended periods of time while driving.
- Mirrors should be checked prior to and after any speed or position change.
- Student recognizes what is visible in the mirrors to the rear.
- A traditional mirror setting leaves a blind spot to the side and gains the same information that is available through the rear view mirror.
- The contemporary mirror setting helps to alleviate blind spot and enlarges the area visible to the driver.
- Car mirrors are not sufficient visual tools to allow a driver to back a car. This is due to the inability to monitor the rear tire movements. The mirrors would need to be much larger to be effective for backing the vehicle.

Application of Referencing to the Vehicle

- The driver is able to place front of vehicle even with a line or curb (the curb or line should appear to run into the right side corner post or under the left side mirror).

Fact Sheet F-2.7, "Standard Vehicle Reference Points" will give a great deal of information to support each of the issues listed on the transparencies.



"Reference Points" (1997). by Interactive Driving Systems, Inc., Cheshire, CT 06410 (203) 272-9391 may be used as a visual technique to introduce or review reference point skills. The video is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **5**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills**The student is expected to:**

(E) describe how to place the front bumper of the vehicle at a line or curb utilizing visual reference points;

(F) describe how to place the rear bumper of the vehicle at a line or curb utilizing visual reference points;

The Instructor:

. **Uses Transparency T-2.38 “Front Limitations”** to lead a discussion of the vision and perception requirements regarding establishing front reference points for a front limitation.

. **Provides Worksheet W-2.8, “Standard Vehicle Reference Points”** as a class activity and topic assessment.

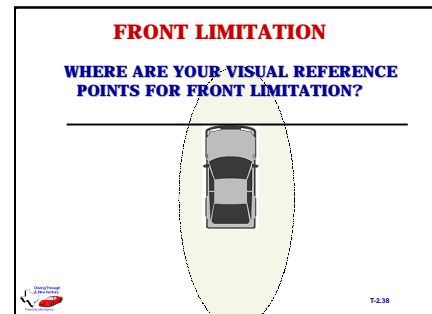
Worksheet W-2.8

“Standard Vehicle Reference Points”

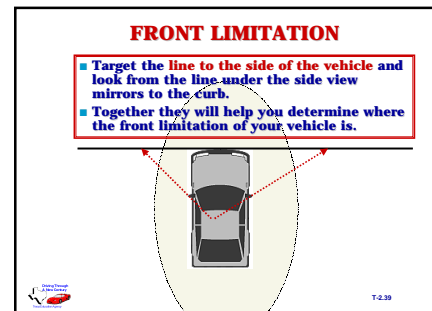
. **Uses Transparency T-2.39, “Front Limitation,”** to continue a discussion of the vision and perception requirements necessary for establishing reference points from the roadway to the vehicle for the front limitation.

. **Uses Transparency T-2.40, “Rear Limitations,”** to lead a discussion of the vision and perception requirements necessary to establish rear reference points.

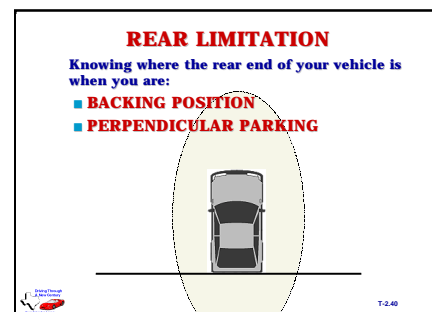
- . Backing Position
- . Perpendicular Parking



Transparency T-2.38
Front Limitation



Transparency T-2.39
Front Limitation



Transparency T-2.40
Rear Limitation

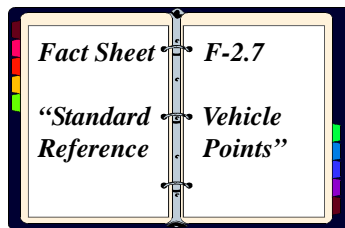
Standard Vehicle Reference Points

LESSON CONTENT (Instructor Support Information)

Application of Referencing to the Vehicle

- The driver is able to place front of vehicle even with a line or curb (the curb or line should appear to run into the right side corner post or under the left side mirror).
- The driver is able to place back bumper of vehicle so it is lined up with any rear line or curb.

Fact Sheet F-2.7, "Standard Vehicle Reference Points" will give a great deal of information to support each of the issues listed on the transparencies.



"Reference Points" (1997). by Interactive Driving Systems, Inc., Chesire, CT 06410 (203) 272-9391 may be used as a visual technique to introduce or review reference point skills. The video is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **5**

TOPIC ACTIVITIES

TOPIC RESOURCES

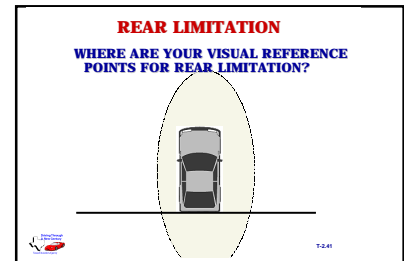
Knowledge and Skills**The student is expected to:**

(F) describe how to place the rear bumper of the vehicle at a line or curb utilizing visual reference points;

(G) describe how to place the right side tires zero to six inches from a line or curb utilizing visual reference points;

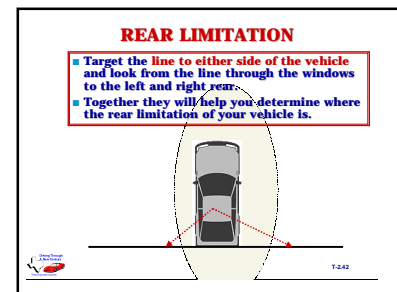
The Instructor:

. **Uses Transparency T-2.41 “Rear Limitation”** to lead a discussion of the vision and perception requirements necessary to establish reference points for rear limitation.



Transparency T-2.41
Rear Limitation

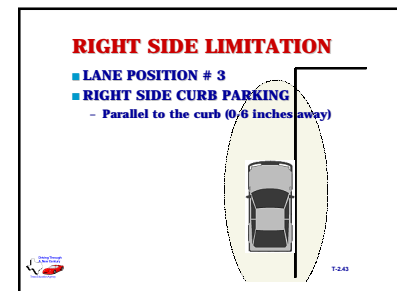
. **Uses Transparency T-2.42 “Rear Limitations”** to continue a discussion of the vision and perception requirements necessary to establish reference points for rear limitation.



Transparency T-2.42
Rear Limitation

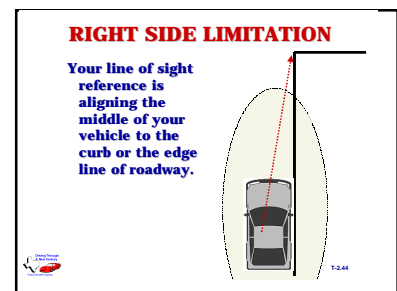
. **Uses Transparency T-2.43 “Right Side Limitations”** to lead a discussion of the vision and perception requirements necessary to establish reference points for right side limitations.

- . Lane Position 3
- . Curb Parking to Right Side



Transparency T-2.43
Right Side Limitation

. **Uses Transparency T-2.44 “Right Side Limitations”** to continue a discussion of the vision and perception requirements necessary to establish reference points for right side limitations.



Transparency T-2.44
Right Side Limitation

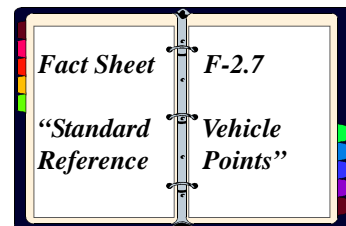
Standard Vehicle Reference Points

LESSON CONTENT (Instructor Support Information)

Application of Referencing to the Vehicle

- The driver is able to park close to a white line, curb, or straight line to the right side of the vehicle being driven; the center line of the hood appears to be next to the line or curb.
- The driver is able to place back bumper of vehicle so it is lined up with any rear line or curb.

Fact Sheet F-2.7, "Standard Vehicle Reference Points" will give a great deal of information to support each of the issues listed on the transparencies.



