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**04.05.00 INSPECTION ITEMS FOR VEHICLE CLASSES****05.01 Inspect Every Passenger Car For: (Listed in suggested order of inspection)**

\* Check for evidence of Financial Responsibility

1. Horn
2. Windshield Wipers
3. Mirror
4. Steering
5. Seat Belts
6. Brakes (system) (Parking - beginning with 1960 models)
7. Tires
8. Wheel Assembly
9. Exhaust System
10. Exhaust Emission System (beginning with 1968 models)
11. Beam Indicator (beginning with 1948 models)
12. Tail Lamps (2); (1) if 1959 model or earlier
13. Stop Lamps (2); (1) if 1959 model or earlier
14. License Plate Lamp (1)
15. Rear Red Reflectors (2)
16. Turn Signal Lamps (beginning with 1960 models)
17. Head Lamps (2)
18. Motor, Serial, or Vehicle Identification Number
19. 1988 & newer - inspect for window tinting or coating
20. Gas caps on vehicles 2-24 model years old.

**05.02 Inspect Every Pickup, Panel, or Truck Under 80 Inches Wide For: (Listed in suggested order of inspection)**

\* Check for evidence of Financial Responsibility

1. Horn
2. Windshield Wipers

3. Mirror
4. Steering
5. Seat Belts
6. Brakes (system) Parking - (beginning with 1960 models)
7. Tires
8. Wheel Assembly
9. Safety Guards or Flaps (if four tires or more on rearmost axle)
10. Exhaust System
11. Exhaust Emission System (beginning with 1968 models)
12. Beam Indicator (beginning with 1948 models)
13. Tail Lamps (2); (1) if 1959 model or earlier
14. Stop Lamps (2); (1) if 1959 model or earlier
15. License Plate Lamp (1)
16. Rear Red Reflectors (2)
17. Turn Signal Lamps (beginning with 1960 models) (measure if 1959 model or earlier)
18. Head Lamps (2)
19. Motor, Serial, or Vehicle Identification Number
20. 1988 & newer - inspect for window tinting or coating
21. Gas caps on vehicles 2-24 model years old.

Overall width is determined by measuring from the widest part on one side to the widest part on the other side of the vehicle. In some vehicles this may be the dual wheels which would be considered as part of the width. Do not include an outside mirror or mirrors in determining overall width.

**[ 05.03 Inspect Every Truck 80 Inches or More in Overall Width For: (Listed in suggested order of inspection) Refer to Federal Motor Carrier Safety Regulations, if required.**

\* Check for evidence of Financial Responsibility

1. Horn
2. Windshield Wipers

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3. Mirror
4. Steering
5. Seat Belts
6. Brakes system (Parking - beginning with 1960 models)
7. Tires
8. Wheel Assembly
9. Safety Guards or Flaps (if four tires or more on rearmost axle)
10. Exhaust System
11. Exhaust Emission System (beginning with 1968 models)
12. Beam Indicator (beginning with 1948 models)
13. Tail Lamps (2); (1) if 1959 model or earlier
14. Stop Lamps (2); (1) if 1959 model or earlier
15. License Plate Lamp (1)
16. Rear Red Reflectors (2)
17. Turn Signal Lamps
18. Clearance Lamps
19. Side Marker Lamps
20. Side Reflectors
21. Head Lamps (2)

(Refer to Reference Section as per lighting diagrams and as applicable to the particular style of truck being inspected.)

22. Motor, Serial, or Vehicle Identification Number
23. 1988 & newer - inspect for window tinting or coating
24. Gas caps on vehicles 2-24 model years old.

Overall width is determined by measuring from the widest part on one side to the widest part on the other side of the vehicle. In some vehicles this may be the dual wheels which would be considered as part of the width. Do not include an outside mirror or mirrors in determining overall width.

**05.04 Inspect Every Truck-Tractor For:** (Listed in suggested order of inspection) Refer to Federal Motor Carrier Safety Regulations, if required.

\* Check for evidence of Financial Responsibility

1. Horn
2. Windshield Wipers
3. Mirror
4. Steering
5. Seat Belts
6. Brakes (system) Parking - (beginning with 1960 models)
7. Tires
8. Wheel Assembly
9. Exhaust System
10. Exhaust Emission System (beginning with 1968 models)
11. Beam Indicator (beginning with 1948 models)
12. Tail Lamps (2); (1) if 1959 model or earlier
13. Stop Lamps (2); (1) if 1959 model or earlier
14. Rear Red Reflectors (2)
15. Turn Signal Lamps
16. Cab Lamps (2)
17. Head Lamps (2)
18. Motor, Serial, or Vehicle Identification Number
19. 1988 & newer - inspect for window tinting or coating
20. Gas caps on vehicles 2-24 model years old.

**Definition of a Truck-Tractor.** Every motor vehicle designed and used primarily for drawing other vehicles and not so constructed as to carry a load other than a part of the weight of the vehicle and load so drawn.

**NOTE:** License plate lamp required if the truck-tractor has a rear license plate.

[ **05.05 Inspect Every Bus (Except School Bus), or Motor Home For:** (Listed in suggested order of inspection) Refer to Federal Motor Carrier Safety Regulations, if required.

[ **NOTE:** A Motor Home less than 80 inches in overall width will be inspected for the items required on a passenger car.

**NOTE:** No bus, motor coach, or motor home shall be altered in any manner to lower the road clearance of the vehicle below the manufacturer's clearance standards.

\*Check for evidence of Financial Responsibility

1. Horn
  2. Windshield Wipers
  3. Mirror
  4. Steering
  - [ 5. Seat Belts
  6. Brakes (system) Parking - (beginning with 1960 models)
  7. Tires
  8. Wheel Assembly
  9. Exhaust System
  10. Exhaust Emission System (beginning with 1968 models)
  11. Beam Indicator (beginning with 1948 models)
  12. Tail Lamps (2)
  13. Stop Lamps (2)
  14. License Plate Lamp (1)
  15. Rear Red Reflectors (2)
  16. Turn Signal Lamps
  17. Clearance Lamps
  18. Side Marker Lamps
  19. Side Reflectors
  20. Head Lamps (2)
- (Refer to Reference Section as per lighting diagrams and as applicable to the particular style of bus being inspected.)
21. Motor, Serial, or Vehicle Identification Number

**05.06 Inspect All Trailers, Semitrailers, Pole Trailers, or Mobile Homes Exceeding 4,500 Pounds Actual Gross Weight**

**or Registered Weight For:** (Listed in suggested order of inspection) Refer to Federal Motor Carrier Safety Regulations, if required.

\* Check for evidence of Financial Responsibility on towing vehicle

1. Brakes (system) (If gross weight exceeds 4,500 pounds)
2. Tires
3. Wheel Assembly
4. Safety Guards or Flaps (if four tires or more on rearmost axle) Pole trailers exempt.
5. Tail Lamps (2)
6. Stop Lamps (2)
7. License Plate Lamp (1)
8. Rear Red Reflectors (2)
9. Turn Signal Lamps
10. Clearance Lamps
11. Side Marker Lamps
12. Side Reflectors
13. Side Marker Lamps and Reflectors (30 feet or more in overall length)

(Refer to Reference Section as per lighting diagrams and as applicable to the particular trailer being inspected.)