"Reference Points" (1997). by Interactive Driving Systems, Inc., Cheshire, CT 06410 (203) 272-9391 may be used as a visual technique to introduce or review reference point skills. The video is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **5**

TOPIC ACTIVITIES

TOPIC RESOURCES

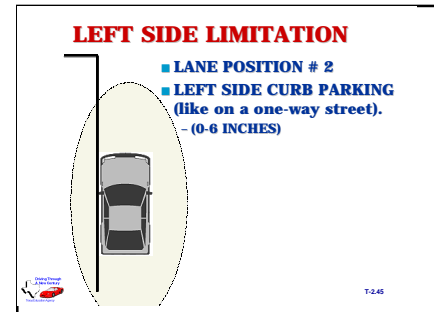
Knowledge and Skills**The student is expected to:**

(H) describe how to place the left side tires zero to six inches from a line or curb utilizing visual reference points;

The Instructor:

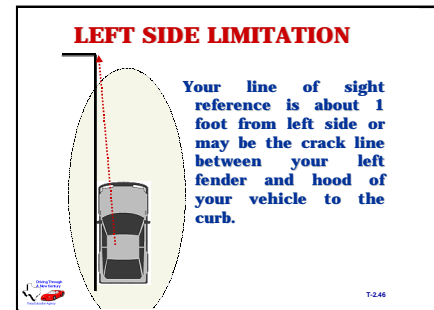
. Uses Transparency T-2.45 “Left Side Limitations” to lead a discussion of the vision and perception requirements necessary to establish reference points for right side limitations.

- . Lane Position 2
- . Curb Parking to Left Side



Transparency T-2.45
Left Side Limitation

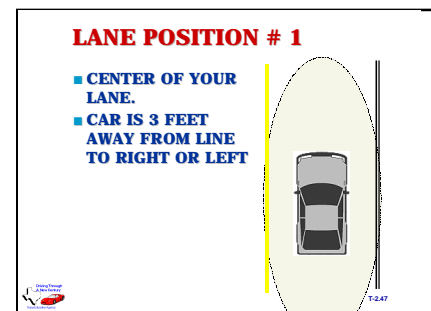
. Uses Transparency T-2.46, “Left Side Limitations,” to continue a discussion of the vision and perception requirements necessary to establish reference points for right side limitations.



Transparency T-2.46
Left Side Limitation

. Uses Transparency T-2.47 “Lane Position#1” to lead a discussion of the vision and perception requirements necessary to establish reference points for the center of lane position.

- . Center of Lane
- . Three feet from left side
- . Three feet from right side



Transparency T-2.47
Lane Position # 1

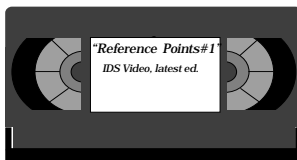
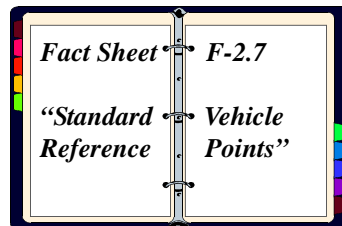
Standard Vehicle Reference Points

LESSON CONTENT (Instructor Support Information)

Application of Referencing to the Vehicle

- The driver is able to park close to a white line, curb or straight line to the right side of the vehicle being driven; the center line of the hood appears to be next to the line or curb.
- The driver is able to place the right side of the vehicle three feet from a white line or the curb.
- The driver is able to place the left side of the vehicle against the yellow center line or curb.

Fact Sheet F-2.7, "Standard Vehicle Reference Points" will give a great deal of information to support each of the issues listed on the transparencies.



"Reference Points" (1997). by Interactive Driving Systems, Inc., Chesire, CT 06410 (203) 272-9391 may be used as a visual technique to introduce or review reference point skills. The video is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker's message.



GRADE: **HS** MODULE: **TWO** TOPIC: **5**

TOPIC ACTIVITIES

TOPIC RESOURCES

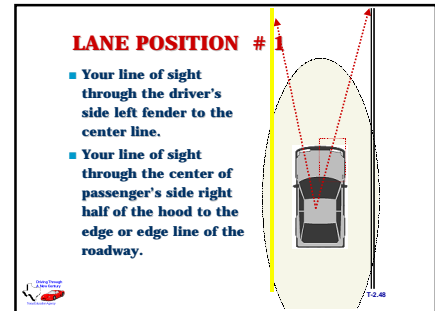
Knowledge and Skills

The student is expected to:

(H) describe how to place the left side tires zero to six inches from a line or curb utilizing visual reference points;

The Instructor:

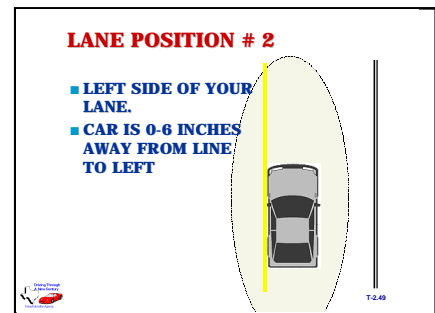
. Uses Transparency T-2.48 “Lane Position # 1” to continue a discussion of the vision and perception requirements necessary to establish reference points for center of lane position.



Transparency T-2.48
Lane Position # 1

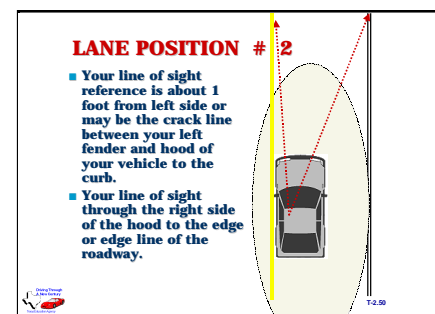
. Uses Transparency T-2.49 “Lane Position # 2” to lead a discussion of the vision and perception requirements necessary to establish reference points for left side lane limitations.

- . Left Side of the Lane
- . 0-6 inches from the left side line



Transparency T-2.49
Lane Position # 2

. Uses Transparency T-2.50 “Lane Position#2” to continue a discussion of the vision and perception requirements necessary to establish reference points for left side lane limitations.



Transparency T-2.50
Lane Position # 2

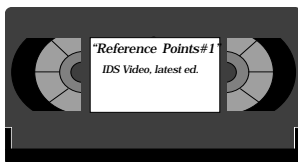
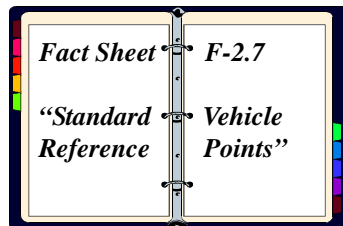
Standard Vehicle Reference Points

LESSON CONTENT (Instructor Support Information)

Application of Referencing to the Vehicle

- The driver is able to place the right side of the vehicle three feet from a white line or the curb.
- The driver is able to place the right side of the vehicle six feet away from a line or curb.
- The driver is able to place the left side of the vehicle against the yellow center line or curb.

Fact Sheet F-2.7, “Standard Vehicle Reference Points” will give a great deal of information to support each of the issues listed on the transparencies.



“Reference Points” (1997). by Interactive Driving Systems, Inc., Cheshire, CT 06410 (203) 272-9391 may be used as a visual technique to introduce or review reference point skills. The video is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker’s message.



GRADE: **HS** MODULE: **TWO** TOPIC: **5**

TOPIC ACTIVITIES

TOPIC RESOURCES

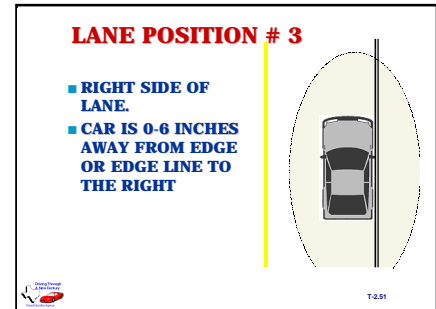
Knowledge and Skills

The student is expected to:

- (I) describe the placement options in a traffic lane utilizing visual reference points

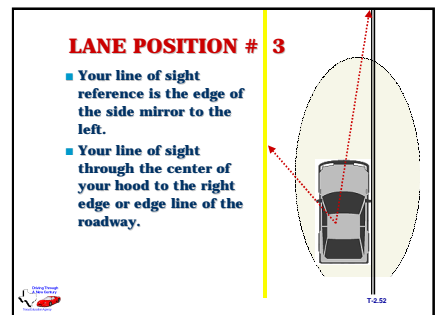
The Instructor:

. Uses Transparency T-2.51 “Lane Position # 3” to lead a discussion of the vision and perception requirements necessary to establish reference points for right side lane limitations.