14. Serial or Vehicle Identification Number

**NOTE:** On House Moving Dollies and Converter Dollies, the only items of inspection are:

- a. Brakes (on converter dollies only)
- b. Tires
- c. Wheel Assembly
- d. Coupling Devices (on converter dollies)
- e. Reflector, rear, red (2), one on each side
- f. Tail lamps, rear, red (2), one on each side
- g. Stop lamps, rear red (2), one on each side

## 04.05.07 - 05.09

(Refer to reference section as per lighting diagram)

### **05.07 Inspect Every Motorcycle and Motor-Driven Cycle For:** (listed in suggested order of inspection)

\* Check for evidence of Financial Responsibility

1. Horn
2. Mirror
3. Steering
4. Brakes (system)
5. Tires
6. Wheel Assembly
7. Exhaust System
8. Tail Lamp (1)
9. Stop Lamp (1)
10. License Plate Lamp
11. Rear Red Reflector (1)
12. Head Lamp (1)
13. Motor, Serial, or Vehicle Identification Number

#### **Definitions:**

**Motorcycle:** Every motor vehicle having a saddle for the use of the rider and designed to propel itself with not more than three wheels in contact with the ground but excluding a tractor.

**Motor-Driven Cycle:** Every motorcycle with a motor which has an engine piston displacement of not more than 125cc.

### **05.08 Inspect Every Moped For:** (Listed in suggested order of inspection)

\* Check for evidence of Financial Responsibility

1. Brake
2. Head Lamp
3. Reflector
4. Rear Lamp

**Definition of a Moped:** Moped means a motor-driven cycle whose speed attainable in one mile is not more than 30 mph and that is equipped with a motor that produces not more than two-brake horsepower. If an internal combustion engine is used, the piston displacement may not exceed 50cc and the power drive system may not require the operator to shift gears.

### **05.09 Inspect Every School Bus For:** (Listed in suggested order of inspection) Refer to Federal Motor Carrier Safety Regulations, if required.

\* Check for evidence of Financial Responsibility - unless government owned.

1. Horn
2. Windshield Wipers
3. Mirror
4. Steering
5. Seat Belts (driver only)
6. Brakes (system) Parking - (beginning with 1960 models)
7. Tires
8. Wheel Assembly
9. Exhaust System
10. Exhaust Emission System (beginning with 1968 models)
11. Beam Indicator (beginning with 1948 models)
12. Tail Lamps (2)
13. Stop Lamps (2)
14. License Plate Lamp (1)
15. Rear Red Reflectors (2)
16. Turn Signal Lamps
17. Clearance Lamps
18. Side Marker Lamps
19. Side Reflectors

20. Red Warning Lamps (2 front - 2 rear - alternately flashing)

(Refer to Reference Section as per lighting diagrams and as applicable to the particular bus being inspected.)

21. Signs ("**SCHOOL BUS**" 8 inches in height on front and on rear of bus)

22. Fire Extinguisher (one quart chemical)

23. Head Lamps (2)

24. Exterior Crossover (Convex) Mirror

25. Motor, Serial, or Vehicle Identification Number

26. Gas caps on vehicles 2-24 model years old.

Definition of a School Bus: Every motor vehicle that complies with the color and identification requirements set forth in the most recent edition of standards as produced and sponsored by the National Commission on Safety Education of the National Education Association, Washington, D.C., and is being used to transport children to or from school or in connection with school activities, not including buses operated by common carriers in urban transportation of schoolchildren.

### 05.10 Special Requirements for School Buses Only

In addition to all other equipment required by law as determined by size, weight, or vehicle class, school buses are required to be equipped with the following items:

1. Signs on the front and on the rear of the vehicle showing the words "**SCHOOL BUS**" in plainly readable letters not less than 8 inches in height.
2. At least one quart of chemical-type fire extinguisher in good condition and conveniently located for immediate use.
3. School bus **RED** signal lamps mounted as high and as widely spaced laterally as practicable, which should be capable of displaying to the front, two alternately flashing **RED** lights located at the same level AND to the rear, two alternately flashing **RED** lights located at the same level. These lights should have sufficient intensity to be visible at 500 feet in normal sunlight. These lamps are intended to identify a vehicle as a school bus and to inform other users of the highway that such vehicle is stopped on the highway to take on or discharge schoolchildren.
4. One or more exterior (crossover) mirror of convex design mounted at or near the front of the school bus and adjustable to give the driver, at all times when seated in the driver's seat, a clear view of the ground or roadway immediately ahead of the front bumper and beside the front wheels of the school bus. Crossover mirror(s) is required on all school buses no matter how the design of the bus.

#### Inspect For and Reject If:

1. All equipment required by size, weight, or class of the vehicle does not meet requirements.
2. Signs are not present, readable, and of proper height.
3. Fire extinguisher is not of required capacity, proper type, or in good condition and properly located.
4. School bus **RED** signal lamps are not present, properly working, and in good condition.
5. Crossover mirror mounting is loose or will not adjust to different positions or will not hold firm after adjustment.
6. Crossover mirror offers unsafe interference with driver's forward vision or hides either front turn signal from view of oncoming driver.
7. Crossover mirror's reflective surface is cracked, broken, peeled, or tarnished, or has sharp edges.

**NOTE:** Some school buses may be equipped with 8 warning

signal lamps, 4 red and 4 amber, working in an automatic integrated system. This system of alternately flashing warning lamps will be accepted provided it has 2 red lamps on the front and 2 red lamps on the rear.

### 04.10.00 PRIOR TO INSPECTION

The owner or operator of a vehicle shall present evidence of Financial Responsibility to the inspection station in one of the following ways:

1. A liability insurance policy, or a copy of the policy, in at least the minimum amounts required by law.
2. A standard proof of liability insurance form promulgated by the Texas Department of Insurance and issued by a liability insurer that includes:
  - a. the name of the insurer;
  - b. the insurance policy number;
  - c. the policy period (dates of coverage must be **30-day** minimum);
  - d. the name and address of each insured person;
  - e. the policy limit or a statement that the coverage of the policy complies with at least the minimum amounts of liability insurance required by this Act; and
  - f. the make and model of each covered vehicle.
3. An insurance binder that confirms that the owner and/or operator is in compliance.
4. A copy of a certificate issued by the Department of Public Safety that shows that the vehicle is covered by self-insurance.
5. A certificate (or copy) issued by the State Treasurer that shows that the owner of the vehicle has on deposit with the treasurer money or securities in at least the amount required by law.
6. A certificate (or copy of a certificate) issued by the Department of Public Safety that shows that the vehicle is a vehicle for which a bond is on file with the Department.
7. A copy of a certificate issued by the County Judge where the vehicle is registered that shows that the owner has on deposit, cash or a cashier's check in at least the amount required by law.

**NOTE:** Evidence of Financial Responsibility must be fur-

## 04.15.00 - 15.02

nished for the TOWING VEHICLE of any trailer, semitrailer, or pole trailer presented for inspection.

**NOTE:** A non owner's policy is not acceptable as evidence of Financial Responsibility.

**NOTE:** Proof of Financial Responsibility from another state is acceptable.

An inspection certificate may not be issued for a vehicle for which the owner or operator fails to furnish the required evidence of Financial Responsibility.