Transparency T-2.51
Lane Position # 3

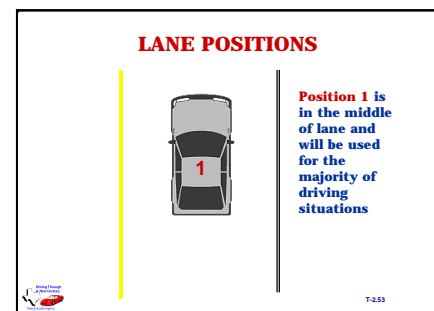
. Uses Transparency T-2.52 “Lane Position # 3” to continue a discussion of the vision and perception requirements necessary to establish reference points for right side lane limitations.



Transparency T-2.52
Lane Position # 3

. Uses Transparency T-2.53 “Lane Positions” to lead a discussion of the vision and perception requirements establishing center of lane position reference points for placement within a lane.

- . Center of Lane
- . Three feet from left side
- . Three feet from right side



Transparency T-2.53
Lane Positions

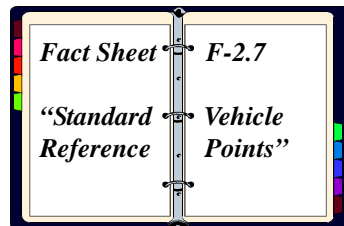
Standard Vehicle Reference Points

LESSON CONTENT (Instructor Support Information)

Application of Referencing to the Vehicle

- The driver is able to park close to a white line, curb, or straight line to the right side of the vehicle being driven; the center line of the hood appears to be next to the line or curb.
- The driver is able to place the right side of the vehicle three feet from a white line or the curb.

Fact Sheet F-2.7, “Standard Vehicle Reference Points” will give a great deal of information to support each of the issues listed on the transparencies.



“Reference Points” (1997). by Interactive Driving Systems, Inc., Cheshire, CT 06410 (203) 272-9391 may be used as a visual technique to introduce or review reference point skills. The video is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker’s message.



GRADE: **HS** MODULE: **TWO** TOPIC: **5**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills

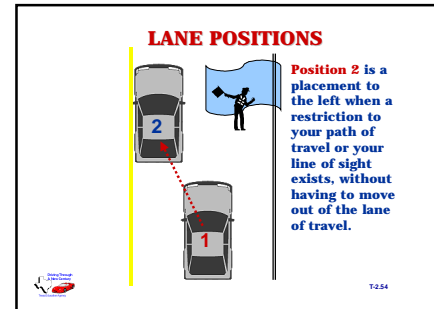
The student is expected to:

(J) explain vehicle reference techniques to reduce the risk of a collision.

The Instructor:

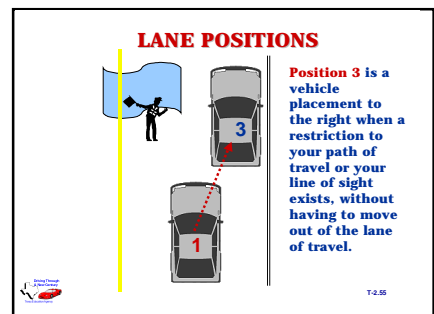
. Uses Transparency T-2.54 “Lane Positions” to lead a discussion of the vision and perception requirements necessary to establish lane positions from Lane Position # 1 to Lane Position # 2 to avoid a path of travel or line of sight restriction and asks students to list when this position

adjustment would be used.



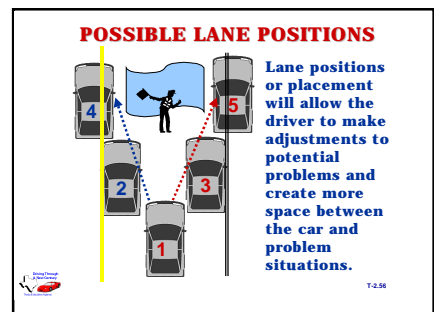
Transparency T-2.54
Lane Positions

. Uses Transparency T-2.55 “Lane Positions” to lead a discussion of the vision and perception requirements necessary to establish lane positions from Lane Position # 1 to Lane Position # 3 to avoid a path of travel or line of sight restriction and asks students to list when this position adjustment would be used.



Transparency T-2.55
Lane Positions

. Uses Transparency T-2.56 “Possible Lane Positions” to lead a discussion of the vision and perception requirements necessary to establish lane positions from Lane Position # 1 to Lane Position # 2, 4 or 3, 5, to avoid a path of travel or line of sight restriction and asks students to list when these position adjustments would be used.



Transparency T-2.56
Possible Lane Positions

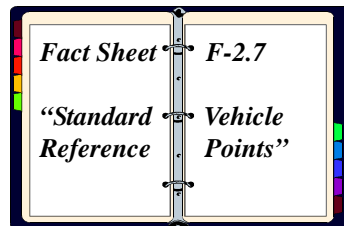
Standard Vehicle Reference Points

LESSON CONTENT (Instructor Support Information)

Application of Referencing to the Vehicle

- The driver is able to avoid a path of travel (POT) or a line of sight (LOS) restriction or problem to the left side of lane.
- The driver is able to avoid a path of travel (POT) or a line of sight (LOS) restriction or problem to the right side of lane.
- The driver is able to avoid a path of travel (POT) or a line of sight (LOS) restriction or problem by positioning over the yellow or white line to the left.
- The driver is able to avoid a path of travel (POT) or a line of sight (LOS) restriction or problem by positioning over the white line to the right.

Fact Sheet F-2.7, “Standard Vehicle Reference Points” will give a great deal of information to support each of the issues listed on the transparencies.



“Reference Points” (1997). by Interactive Driving Systems, Inc., Cheshire, CT 06410 (203) 272-9391 may be used as a visual technique to introduce or review reference point skills. The video is a resource that supplements the information presented in this segment.

Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker’s message.



GRADE: **HS** MODULE: **TWO** TOPIC: **5**

TOPIC ACTIVITIES

TOPIC RESOURCES

Knowledge and Skills

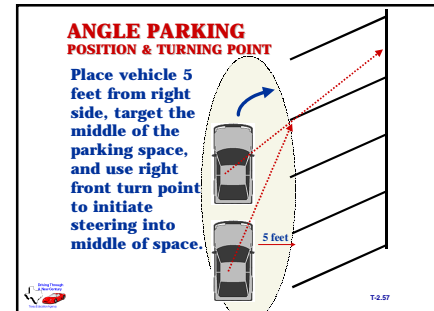
The student is expected to:

(K) explain vehicle reference techniques to enter an angle parking place.

The Instructor:

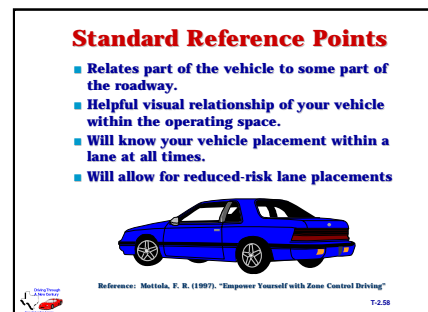
. Uses Transparency T-2.57 “**Angle Parking**” to lead a discussion of the vision and perception requirements necessary to establish an angle parking setup and entry reference points prior to the in-car lesson.

- . Position 5 feet from lines
- . Use right front turn point while targeting middle of lane



Transparency T-2.57
Angle Parking

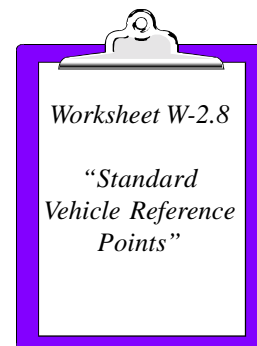
. Uses Transparency T-2.58 “**Standard Reference Points**” to review the vision and perception requirements necessary to establish standard vehicle reference points for gaining good lane position and placement.



Transparency T-2.58
Standard Reference Points Review

. Collects Worksheet W-2.8 “**Standard Vehicle Reference Points**” as assessment tools for this topic area.

. Provides MA-2.1 “**Preparing to Drive**” as Module Two final assessment.



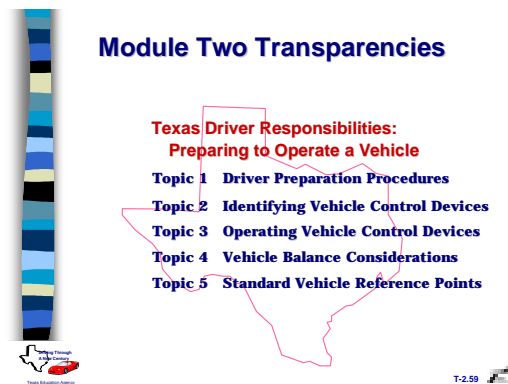
Standard Vehicle Reference Points

LESSON CONTENT (Instructor Support Information)

Fact Sheets F-2.7, “Standard Vehicle Reference Points” provides information to support each of the issues listed on the transparencies.

“Reference Points” (1997). by Interactive Driving Systems, Inc., Chesire, CT 06410 (203) 272-9391 may be used as a visual technique to introduce or review reference point skills. The video is a resource that supplements the information presented in this segment.

The instructor should collect optional Worksheet W-2.8, “Standard Vehicle Reference Points” as an assessment tool for this topic area. Questions concerning this topic are located in the Module Assessment MA-2.1, Preparing To Drive.



Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker’s message.



Module Two Topic 5 Resources

Module Two, Topic 5 Transparencies:

- T-2.32, "Targeting & Visual Requirements"
- T-2.33, "Determining Vehicle Operating Space"
- T-2.34, "Traditional Mirror Views and Blind Spots"
- T-2.35, "Blind Spot & Glare Elimination"
- T-2.36, "Standard Reference Points"
- T-2.37, "Front Limitation"
- T-2.38, "Front Limitation"
- T-2.39, "Front Limitation"
- T-2.40, "Rear Limitation"
- T-2.41, "Rear Limitation"
- T-2.42, "Rear Limitation"
- T-2.43, "Right Side Limitation"
- T-2.44, "Right Side Limitation"
- T-2.45, "Left Side Limitation"
- T-2.46, "Left Side Limitation"
- T-2.47, "Lane Position # 1"
- T-2.48, "Lane Position # 1"
- T-2.49, "Lane Position # 2"
- T-2.50, "Lane Position # 2"
- T-2.51, "Lane Position # 3"
- T-2.52, "Lane Position # 3"
- T-2.53, "Lane Positions"
- T-2.54, "Lane Positions"
- T-2.55, "Lane Positions"
- T-2.56, "Possible Lane Positions"
- T-2.57, "Angle Parking"
- T-2.58, "Standard Reference Points"

Worksheets

- W-2.8, "Standard Vehicle Reference Points"

Fact Sheets

- F-2.5, "Introduction to Targeting Concepts"
- F-2.6, "Preventing Blind Spot Crashes"
- F-2.7, "Standard Vehicle References"

Assessment

- MA-2.1, "Preparing to Drive"

Suggested Resources

Mottola, F. R. 1997. "Empower Yourself with Zone Control Driving," "Targeting," and "Reference Points," (1997).

Interactive Driving Systems, Inc., P.O. Box 98, Cheshire, CT 06410.
203/272-9391 Office 203/250-0896 FAX

Module Two**Topic Title: Supplemental**

- Qualifies for Texas Driver Instructional Permit
- Total Parental Involvement: 4 hours

180 minutes instructional time
minutes discretionary break time

Non-credit course (32 hrs)
Multiphase course (40 hrs)
Credit course (56 hrs/semester)

Module Two, Supplemental is not a required program element.

Needed Resources	Instructor Activities	Time Frame
Textbook Resources	. Provides additional textbook resources for parental involvement.	
Fact Sheets F-2.5	. Provides Fact Sheets for home based activities.	
Fact Sheets F-2.6		
Worksheets W-2.3		
Worksheets W-2.5	. Provides Worksheets for home based activities.	
Worksheets W-2.6		
. Classroom Lab Activity	. Provides copies of BTW lessons for parent based follow up activities.	
. Pre-assessment Activity		
Optional Videos:		
“Targeting,” IDS # 2	. Provides access to video and resource materials for vehicle readiness, driver preparation, vehicle controls, reference points, and targeting concepts.	
“Reference Points” IDS # 1		
“Teaching Your Teens to Drive” Lessons One to Three: Developing Basic Vehicle Control”		
Optional Textbook Resources:		
“Drive Right” Ch. 3		
“Empower Yourself” pp. 1-15		
“How to Drive” Ch. 5		
“Handbook Plus” Ch. 2		
“License to Drive” Ch. 5		
“Responsible Driving” Ch. 6		

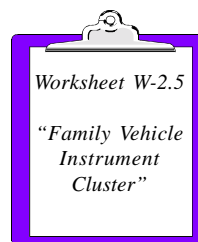
GRADE: **HS**
TOPIC ACTIVITIESMODULE: **TWO** TOPIC: **SUPPLEMENTAL**
TOPIC RESOURCES**Knowledge and Skills**

The student is expected to:

The Instructor:

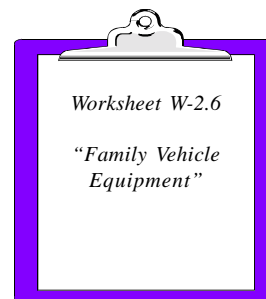
. Reviews W-2.3, “Control and Information Devices” during vehicle discussion and reviews W-2.5, “Family Vehicle Instrument Cluster” for use as a parent involvement activity utilizing the owner’s manual for the family vehicle or that of a friend to compare the control and information devices and symbols included in the dashboard of the vehicle with the one illustrated on the worksheet.

. Reviews Worksheet W-2.5, “Family Vehicle Instrument Cluster” which may be used as a Topic 3 assessment tool, which gives students a longer time period to complete the exercise.



. Reviews Worksheet W-2.6, “Family Vehicle Equipment” as an assessment tool for this topic area.

. Provides “Owner’s Manual” for class review based on the vehicle used at home.



. Uses Optional Classroom Laboratory to help student discover the areas visible and not visible around the vehicle as well as the areas visible in the mirror settings.

. Uses Optional In-Car Supplement BTW-2.1 to pre-assess student driving capabilities.

Parental Involvement Supplement**LESSON CONTENT (Instructor Support Information)**

Outside Activity for 40 hour and 56 hour classroom would allow students to view under the hood items discussed in Topic 1 and dash panel symbols discussed in Topic 2. The outside activity would serve as a 30 minute classroom activity for this topic area.

The instructor will collect Worksheet W-2.3 “Control and Information Devices,” Worksheet W-2.4 “Control, Information, Comfort, and Safety Devices,” and Worksheet W-2.5 “Family Vehicle Instrument Cluster” and use as assessment tools for this session.

Worksheet W-2.5 “Family Vehicle Instrument Cluster” may be combined with W-2.6 in Topic 3 as an optional assessment item.

“Teaching Your Teens To Drive” (1996) AAA Association Communication provides a video, student guide, and parent guide that has three lesson segments devoted to driver preparation, starting, and moving the vehicle. It may be a valuable resource that may add to the information presented in this segment.



Texas Essential Knowledge and Skills: § 110.42. English I (b) (4) The student uses writing as a tool for learning. (B) to discover, organize, and support what is known and what needs to be learned. (14) The student listens attentively for a variety of purposes. (A) focus attention on speaker’s message.



Classroom Supplement or Parental Involvement Activity

Learning Goals: The TSE student should think logically and creatively while integrating experience and past knowledge to form reasoned judgments concerning space occupied by vehicle and mirror visibility around the vehicle.

Performances: During this session students will: Cooperate with group members in drawing or being seated behind the steering wheel of vehicle.
Position themselves in a proper location for driving the vehicle.
Illustrate the area around the vehicle which is not visible to the driver, the size of the four tire patches created by the vehicle at rest, the area around the vehicle which is visible to the driver by rear and side mirrors, and the size of the three mirror zones and the two blind spot zones.