### 1. Vehicles exempt from this requirement:

- a. GOVERNMENT VEHICLES (U.S., State-Texas, county, city, or other political subdivision)
- b. Vehicles registered to volunteer fire departments
- c. Antique vehicles

## 04.15.00 INSPECTION REQUIREMENTS

**Every vehicle which is registered in this state and operated on the highways of this state is required to be inspected.**

### 15.01 Vehicles Exempt from Inspection

#### 1. Equipment:

- a. Road-Building Equipment
- b. Farm Machinery
- \*c. Trailers
- \*d. Semitrailers
- \*e. Pole Trailers
- \*f. Mobile Homes
- g. Any Vehicle required to Display a Slow-Moving Vehicle Emblem

\*When the actual gross weight or registered gross weight is 4,500 pounds or less.

#### 2. A vehicle with one of the following type Texas license plates:

- a. Paper Dealer Demonstration/In-transit/Converter Tag
- b. Parade License
- c. Former Military Vehicle License
- d. In-Transit License
- e. Machinery License
- f. Disaster License
- g. Farm Trailer License
- h. Permit License
- i. Antique License
- j. Charitable Organization Tag
- k. All-Terrain Vehicle Validation Sticker

#### 3. A vehicle with one of the following Texas permits:

- a. Factory Delivery Permits
- b. Prorate Tabs
- c. One-Trip Permits
- d. Temporary 24-Hour Permits
- e. Mobile drilling and servicing equipment used in gas, oil, or crude production having a 72- or 144-Hour Permit

### 15.02 General Inspection Requirements

1. City, county, state or federally owned vehicles, if licensed with Texas plates, require inspection and they must meet the same requirements of any other vehicle of that same size, weight, etc. (**Example:** Fire trucks, garbage trucks, ambulances, police vehicles, and others; except that these vehicles are exempt from evidence of Financial Responsibility requirements.) (See 04.10.00.)
2. In inspecting trailers, semitrailers, pole trailers, and mobile homes, these vehicles will be considered a separate vehicle whether used in connection with a motor vehicle or not and will require a separate inspection and certificate. A separate fee shall be charged for each vehicle inspected.
3. Each inspection shall be a complete inspection performed by a certified inspector and shall include a check of all the items in the Rules and Regulations Manual, except that a

[ reinspection of a rejected vehicle by the same station within 15 days of the initial inspection that resulted in rejection need only check the items previously found defective, unless any other obvious defects are noted. A vehicle NOT inspected because of no evidence of Financial Responsibility will not be considered as rejected and no fee will be charged. Once the inspection on a vehicle has begun, it must be completed whether or not the vehicle is passed or rejected.

4. All inspections must be made only at the approved inspection areas at the location approved by the Texas Department of Public Safety.

5. All persons used as inspectors shall be certified by the Texas Department of Public Safety. If a certified inspector changes their place of employment, the inspector certification ceases and the Department representative must be notified immediately. Each inspection shall be performed by a properly certified inspector.

6. Inspections may be made while it is raining or snowing. Care must be exercised when making inspections during inclement weather. Road (brake) tests will be permitted with due care when it is raining or when braking surfaces are wet. No road (brake) tests are permitted on icy road test areas.

7. No duplicate safety inspection certificates can be issued. If a certificate is lost, stolen, or mutilated, the vehicle must be submitted for another inspection and subject to statutory fee.

8. Refusing to inspect a vehicle submitted for inspection without sufficient cause or the careless inspection and willful violation of the inspection requirements may result in suspension of the Certificate of Appointment and possible court action.

9. Vehicles not registered in the state of Texas may be inspected, but shall not be issued a Texas vehicle inspection certificate unless they meet Texas' requirements, including evidence of Financial Responsibility.

10. Complete Vehicle Identification Number or serial number shall be listed on the inspection station report, on the identification certificate, and on the reverse side of the safety inspection certificate in the space provided for same. If no number is on the vehicle, show "None."

11. Fleet Station: An Official Vehicle Inspection Station to which the Department has granted authority to inspect only those vehicles which are owned by, or under bona fide lease to or under service contract to, the company in whose name the fleet inspection station license is issued.

12. Governmental Station: An Official Vehicle Inspection Station to which the Department has granted authority to inspect only those vehicles which are owned and operated by the political subdivision and agency of the state and in whose name

the governmental vehicle inspection station's Certificate of Appointment is issued.

13. Each Official Vehicle Inspection Station must inspect every vehicle (according to endorsement) presented for inspection as prescribed by the rules and regulations, either rejecting or approving it. A vehicle rejected by one inspection station may be reinspected by another inspection station if the vehicle owner desires to have this done, and is willing to pay an additional fee.

14. Any vehicle coming under the provisions of the Vehicle Inspection Act that is involved in an accident which results in apparent property damage or affects the safety of said vehicle in the items covered under the Vehicle Inspection Act must be reinspected after adequate repairs are made. The required fee shall be collected.

15. Safety inspection certificates and identification certificates must be affixed to or issued to a vehicle ONLY by the certified inspector within the approved area of inspection in the inspection station where he is certified to inspect.

16. Foreign-made, as well as American-made, motor vehicles must comply with all the vehicle inspection requirements, including lighting equipment meeting Department standards.

17. Reports of violations of the Vehicle Inspection Act or of these rules and regulations will be investigated. When such reports are found to be justified they may result in the suspension of the inspection station, possible court action, or other appropriate action. Repeated violations or serious violations may result in the revocation of the appointment by the Department or action against the certified inspector.

18. The term "inspection" as herein used shall not include repairs or adjustments. Repairs or adjustments necessary to bring the vehicle into conformity with these regulations may be made by agreement between the vehicle owner and such inspection station or whatever repair shop the vehicle owner may select. Total charges for inspection, repairs, and adjustments, including any state sales tax, must be reported on the inspection station report.

19. All vehicles owned by the federal government shall be exempt from all provisions of the Vehicle Inspection Act or rules and regulations, except those which are registered in Texas and display Texas registration plates.

20. Vehicles that are temporarily out of the state and not conveniently available for inspection during the month designated by the inspection certificate must be presented for inspection immediately upon return to the state.

21. Each vehicle that meets the requirements as set forth in these regulations shall be issued an approval certificate.

## 04.15.03 - 15.07

Those vehicles that do not meet the inspection requirements must be issued a rejection receipt.

### 15.03 Foreign Vehicles

The inspection of vehicles applies to foreign-made motor vehicles as well as American-made motor vehicles. However, there are some foreign-made vehicles that cannot be inspected in the usual manner. Therefore, when inspecting those foreign-made vehicles, you are authorized to follow the Department's recommendation for inspection and to reject any vehicle for an item that is worn, missing, broken, or defective in any manner that exceeds the Department's tolerance for replacement.

Many of these vehicles are not export models and, therefore, are equipped with lighting and other devices that do not meet standards adopted by the Texas Department of Public Safety. All devices must meet applicable Department standards. In cases where those devices do not comply with the inspection requirements, legal devices must be installed. Head lamps on those vehicles must be of a type acceptable by the Department before an inspection certificate can be issued.

### 15.04 Miniature Vehicles

These miniature vehicles (mini-bikes, go-carts, or toy class vehicles) must pass the inspection requirements and obtain an inspection certificate before being operated on the streets and highways of this state.

Such vehicles with not more than three wheels in contact with the ground will be inspected as motor-driven cycles. All others will be inspected as passenger cars.

Before an inspection certificate is issued to one of these vehicles, be absolutely sure that it meets all inspection requirements for the class vehicle and is equipped with acceptable lighting devices that meet Department standards.