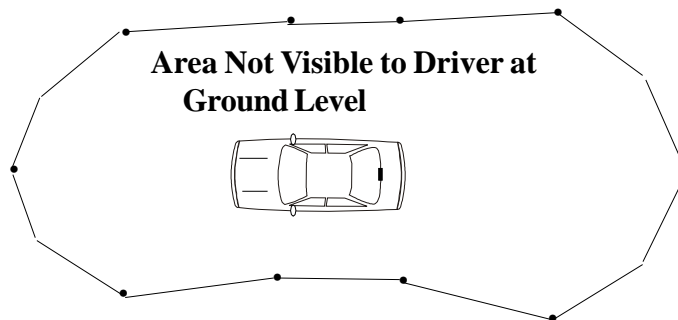
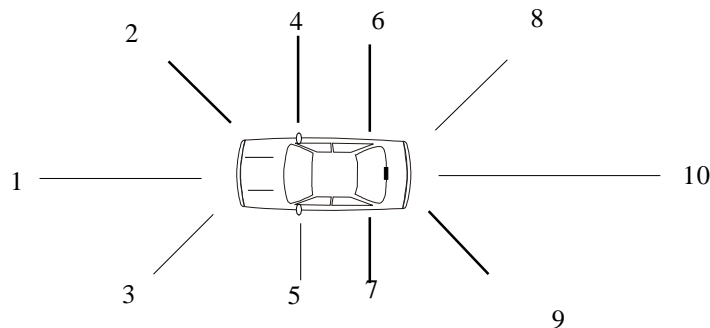
Assessment: The student portfolio will contain an illustration or picture of the area around the vehicle which is not visible to the driver, a diagram of the four tire patches, and an illustration or picture of the three mirror visibility zones and the two blind spot zones.

This activity may not be used as in-car activity time or in-car observation time.

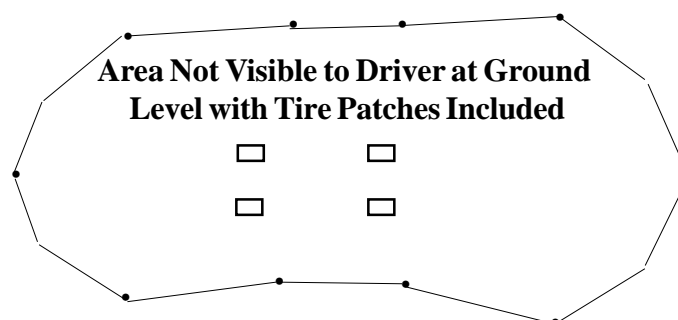
[illegible]

Diagrams—2.1 Vehicle Operating Space

Two or three students are needed to assist in this exercise. One student should be seated behind the wheel of the vehicle. The other students should position themselves close to the vehicle in positions illustrated below. Starting at the 1 position and repeating for 2 to 10, ask the student in the car to wave hand when he can see the shoes of the student outside the car as they walk slowly away. Mark the positions so that a chalk line can be drawn from one point to another. This will indicate an area that is one length of the vehicle to front, two lengths of vehicle to rear and one width of the vehicle to the left and two widths to the right. This space is not visible to the driver.

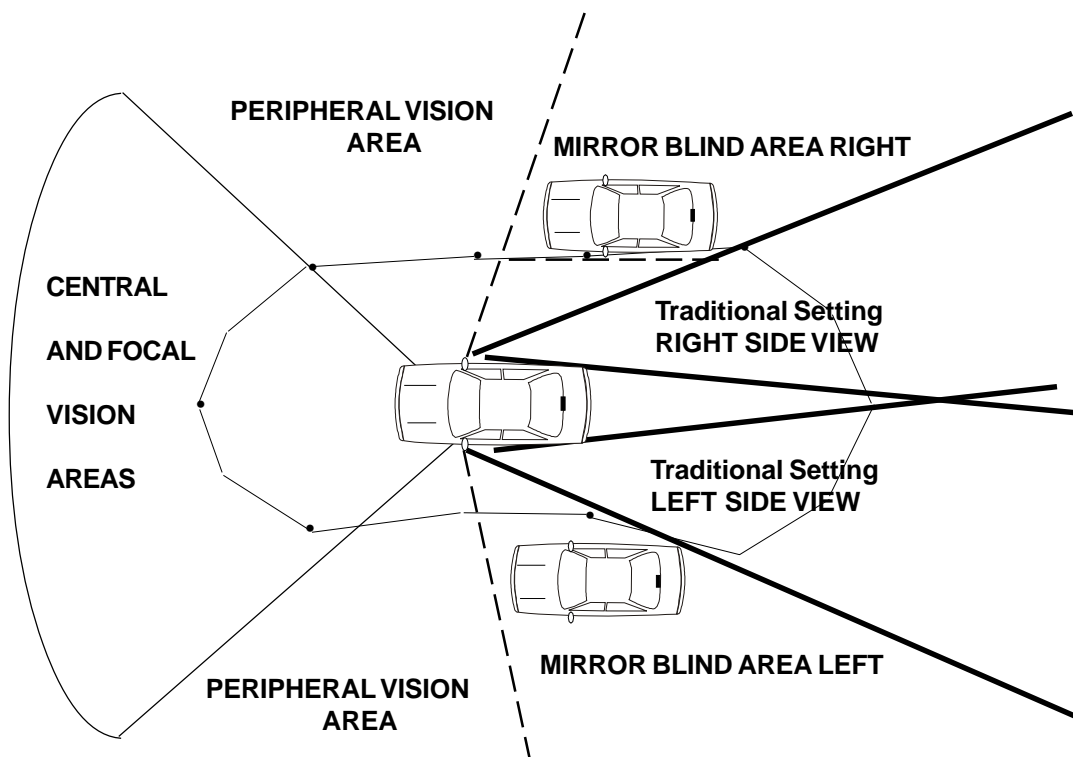
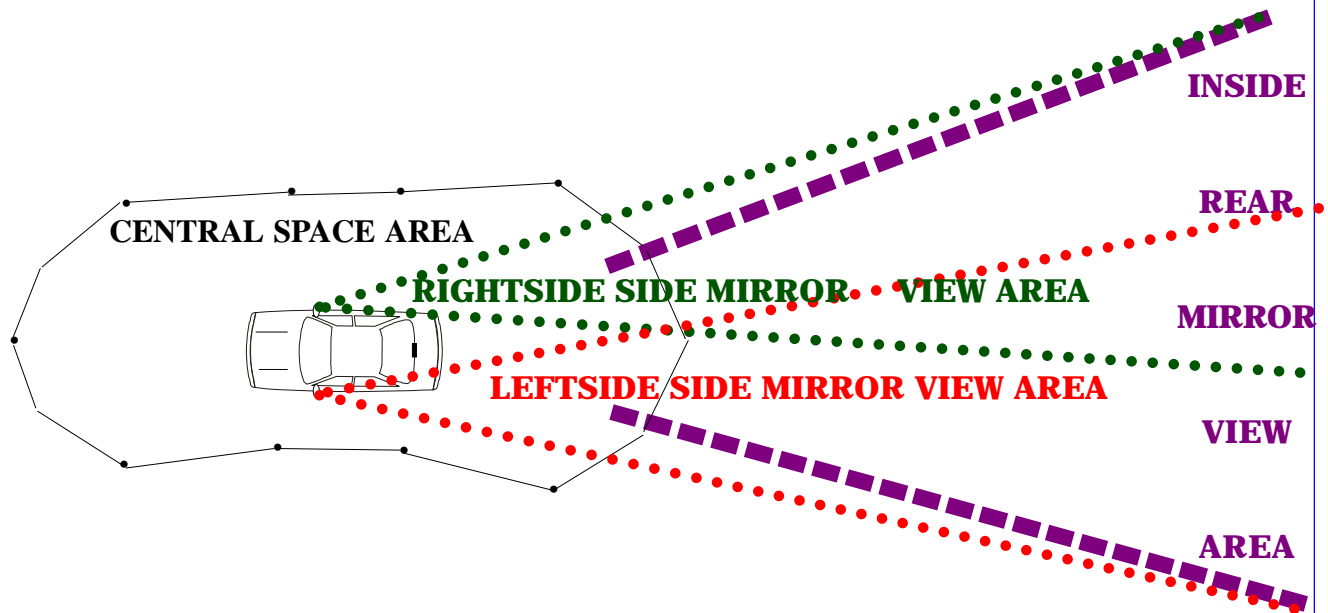


Outline the tire patches with chalk and then drive the vehicle out of the space to indicate how small the contact area is in relation to the space being driven down the roadway. This exercise dramatizes why the driver needs to establish a target area that is far from the vehicle, since all the decisions have to be made based on what is happening in the intended path of travel.