All-Terrain Vehicles (ATV) cannot be inspected regardless of how equipped. This class vehicle is not designed for use on public roads.

### 15.05 Mopeds

Definition: Moped means a motor-driven cycle whose speed attainable in one mile is not more than 30 mph and that is equipped with a motor that produces not more than two-brake horsepower. If an internal combustion engine is used, the piston displacement may not exceed 50cc and the power drive system may not require the operator to shift gears.

**NOTE:** A moped will be issued a regular motorcycle registration plate by the Texas Department of Transportation.

**NOTE:** The only items of inspection on a moped will be the brake, head lamp, rear lamp, and reflector.

### 15.06 Reconstructed or Rebuilt Vehicles

All vehicles used on the public highways are required to meet all of the state equipment laws and requirements; therefore, reconstructed or rebuilt vehicles which are using the public highways are also expected to meet all of the state equipment laws and regulations. Reconstructed or rebuilt vehicles in many instances fail to meet state requirements and, therefore, are not legal for use on the public highways.

All reconstructed or rebuilt vehicles (sand or dune buggies or hot rods) must comply with inspection requirements for the class of motor vehicle it is being inspected as, such as car, truck, motorcycle, or motor-driven cycle.

Be sure to check reconstructed or rebuilt vehicles for all required items of inspection with particular attention to the lighting devices. Head lamps shall be of a type acceptable by the Department. No modifications are allowed that will change the original design or performance of any lamp. Only acceptable automobile head lamps may be used on cars and trucks. Either the 7-inch head lamps or both dual head lamps (type 1 and type 2) may be used. Only acceptable motorcycle head lamps may be used on motorcycles, motor-driven cycles, and mopeds.

All lighting devices must be of an acceptable type that meet Department standards and must comply with the mounting heights as specified in the inspection requirements.

The year model of a reconstructed vehicle will be the same year in which it was reconstructed and not the year of original manufacture. Therefore, the inspection requirements would be for the model year of the vehicle (same as the year of reconstruction) or the year model of the engine itself, whichever is the later model.

Motor vehicles used for competitive racing, such as modified stock cars, dragsters, and hot rods may be inspected. When such a vehicle is presented for inspection, all rules and regulations regarding the inspection of the vehicle will apply. This applies to brake requirements, exhaust systems, as well as any other item required in these provisions.

### 15.07 Multi-Purpose Vehicles

Multi-purpose passenger vehicle means a motor vehicle with power, except a trailer, designed to carry 10 persons or less

which is constructed either on a truck chassis or with special features for occasional off-road operation. Lighting and reflector requirements for this type vehicle would refer to diagrams of similar type vehicle such as bus or van-type truck. The type of registration plate is not a determining factor in the number of lighting devices required for inspection purposes.

**15.08 Vehicles Equipped to Use Liquefied Gas as a Fuel.** No certificate of safety inspection may be issued by any inspector or inspection station for a motor vehicle equipped with a carburetion device permitting the use of liquefied gas alone or interchangeably with other fuels, unless a currently valid liquefied gas tax decal issued by the Comptroller of Public Accounts is affixed to the lower right-hand corner of the front windshield of the vehicle on the passenger's side. Vehicles operated by a public school district or county are exempt from this requirement.

**NOTE:** Certain commercial vehicles with apportioned registration may be exempt from the liquefied gas tax decal requirement if they present an exemption letter issued by the Comptroller's office. The exemption letter will identify the vehicle by Vehicle Identification Number (VIN), license number, and must be furnished to inspector prior to inspection.

**15.09 Unsafe Vehicles.** It is a violation of the Transportation Code for any person to drive or move on any highway any motor vehicle, trailer, semitrailer, pole trailer, mobile home, or combination thereof unless the equipment upon any and every said vehicle is in good working order and adjustment as required in this Act and said vehicle is in such safe mechanical condition as not to endanger the driver or other occupant or any person upon the highway. It is also a violation for any person to drive or move or for the owner to cause or to permit to be moved on the highway any vehicle, or combination of vehicles, which is in unsafe condition as to endanger any person, or which does not contain those parts or is not at all times equipped with such lamps and other equipment in proper condition and adjustment as required by law, or which is equipped in any manner in violation of the law, or for any person to do any act forbidden or fail to perform any act required by law.

**15.10 Special Lighting Devices and Reflector Requirements.** The law describes certain lamps and reflectors that certain vehicles must have regardless of whether or not those vehicles are operated at night. The law further states that when these vehicles are operated at night all of these prescribed lamps must be burning.

Any lighting device, lens and/or reflector used on a vehicle must meet standards adopted by the Texas Department of Public Safety for that particular use.

Whenever a requirement is declared as to the mounted height of lamps or devices, it shall mean from the center of such lamp or device to the level ground upon which the vehicle stands when such vehicle is without a load.

Whenever requirement is declared as to visibility distance from which certain lamps and devices shall render objects visible or within which such lamps or devices shall be visible, these provisions shall apply at nighttime in respect to a vehicle without a load when upon a straight, level, unlighted highway under normal atmospheric conditions unless a different time or condition is expressly stated.

REJECT ANY VEHICLE PRESENTED FOR INSPECTION WHICH IS NOT EQUIPPED WITH ALL THE LAMPS AND DEVICES PRESCRIBED REGARDLESS OF HOW AND WHEN THE VEHICLE IS OPERATED.

**15.11 Commercial Motor Vehicle Inspection Program.** The term "commercial motor vehicle" means a self-propelled or towed vehicle, used to transport persons or property that is used on a public highway to transport passengers or cargo if:

1. the vehicle or combination of vehicles has a gross weight, registered weight, or gross weight rating of more than 26,000 pounds; or
2. the vehicle is a farm vehicle with a gross weight, a registered weight, or a gross weight rating of more than 48,000 pounds; or
3. the vehicle is designed to transport more than 15 passengers, including the driver; or
4. the vehicle is used to transport hazardous materials in a quantity requiring placarding by a regulation issued under the Hazardous Materials Transportation Act; or
5. the vehicle or combination of vehicles has a gross weight rating of more than 10,000 pounds and is operated in interstate commerce and registered in this state.
6. the vehicle is a school bus that will operate at a speed authorized by the Texas Transportation Code; or
7. the vehicle is a school activity bus that has a gross weight, registered weight, or gross weight rating of more than 26,000 pounds, or is designed to transport more than 15 passengers, including the driver.

**15.12 Acceptance of Out-of-State Commercial Vehicle Inspection Certificates.** A valid commercial vehicle inspection certificate issued outside of Texas is acceptable on a Texas-registered vehicle.

Valid out-of-state inspection certificates will not be honored on commercial vehicles required to be registered in this state.

#### 04.20.00 DETAILS OF INSPECTION

All items of inspection enumerated will be covered which are required to be inspected in accordance with the Texas Vehicle In-

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spection Act and these rules and regulations prior to the affixing of an inspection certificate on a vehicle.

During the brake/road test of a vehicle requiring a Commercial Driver License (CDL) the certified inspector may ride in the vehicle driven by its operator observing the braking performance at the brake test area, provided the inspector is not licensed to operate the class vehicle presented for inspection.

Any vehicle presented for inspection that is modified for use by a disabled person may be driven by the operator with the certified inspector riding and observing during the road test portion of the inspection.

**NOTE:** The following items of inspection are listed alphabetically.

**20.01 Beam Indicator.** Every new motor vehicle registered in this state after January 1, 1948, other than a motorcycle or a motor-driven cycle, which has multiple beam road lighting equipment, shall be equipped with a beam indicator (no certain color required) which shall be lighted whenever the uppermost distribution of light from the head lamp is in use, and shall not be otherwise lighted. Said indicator shall be so designed and located that when lighted it will be readily visible without glare to the driver of the vehicle so equipped.

1. Inspection Procedure. Check operation and condition visually.
2. Inspect for and reject if: (When required)
  - a. Vehicle not equipped with a beam indicator.
  - b. Improper switching indication.
  - c. Produces glaring light.
  - d. Inoperative for any reason.

**20.02 Brakes.** Every passenger car, truck, bus, school bus, and motorcycle shall be equipped with brakes acting on all wheels except:

1. Motor-driven cycles, motor scooters, motorcycle sidecars, or mopeds.
2. Trucks and truck tractors (manufactured prior to 1981) having three or more axles need not have brakes on the front wheels, except that when such vehicles are equipped with at least two steerable axles, the wheels on one steerable axle need not have brakes. However, such trucks and truck tractors must be capable of complying with the performance requirements of this Act.
3. Any vehicle being towed in a driveaway or towaway operation, provided the combination of vehicles is capable of complying with the brake performance requirements, does not require brakes acting on all wheels.

Definition of Terms:

**Brake System:** A combination of one or more brakes and their related means of operation and control.

**Service Brake System:** A brake system used for retarding, stopping, and controlling the vehicle under normal operating conditions. This brake is sometimes referred to as "foot brake."

**Parking Brake System:** A brake system used to hold and maintain the vehicle in a stationary position. (A positive mechanical means is employed to hold the brake applied when the vehicle is unattended.)

**Pedal Reserve:** As applied to hydraulic, mechanical, or power assisted hydraulic brakes, this is the amount of distance (total pedal travel) left in reserve when the pedal is depressed to the brake-applied position. (The purpose of the pedal reserve check is to ascertain the degree of the brake adjustment and to demonstrate satisfactory brake actuating system condition).

**Equalization:** Brakes shall be so adjusted as to operate as equally as practicable with respect to the wheels on the opposite sides of the vehicle.

**Driveaway-Towaway Operation:** Any operation in which any motor vehicle, trailer, or semitrailer, singly or in combination, new or used, constitutes the commodity being transported when one set or more of wheels of any such vehicle are on the roadway during the course of the transportation, whether or not any such vehicle furnishes the motor power.

4. **Inspection Procedure.** Service brake performance tests should be conducted on a substantially level, hard, smooth surface road or area that is free from loose material, oil, or grease. Using the service brake only, the stopping ability of the vehicle should be tested by one of the following methods.

a. Service Brake Test

1) **On Road (Decelerometer):** Mount an approved decelerometer at centerline of vehicle. Level the decelerometer. At a speed of 20 mph apply service brake firmly. Observe decelerometer reading.

2) **On Road (Road Test):** At a speed of 20 mph apply service brakes firmly. Observe whether a vehicle comes to a smooth stop within the distance prescribed by the chart, "Required Brake Performance." Inspector should have firm control of the steering wheel throughout the test.

3) **Platform Tester:** Drive vehicle onto “drive-on-and-stop” platform tester. Apply brakes firmly at a speed from 4-8 mph without wheel lockup. All braking action must take place on the platforms.

**NOTE:** Front-wheel drive vehicles are to be checked by road test only unless a platform tester **specifically approved** by the Department to test front-wheel drive vehicles is used.

These machines may be used to inspect the relative effectiveness of each wheel. There should be braking action on all wheels and the action on any one wheel should be 75 percent or more of the action on the other wheel on the same axle.

4) **Roller-Type Brake (Dynamometer-Force Measuring Type):**

- a) Adjust tire inflation to recommended values.
- b) Position vehicle on dynamometer rolls and begin test.
- c) Follow Department’s recommended testing procedures.

b. Test Brake Hydraulic System for Leakage.

While vehicle is stopped, inspector should be able to apply a moderate foot force (40-60 pounds in nonpowered systems and 15-20 pounds in power assisted systems).

c. Test Pedal Reserve.

While the vehicle is stopped, depress brake pedal under moderate foot force (40-60 pounds in nonpowered systems and 15-20 pounds in power assisted systems).

d. Condition of Vacuum System.

Visually inspect system for collapsed, broken, badly chafed and improperly supported hoses and tubes, and loose or broken hose clamps.

5. Inspect Service Brakes for and reject if:

- a. Vehicle is not equipped with required service brakes.
- b. Upon first application, there is less than 2 inches of pedal reserve as determined by the use of an accurate measurement on the fully applied brake pedal of vehicles equipped with conventional brakes.
- c. Upon first application, there is less than 1 inch of pedal reserve as determined by the use of an accurate mea-

surement on the fully applied brake pedal of vehicles with power brakes (power must be on and operating when tested).

d. On service brakes that cannot be checked with the use of an accurate measurement, there is less than a reserve of one-third of the total travel distance of the brake actuator.

e. Brake pedal height cannot be maintained under moderate foot force (40 to 60 pounds for conventional - 15 to 20 pounds for power) for a period of 1 minute.

f. There is visible leakage or audible seepage in hydraulic lines and cylinders, or any other part of the service brake system.

g. Fluid level in the master cylinder is more than 1 inch below the top of the reservoir or below manufacturer’s recommended level.

h. Hoses or cables are restricted, abraded, crimped, cracked, leaking, frayed, or broken.

i. Brake rods or mechanical parts are missing, broken, badly worn, or misaligned.

j. Brake operating levers or control cables do not operate freely, improperly positioned, or misaligned.

k. Any part of the service brake system has been removed, disconnected, rendered inoperative.

l. There is an obvious metal to metal contact sound when brakes are applied, and upon investigation, drum or disk is being scored.

m. The service brakes do not develop the required total braking force as determined by machine tests.

n. Brakes do not meet requirements for stopping distances for the class of vehicle.

o. The brakes are not equalized as determined from road testing or by machine tests of the vehicle.

p. Brake warning lamp or signal is on or comes on during test.

**NOTE:** Anti-lock (ABS) lamp or signal which is on or comes on during test will not be cause for rejection.

**NOTE:** It is imperative that brake system reservoir cover and the surrounding area be thoroughly cleaned before cover is removed for inspection to assure that NO DIRT OR WATER is mixed with the brake fluid.

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**20.03 Parking Brake.** The inspection of the parking brake (auxiliary or holding) applies only to all motor vehicles beginning with the model year 1960. This does not include motorcycles, motor-driven cycles, mopeds, trailers, semitrailers, pole trailers, and mobile homes.

Some types of parking brake may be actuated by foot or hand lever.

The parking brake may be assisted by the service brakes or other source of power, provided that failure of the service brake actuating system or other power assisting mechanism will not prevent the parking brakes from being applied. The parking brakes should be so designed that when once applied, they shall remain applied - despite exhaustion of any source of energy or leakage of any kind. If the means of applying the parking brakes and the service brakes are connected in any way, they shall be so constructed that failure of any one part shall not leave the vehicle without operative brakes. Brake lock systems will not meet the parking brake requirement.