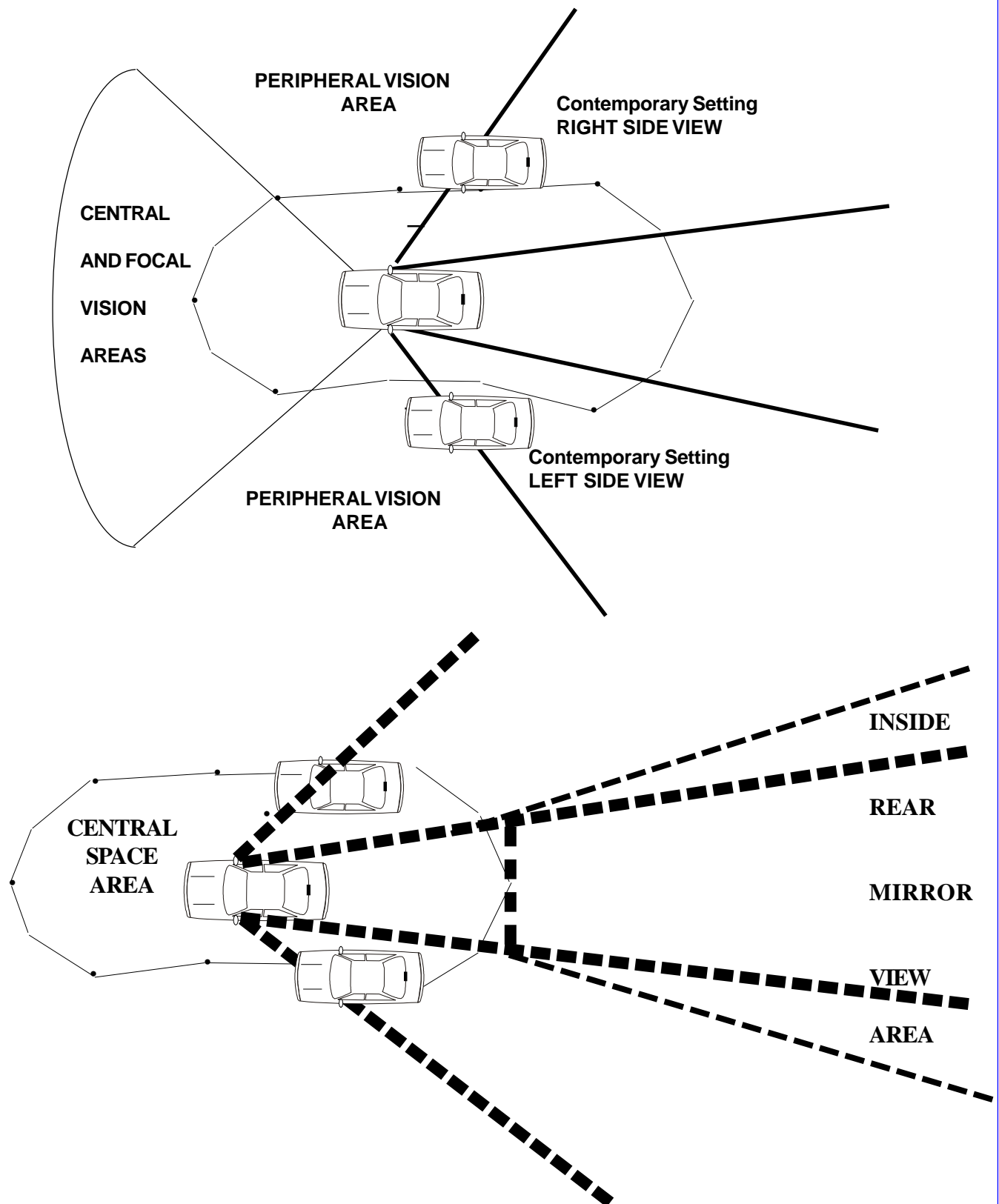


Diagrams—2.1 Mirror View Areas and Blind Spots

Two or three students will need to assist in this exercise. One student should be seated behind the wheel of the vehicle. The other students should position themselves close to the back of the vehicle. Starting at the rear view mirror position, ask the student in the car to wave a hand when he/she can see the shoes of the student outside the car as they walk slowly away. Mark the positions so that a chalk line can be drawn from one point to another. This should indicate an area that is about 200 feet to the rear for ground view. Mark the areas for the side view also recognizing the location of the mirror blind spot. Use the traditional mirror settings and the contemporary mirror settings to indicate the method to reduce the mirror blind spot to the sides with the contemporary settings.



Diagrams—2.1 Blind Zone and Glare Elimination (BGE) Mirror Settings



Prerequisites: Valid Texas Driver Instructional Permit

Learning Goals: The novice driver should be assessed for prior skill and knowledge level, for adjusting entry into in-car skill areas.

Performances: During this in-car lesson the student will demonstrate program entry skill levels by:

- performing forward and reverse movements in the offset alley exercise
- performing forward and backward movements in the tracking exercise
- performing forward maneuvers in the constant curvature exercise

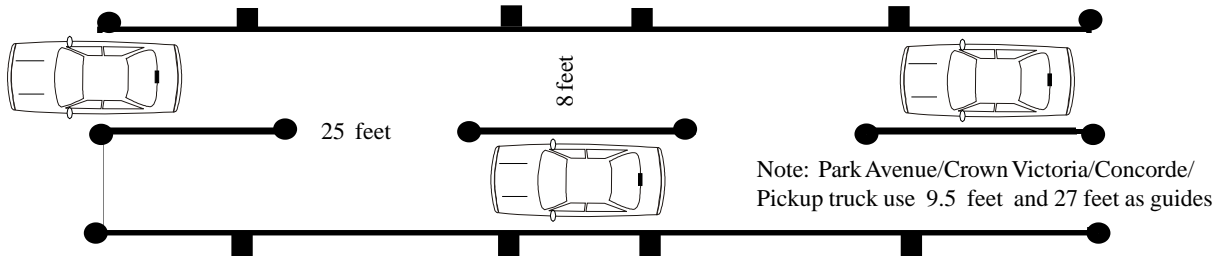
Assessment: The student portfolio will contain a preassessment of tracking, steering, braking, acceleration, lane position and vision skills in three exercises used to determine entry level performance and placement in the in-car lessons.

Instructor Activities	Ref	Student Activities	Materials Needed or Rear Driver Activities	Notes
<ul style="list-style-type: none"> • Prepare assessment site for demonstration of skills as listed in guide • Allow a fifty foot space cushion around the exercises for error control • Organize learning groups for conduct of session • Demonstrate activities to be assessed with limited instruction on task performance • Assess students in activity or assign task to certified on-street instructor • Constant curvature exercise may be combined with the tracking exercise to conserve space on surface used • Provide the assessment document for the student portfolio 	Place Assessment on the Student Record Form	<p>Group activity segment</p> <ul style="list-style-type: none"> • Observe instructor demonstration of preassessment activity • Ask questions pertaining to understanding of tasks <p>Session activity</p> <ul style="list-style-type: none"> • Place 1st driver in the preferred position for driving vehicle regarding seat, steering, mirrors and restraints adjustment • 1st driver performs off-set alley • Succeeding students perform maneuvers • 1st driver performs tracking exercise • Succeeding students perform maneuvers • 1st driver performs constant curvature • Succeeding students perform maneuvers • At the completion of these activities, the students should assess their abilities to perform maneuvers • Place results in portfolio for future reference 	<ul style="list-style-type: none"> • TSE vehicle prepared for on-street use • Cones/markers for exercises; plastic trash cans of different sizes may be substituted for cone markers • Chalked or painted exercise area is recommended for preassessment consistency • Space for surface large enough to accommodate the exercises 	

Diagrams—In-Car Laboratory BTW-2.1 Optional Skills Assessment

Assessment Skill Exercise One

OFF-SET ALLEY



One drive forward at each of the following speeds: 10 mph, 20 mph and 30 mph.