1. Inspection Procedure. On a motor vehicle that has the automatic parking brake release when the transmission is placed in gear, the parking brake should be held down with the foot and the engine accelerated enough with the vehicle in gear to determine if it is working properly.
2. Inspect Parking Brake for and reject if:
  - a. Motor vehicle is not equipped with a parking brake.
  - b. Operating mechanism, when fully applied, does not hold the vehicle.
  - c. Actuating mechanism is not fully released when the release control is operated.
  - d. Any mechanical parts are missing, broken, badly worn, or not operating properly.
  - e. Pull cables are badly worn, stretched, frayed, or not operating freely.
  - f. Parking brake will not hold the vehicle in place when, with the engine running, the vehicle is placed in forward gear and the engine is accelerated enough to cause a pull on the braking mechanism.

**20.04 Motorcycle, Motor-Driven Cycle, and Moped Brake Requirements.** Every motorcycle, motor-driven cycle, and moped, at all times and under all conditions of loading, upon application of the service brake pedal or control, shall be capable of:

1. Developing a brake force that is not less than 43.5% of its gross weight, OR

2. Decelerating to a stop from not more than 20 miles per hour at not less than 14 feet per second, OR

3. Stopping from a speed of 20 miles per hour in not more than 30 feet, such distance to be measured from the point at which movement of the service brake pedal or control begins.

Motorcycles shall be provided with adequate brakes on all wheels. Sidecars are not required to have brakes when braking performance of the motorcycle or motor-driven cycle is met. Motor-driven cycles and mopeds are required to have brakes on at least the rear wheel. During the brake road test, a motorcycle, motor-driven cycle, or moped may be driven by its owner or operator with certified inspector observing the braking performance at the brake test area if the certified inspector is not licensed to operate a motorcycle, motor-driven cycle, or moped.

**20.05 Road Test Procedures.** If a road test is used for checking service brakes:

1. Brake test area must be used on every inspection made.
2. When it is raining, snowing, or when the brake surfaces are wet, brake tests are permitted; however, if the certified inspector feels that they cannot safely and with due care accurately check the service brakes they may refuse to make the inspection.
3. No inspections are permitted when the brake test areas are icy.
4. Extreme care must be exercised and sudden stops must be avoided if other traffic is affected.
5. All vehicles so tested (brake test area) should be driven at a speed of 20 miles per hour and the vehicle must stop as indicated by the stopping distance chart. (See brake performance chart in reference section 30.06.)

The brake application must be started as close to a speed of 20 miles per hour as possible. The stopping distance is to be measured from the point at which the service brake pedal or control begins. The vehicle must stop within the prescribed stopping distance requirements and must not pull to the right or left. Using the service (foot) brake only, the stopping ability of the vehicle should be tested by actual operation of the vehicle.

When applying brakes to the moving vehicle, the braking force must be evenly distributed to the wheels. The brakes should be so adjusted as to operate as equally as practicable with respect to the wheels on the opposite sides of the vehicle. The driver should have a firm control of the steering wheel throughout the test.

Brakes on a truck-tractor may be inspected without a trailer; however, a trailer shall be inspected only with a towing vehicle attached.

Approved brake machines may be used for testing brakes so long as the machine and the braking surfaces afford a competent brake test.

All testing of service brakes for stopping distance and equalization must be done either by an actual road test or by a machine.

**NOTE:** If platform-type brake tester is used, a measured brake test area must also be maintained to test vehicles with more than two (2) axles or vehicles with front-wheel drive, unless, the tester has been specifically approved by the Department to test these vehicles.

**20.06 Platform-Type Tester.** This type of brake tester is a drive-on-and-stop machine consisting of 4 pads or platforms, one for each wheel. When the brakes are applied at the time the vehicle is moving on the pads, the braking effort at each wheel causes a proportionate movement of the pad against the measuring system. All braking action must take place on the platforms.

#### 1. Operation

- a. Drive vehicle on brake tester about 5 miles per hour and apply the brakes firmly but not severely. (Excessive speed and braking should be avoided).
- b. These machines may be used to inspect the relative effectiveness of each wheel. There should be braking action on all wheels.
- c. Each gauge will record the individual wheel braking effort in hundreds of pounds.
- d. Total braking effort and comparative braking energy can be determined.
- e. The tester must be properly installed, maintained, and kept clean at all times.
- f. If the vehicle fails the first brake test, a second brake test must be conducted before the vehicle is rejected.

#### 2. Equalization and tolerances:

- a. Total reading must not be less than 50% of the total weight of the vehicle if the vehicle has brakes on all wheels. The required 50% is the equivalent of a vehicle stopping within 25 feet at 20 miles per hour.
- b. Total reading must not be less than 35% of the weight

of the vehicle if the vehicle does not have brakes on all wheels. The required 35% is the equivalent of a vehicle stopping within 39 feet at 20 miles per hour.

c. Brake machine readings on each opposing wheel of the same axle shall be within 25% on the front axle and within 35% on the rear axle.

#### 3. Conditions affecting brake tester readings:

- a. Wet tires or wet tread plates (pads) will cause readings of braking efficiency to be inaccurate.
- b. Grease, sand, or other foreign material on tires or tread plates (pads) will also cause readings of braking efficiency to be inaccurate.
- c. Worn or slick tires will not affect brake tester as much as they will affect a road test.
- d. Dirt and debris under the tread plates (pads).

**20.07 Roller-Type Tester.** This type brake tester (Dynamometer [Force Measuring Type]) is equipped with powered rollers that rotate the wheels at a speed of approximately 35 to 45 miles per hour with the vehicle in a stationary position. The brakes are applied while the wheels are turning and developing braking force. Measurements of both BRAKING FORCE (Brake Effort) and BRAKE BALANCE are indicated on the gauge(s). Brake fade can also be tested on this machine.

**1. Operation - Acceptance Tests.** With tester in operation and wheels turning, apply brakes slowly until brake effort reaches the following values and hold for 5-6 seconds:

- a. Small vehicle up to 2,200 pounds - 175 lb Brake Effort/Wheel (Total 350 pounds)
- b. Light compacts 2,300 to 3,000 pounds - 230 lb Brake Effort/Wheel (Total 460 pounds)
- c. Heavy compacts 3,100 to 3,600 pounds - 285 lb Brake Effort/Wheel (Total 570 pounds)
- d. All others over 3,700 pounds - 335 lb Brake Effort/Wheel (Total 670 pounds)

Brake Balance Test - During the "Brake Force Test," variance in braking force between wheels should not exceed 70 pounds.

**NOTE:** As an additional service to the vehicle owner or operator, the inspection station is permitted to perform an additional dynamic brake inspection according to recommendations of the equipment manufacturer. However,

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legal reject must be based on the above parameters under "Operation - Acceptance Tests."

If substandard brake conditions are found that are not exposed by the above acceptance test, the inspection station may suggest that the brake repairs be made but must clearly inform the vehicle owner or operator that such repairs are not mandatory to pass inspection.

**20.08 Decelerometer-Type Tester.** This tester is an inertia-type decelerometer consisting of a scale to measure the vehicle's deceleration or equivalent braking force (sometimes referred to as brake efficiency) in percentages. The decelerometer is generally placed as close to the center of the vehicle as practicable (on window of right front door) and the vehicle is operated on the highway outside the inspection station.

### 1. Operation

- a. Level decelerometer and set to "0."
- b. Drive vehicle on a clean, level road (road grade of 5% or less) at 20 mph and apply brakes evenly, without skidding vehicle wheels.
- c. Read the dial to see if vehicle stopped within required stopping distance for class of vehicle.
- d. For brake balance (equalization), the vehicle should stop in a straight line. A pull to either side, right or left, during a test stop indicates brake unbalance.

### 2. Conditions affecting brake tester readings:

- a. Wet tires and highways may cause readings of braking efficiency to be inaccurate.
- b. Oil slicks, sand, or other foreign material on tires or highways may also cause readings of braking efficiency to be inaccurate.
- c. Worn or slick tires may also cause readings to be inaccurate.
- d. Any fast, hard application of the brake can cause wheel lockup and tire skid.

## 20.09 Vacuum Brake System

1. When checking the operation of the vacuum system on a truck or truck-tractor, the trailer shutoff valves must be closed. When checking the operation of the vacuum system on a trailer or semitrailer, the trailer must be coupled to a truck or a truck-tractor with the trailer shutoff valve open. The engine

of the truck-tractor should be allowed to run for one minute to build up vacuum.

- a. Visually inspect system for collapsed, broken, badly chafed, and improperly supported hoses and tubes, and loose or broken hose clamps.
- b. On truck or truck-tractor, depress brake pedal with moderate foot force. While maintaining this force on the pedal, start engine, and observe if pedal falls slightly when engine starts.

On trucks with low vacuum indicators build full vacuum. Shut off engine and reduce vacuum by making a series of moderate brake applications. A flashing or buzzing signal shall function when vacuum reaches eight inches mercury.

Apply and release pedal a number of times and observe action on brake chamber rod on trailers.

### 2. Inspect for and reject if:

- a. Hoses, tubes, or connections leaking, restricted, abraded, crimped, cracked, or broken; or collapse of vacuum hoses when vacuum is applied. Connecting lines not properly attached or supported to prevent damage or abrasion by contact with frame, axle, other lines, or any other part of the vehicle.
- b. Evidence of leakage in the system.
- c. In vacuum-assisted systems, service brake pedal does not move slightly as the engine is started while pressure is maintained on the pedal.
- d. Trailer vacuum brake chamber rods not operating in conjunction with the tractor brake pedal, or not reaching full released position.
- e. In vacuum-equipped vehicles in excess of 10,000 pounds gross vehicle weight and vehicle combinations, insufficient vacuum reserve to permit three full service brake applications after engine is stopped.
- f. Failure of low-vacuum indicator to function when system is reduced to eight inches of mercury vacuum.

## 20.10 Air Brake System

1. With air system charged, open drain cocks in each reservoir, carbon trap, or filter used in the air system; close drain cocks and with air system at zero gauge pressure, check pressure buildup, running engine at fast idle, and record time

to raise air pressure from 50 to 90 psi on the gauge. Check pressures at which light, buzzer, or flag connected to the low-pressure indicator is no longer visible or audible. Continue running engine until the governor cuts out and observe pressure-gauge reading. With engine idling, reduce pressure in system by making a series of brake applications and observe pressure at which governor cuts in. With system fully charged, stop engine and check for air leakage by recording the pressure drop in psi per minute both with brakes released and brakes fully applied. Inspect for restricted, abraded, collapsed, improperly supported, or broken hoses and tubes and audible leaks. Check safety valve for freedom of action. If the compressor is belt driven, check belt for tightness and observe belt condition. Check air compressor for air cleaner condition and restrictions.

## 2. Inspect for and reject if:

- a. Time required to build up air pressure from 50 to 90 psi more than 3 minutes with engine running at fast idle.
- b. Warning device (light, buzzer, or flag) connected to the low pressure indicator of the air brake system not operating when air pressure is lowered to 55 psi.
- c. Governor cut-in pressure lower than 80 psi or cut-out pressure higher than 135 psi, unless other values are recommended by the vehicle manufacturer.
- d. Compressed air reserve insufficient to permit one full service brake application after engine is stopped, and with system fully charged, without lowering reservoir pressure more than 20% below initial reading.
- e. Air brake pressure drop of more than 2 psi in 1 minute for single vehicles or more than 3 psi in 1 minute for vehicle combinations, with engine stopped and service brakes released.
- f. Air pressure drop of more than 3 psi in 1 minute for single vehicles or more than 4 psi in 1 minute for vehicle combinations with engine stopped and service brakes fully applied.
- g. Hoses, tubes, or connections leaking, restricted, abraded, crimped, cracked, or broken. Connecting lines not properly attached or supported to prevent damage or abrasion by contact with frame, axle, other lines, or any other part of the vehicle.
- h. Valves, diaphragms, or piston cups leaking audibly.
- i. Air safety valve inoperative.
- j. Compressor drive belt without sufficient tension, or badly worn or frayed.

- k. Compressor air intake cleaner clogged sufficiently to prevent proper intake of air.

## 20.11 Electric Brake System

1. Insert a low-range (0 to 25 amperes will be adequate for most two and four brake systems; 0 to 40 amperes may be required for a six brake system) dc ammeter into the brake circuit between the controller and the brakes. With controller in "off" position, ammeter should read zero. Gradually apply controller to "full on" position; observe maximum ammeter reading and current modulation. Gradually return controller to "full off" and observe return to zero ampere and current modulation. Divide maximum ammeter reading by number of brakes.

Check for loose or dirty terminal connections and for broken, frayed, or unsupported wires.

## 2. Inspect for and reject if:

- a. Trailers showing a per-brake maximum amperage value of more than 20% above, or less than 30% below, the brake manufacturer's maximum current rating.
- b. Ammeter showing no reading, or needle indication not steady on application and release of brake controller.
- c. Loose or dirty terminal connections; broken, frayed, or unsupported wires. Trailers using single conductor or non-stranded wires or wires of a size below brake manufacturer's minimum recommendation.

**NOTE:** Parking brakes are not inspected on trailers, semi-trailers, pole trailers, and mobile homes.

**20.12 Cab Lamps.** Refer to Reference Section for lighting diagrams. Every truck-tractor shall have on the front, two cab clearance lamps, one on each side.

1. **Definition of a Truck-Tractor.** Every motor vehicle designed and used primarily for drawing other vehicles and not so constructed as to carry a load other than a part of the weight of the vehicle and load so drawn.
  - a. Required on truck-tractors only.
  - b. Color amber.
  - c. Number - 2.
  - d. Location - shall be mounted on the front of the cab, one on each side as described in lighting diagram. If the vehicle has a sleeper cab, these lights may be placed on the

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highest and widest part of the cab with the light showing to the front of the vehicle. Cab lamps should be located so as to indicate the extreme width of the truck-tractor cab.

2. **Inspection Procedure.** Check operation and condition.

3. **Inspect for and reject if:**

- a. Lamps are required and not present.
- b. Lamp is not securely mounted and properly located.
- c. Lamp does not emit required color, lens, or bulb painted.
- d. Lamp lens is discolored, or missing.
- e. Lamp is not visible from distance between 500 feet and 50 feet.
- f. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

**20.13 Clearance Lamps.** Refer to Reference Section for lighting diagrams.

1. Required on all:

Buses 80 inches or more in overall width.  
Trucks 80 inches or more in overall width.  
Trailers and semitrailers 80 inches or more in overall width.  
Trailers and semitrailers 30 feet or more in overall length.  
Pole trailers.