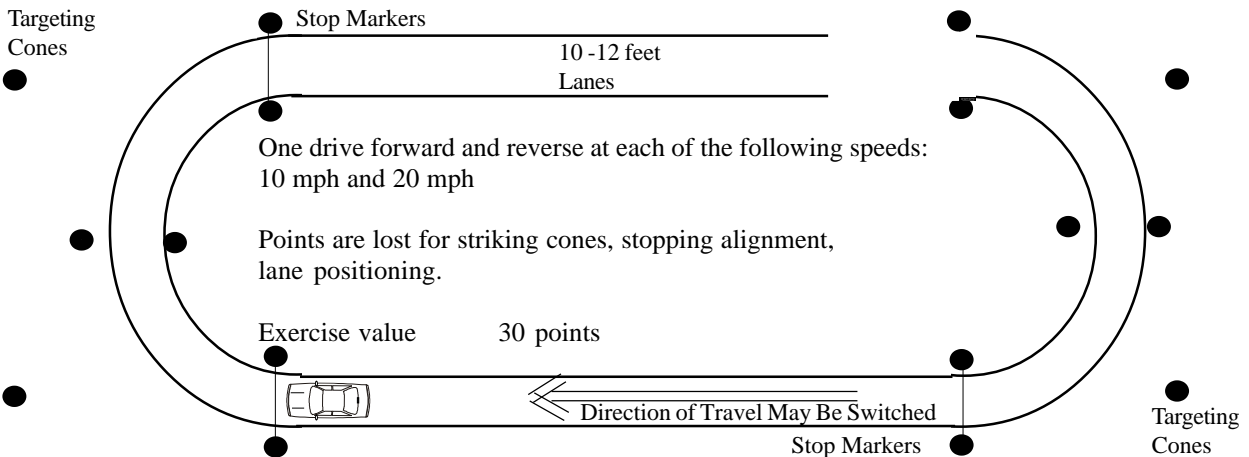
One drive in reverse at each of the following speeds: 5 mph, 10 mph and 20 mph.

Points are lost when cones are struck or vehicle is slowed or stopped.

Exercise value 40 points

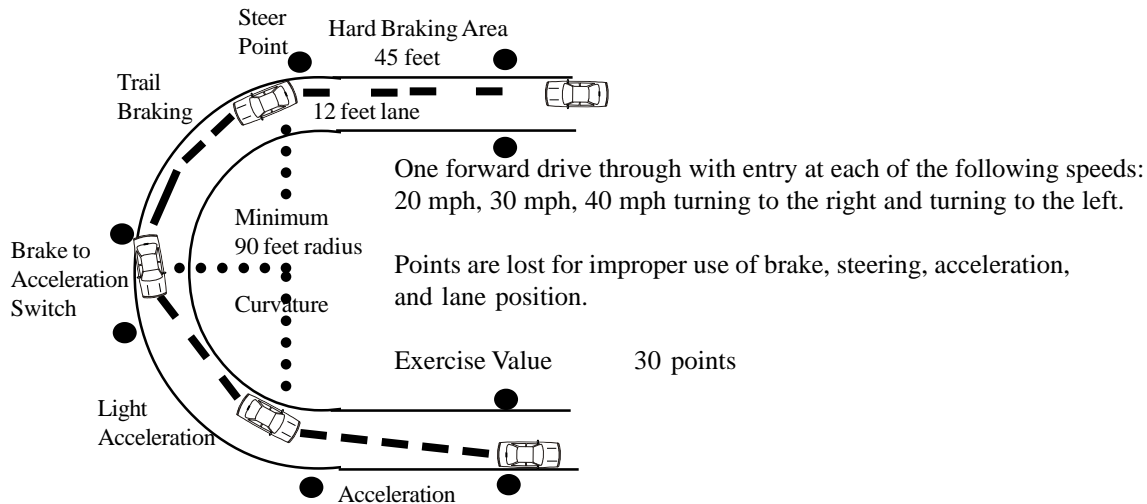
Assessment Skill Exercise Two

TRACKING



Assessment Skill Exercise Three

CONSTANT CURVATURE



Name _____

Date _____

Points lost _____

Assessment Score: _____ /100

Assessment Stopped _____

Off-Set Alley Preassessment /40**Forward 10 mph****Cone displacement****Speed**Points Lost:

Large: 5 10 15

Small: 2 4 6

Slowed 1 1 1 1 1

Stopped 2 2 2

Reverse 5 mph**Cone displacement****Speed**Points Lost:

Large: 5 10 15

Small: 2 4 6

Slowed 1 1 1 1 1

Stopped 2 2 2

Forward 20 mph**Cone displacement****Speed**Points Lost:

Large: 5 10 15

Small: 2 4 6

Slowed 1 1 1 1 1

Stopped 2 2 2

Reverse 10 mph**Cone displacement****Speed**Points Lost:

Large: 5 10 15

Small: 2 4 6

Slowed 1 1 1 1 1

Stopped 2 2 2

Forward 30 mph**Cone displacement****Speed**Points Lost:

Large: 5 10 15

Small: 2 4 6

Slowed 1 1 1 1 1

Stopped 2 2 2

Reverse 15 mph**Cone displacement****Speed**Points Lost:

Large: 5 10 15

Small: 2 4 6

Slowed 1 1 1 1 1

Stopped 2 2 2

Tracking/Targeting Preassessment /30**Forward 10 mph****Cone displacement**

2 2 2 2 2 2

Stopping FrontPoints Lost:

Lane Position

1 1 1 1 1 1

Alignment 2 2

Vehicle Not Aligned

1 1 1 1 1 1

Reverse 5 mph**Cone displacement**

2 2 2 2 2 2

Stopping FrontPoints Lost:

Lane Position

1 1 1 1 1 1

Alignment 2 2

Vehicle Not Aligned

1 1 1 1 1 1

Forward 20 mph**Cone displacement**

2 2 2 2 2 2

Stopping FrontPoints Lost:

Lane Position

1 1 1 1 1 1

Alignment 2 2

Vehicle Not Aligned

1 1 1 1 1 1

Reverse 10 mph**Cone displacement**

2 2 2 2 2 2

Stopping FrontPoints Lost:

Lane Position

1 1 1 1 1 1

Alignment 2 2

Vehicle Not Aligned

1 1 1 1 1 1

Constant Curvature Reassessment /30

		Braking	Steering	Acceleration	Lane Position	Points Lost
Forward	20 mph	2 2 2	1 1 1	1 1 1	1 1 1	<input type="text"/>
Forward	30 mph	2 2 2	1 1 1	1 1 1	1 1 1	<input type="text"/>
Forward	40 mph	2 2 2	1 1 1	1 1 1	1 1 1	<input type="text"/>

Prerequisites: Valid Texas Driver Instructional Permit

Learning Goals: The novice driver should demonstrate comprehension of targeting, basic braking, smooth acceleration, and basic steering skills in a controlled risk environment.

Performances: During this in-car lesson, the student will demonstrate the ability to perform targeting skills using the Auto Control Monster Device attached to the rear of a front wheel drive vehicle or a standard equipped driver education vehicle. The student will demonstrate smooth braking and acceleration skills while moving forward. The student will perform hand to hand steering and hand over hand steering techniques while moving the vehicle.

Assessment: Instructor assessment using the Mottola Auto Control Monster Lesson Plan Guide or mark introductory skills on district in-car student record form.

Instructor Activities	Ref	Student Activities	Materials Needed or Rear Driver Activities	Notes
<ul style="list-style-type: none"> Review facility for changes or obstructions. Review objectives for lesson with drivers. Prepare vehicle and surfaces for lesson. Introduce driver readiness tasks. Introduce targeting concepts. Introduce controlled braking concepts. Introduce progressive acceleration techniques. Introduce hand to hand steering techniques. Introduce hand over hand steering techniques. Practice targeting concepts. Practice controlled braking concepts. Practice progressive acceleration techniques. Practice hand to hand steering techniques. Practice hand over hand steering techniques. Practices securing tasks. Evaluate student progress in activities for record and portfolio. <p>Repeat tasks with next driver.</p>	<p>Mod 2</p> <p>Mod 2</p> <p>Mod 2</p> <p>Mod 2</p> <p>Mod 2</p> <p>Assess on Student Record Card</p>	<p>Group activity segment</p> <ul style="list-style-type: none"> Review objectives, show permit, ask questions regarding lesson activities. <p>Session activity</p> <ul style="list-style-type: none"> Introduce driver readiness tasks to first driver. Performs targeting drills. Performs controlled braking with minimal assist. Performs progressive acceleration with minimal assist. Performs hand to hand steering with minimal assistance. Performs hand over hand steering with minimal assistance. Practices targeting skills with minimal assistance. Practices controlled braking with minimal assistance. Practices hand to hand steering with minimal assistance. Practices hand over hand steering with minimal assistance. Practices securing with minimal assistance. Review and assess tasks performed in lesson. 	<ul style="list-style-type: none"> Shows permit at the start of lesson. Listens to review of procedures. Watches and asks questions regarding procedures. Watches demonstration of each activity by student or instructor. Verbally reviews procedures while driver is performing techniques in each area. Prepares for driving sequence. 	

Prerequisites: Valid Texas Driver Learner's Permit

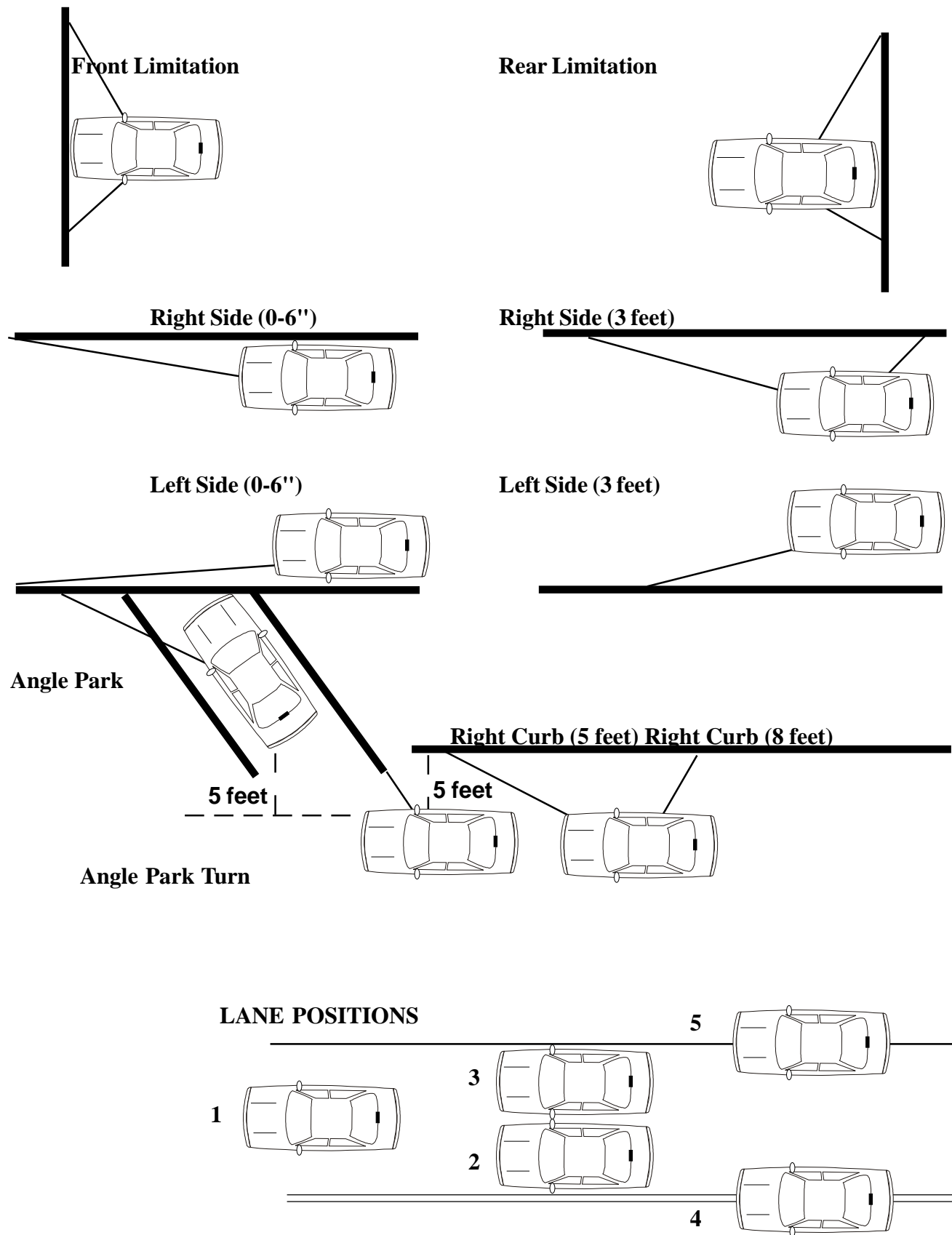
Learning Goals: The novice driver should demonstrate comprehension of pre-drive, basic maintenance, driver readiness, starting, pull from curb, visual referencing, and securing for listed vehicle positions which will increase student's ability to position vehicle for basic vehicle maneuvers.

Performances: During this in-car lesson, the students will demonstrate the ability to perform pre-start and maintenance checks and prepare themselves and the vehicle to starting the vehicle. Using reference points, they will be able to demonstrate positioning the vehicle to its front and rear limits, in positioning the vehicle in curb alignments, vehicle lane positions, parking maneuvers, and their set up positions; and be able to position the car with turning points for the basic vehicle maneuvers.

Assessment: Instructor assessment of pre-drive, maintenance, readiness, starting, pulling from curb, lane positions, backing techniques, and securing on the district in-car records form. Student assessment of positions drawn on worksheet for portfolio.

Instructor Activities	Ref	Student Activities	Materials Needed or Rear Driver Activities	Notes
<ul style="list-style-type: none"> Review facility for changes or obstructions. Review objectives for lesson with drivers. Prepare vehicle and surfaces for lesson. Evaluate pre-drive, maintenance, and start procedures. Review, guide, and supervise front limitations technique. Review, guide, and supervise rear limitation technique. Review, guide, and supervise curb alignment techniques. Review, guide, and supervise lane position techniques. Review, guide, and supervise parking techniques. Review, guide, and supervise securing techniques. Evaluate student progress in activities for record and portfolio. <p>Repeat tasks with next driver.</p>	<p>Mod 2</p> <p>Mod 2</p> <p>Mod 2</p> <p>Mod 2</p> <p>Mod 2</p> <p>Mod 2</p> <p>Place Pre-Assess on Student Record Card</p>	<p>Group activity segment</p> <ul style="list-style-type: none"> Review objectives, show permit, ask questions regarding lesson activities. <p>Session activity</p> <ul style="list-style-type: none"> 1st driver performs pre-drive, maintenance, readiness, and starting procedures. Performs a front limitation with minimal assist. Performs rear limitation with minimal assist. Performs curb alignments with minimal assistance. Performs vehicle lane positions with minimal assistance. Performs parking turn points with minimal assistance. Performs parking maneuvers with minimal assistance. Performs stopping, securing procedures. Review and assess tasks performed in lesson. 	<ul style="list-style-type: none"> Shows permit at the start of lesson. Listens to review of procedures. Watches and asks questions regarding procedures. Watches demonstration of each activity by student or instructor. Verbally reviews procedures while driver is performing techniques in each area. Prepares for driving sequence. 	

Diagrams—In-Car 2.3 Standard Visual Referencing Guidelines



Optional Titles: "Starting Out Right" ... DORON Video or Laserdisc
 "Ins and Outs of Turns" ... DORON Video or Laserdisc
 "Controlling Your Vehicle" ... SSI Safe Driver Training Series
 "Turning and Parking Manuevers" ... SSI Safe Driver Training Series

Learning Goals: The simulation student should demonstrate comprehension of pre-drive, driver readiness, start, securing, and vehicle positioning in lane which will increase student's ability to position vehicle for basic vehicle maneuvers.

Performances: Performances are based on simulation video used for this section. It is recommended to start with a session that demonstrates the use of the simulator and establishes the need for procedures and good seating position. Explain the need for holding the wheel at a position that is below the center of the wheel due to airbag displacement. Demonstrate the correct seating and steering positions for vehicle control

Assessment: Instructor assessment of procedures, lane positions, and techniques on the district on-street records form. Student assessment of simulation activities may be added to the student portfolio.

Instructor Activities	Student Activities	Materials Needed and Notes