- a. Clearance lamps shall, so far as is practicable, be mounted on the permanent structure of the vehicle in such a manner as to indicate the extreme height and width of the vehicle. When identification lamps are present and are mounted as high as practicable, clearance lamps may be mounted at optional height. When the mounting of front clearance lamps results in such lamps failing to indicate the extreme width of the trailer, such lamps may be mounted at optional height but must indicate, as near as practicable, the extreme width of the trailer.
- b. Clearance lamps and side marker lamps may be mounted in combinations, provided illumination is given as required by law.

c. Clearance lamps mounted on the front or on the sides near the front of a vehicle shall display an amber color.

d. Clearance lamps mounted on the rear or on the sides near the rear of a vehicle shall display a red color.

e. Clearance lamps shall be visible under normal atmospheric conditions at a distance between 500 feet and 50 feet from the vehicle on which mounted.

f. On buses and trucks 80 inches or more in overall width and trailers and semitrailers 80 inches or more in overall width:

- 1) On the front, two clearance lamps.
- 2) On the rear, two clearance lamps.

2. **Inspection Procedures:**

- a. A crack is defined as any break, separation, or missing part that permits light from the bulb to emit through the crack or break.
- b. Check operation and condition.

3. **Inspect for and reject if:**

- a. Lamps are not present.
- b. Lamps are not securely mounted and properly located.
- c. Lamps do not emit required color; lens or bulb painted.
- d. Visibility requirements are not met.
- e. Lenses are discolored, or missing.
- f. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

**20.14 Exhaust Emission System.** The owner or operator of any new motor vehicle or new motor vehicle engine beginning with the model year 1968 equipped with an exhaust emission system shall maintain the exhaust emission system in good operable condition and shall use it at all times that the motor vehicle or motor vehicle engine is operated. The owner or operator

of the motor vehicle or motor vehicle engine shall not remove or intentionally make inoperable within the state of Texas the exhaust emission system or any part thereof, except where the purpose of removal of the exhaust emission system or part thereof is to install another exhaust emission system or part thereof, which is intended to be equally effective in reducing atmospheric emissions from the vehicle or engine.

The exhaust emission system was installed by manufacturers of motor vehicles beginning with model year 1968. The inspection of the exhaust emission system will apply only to those vehicles that are equipped with such a system. The following exhaust emission systems will be inspected if installed as original equipment by the manufacturer: thermostatic air cleaner, exhaust gas recirculation system, positive crankcase ventilation system, air injection system, evaporative emission system, and/or catalytic converter.

If installed as original equipment by the manufacturer, the catalytic converter will be considered a part of the exhaust emission system on all 1984 and later model vehicles. It will be inspected as a part of the exhaust system on prior to 1984 model vehicles.

**NOTE:** The inspection of the exhaust emission system shall not apply to motor vehicles altered and modified to use only a fuel other than gasoline.

**NOTE:** Vehicles using liquefied petroleum gas as fuel or a combination of liquefied petroleum gas and any other fuel must bear a liquefied gas tax decal on the windshield lower right-hand corner showing this vehicle uses liquefied petroleum gas, before a safety inspection certificate can be issued.

**NOTE:** A motor vehicle that uses liquefied petroleum gas that is operated by a public school district or county in this state is not required to have a liquefied gas tax decal or special use liquefied gas tax decal.

[ **NOTE:** Vehicles that are originally manufactured with a Thermostatic Air Cleaner (TAC) System are required to have a closed-type design air filter system. (Vehicles 1996 and newer were not originally manufactured with a Thermostatic Air Cleaner (TAC) System.)

[ **NOTE:** Vehicles that are not originally equipped with a Thermostatic Air Cleaner (TAC) System may have an aftermarket open-type air filter intake system installed. This type of system is not an item of inspection.

1. **Inspection Procedure.** Examine visually.

2. **Inspect for and reject if:**

a. The exhaust emission system has been removed.

- b. The exhaust emission system has been disconnected.
- c. The plumbing or hoses are loose, broken, leaking, or improperly routed.
- d. Air pump (air injection-type) belt is loose, removed, excessively cracked, frayed or has pieces missing.
- e. The exhaust emission system has been altered in any manner to make it ineffective.
- f. The catalytic converter has been removed, leaking, or disconnected on a 1984 or later model vehicle.

3. **Gas Cap Testing.** Every gasoline-powered vehicle\* from 2-24 model years old will be checked for presence of and by a Department approved "Gas Cap Testing Device" to determine if the gas cap is missing or defective. The following vehicles are exempt:

- a. Antique vehicles.
- b. Slow-moving vehicles.
- c. Motorcycles.
- d. Vehicles operated exclusively by a fuel other than gasoline.
- e. Vehicles newer than 2 years old and older than 24 years old.

4. **Inspection Procedure.**

- a. Conduct daily calibration check of gas cap testing device.
- b. Check for presence (all gas caps must be checked).
- c. Check for correct type of gas cap(s).
- d. Remove gas cap(s) and test using an approved testing device. (Gas cap present but not testable will not be cause for rejection.)
- e. Any gas cap(s) failing the initial test will be tested a second time to verify failure.

5. **Inspect for and reject if:**

- a. Vehicle not equipped with required gas cap(s).
- b. Vehicle not equipped with proper type gas cap(s).
- c. Gas cap(s) fails both tests.

**NOTE:** When a vehicle is presented for inspection and the vehicle is from a designated emissions county and is subject to the Texas Vehicle Emissions Inspection and Maintenance Program an Affidavit (VIE-12) is required. (See Chapter 5, page 5-14.)

**20.15 Exhaust System.** Every motor vehicle shall at all times be equipped with muffler in good working order and in constant operation.

**Muffler defined:** Muffler is a device consisting of a series of chambers or baffle plates or other mechanical design for the purpose of receiving exhaust gas from an internal combustion engine and/or turbine wheels for the purpose of receiving exhaust gas from a diesel engine, both of which are effective in reducing noise.

[ **NOTE:** On vehicles manufactured or equipped with a muffler and a turbo, the muffler must be present and in good working order.

The exhaust system includes the manifolds, gaskets, exhaust lines, mufflers, resonators, tailpiping, and supporting hardware.

Motor vehicles cannot be equipped with a muffler which is perforated or which was perforated and has been repaired, either by a muffler repair jacket or by patching or in any other way. In those cases where a muffler is perforated at the time of an inspection or has been perforated and has been repaired previous to the inspection, the muffler must be replaced or the vehicle rejected.

Some pickups are equipped with a camper or hard shell cover and are sometimes used for the transportation of passengers. The tailpipe should discharge the exhaust at the rear or sides. This truck modification will be considered as a passenger compartment.

[ The entire structure of a passenger vehicle or a motor home-type vehicle is considered a passenger compartment. The cab only of all other truck-type vehicles is considered passenger or luggage compartment.

If the vehicle is equipped with lake pipes or similar devices, such pipes or devices must be securely plated and bolted or capped.

Dual exhaust systems may be modified to single exhaust systems and single exhaust systems to dual exhaust systems, provided the modification does not violate requirements concerning exhaust emission systems.

The catalytic converter will be considered as a part of the exhaust system on all vehicles prior to 1984 year model and will be inspected only visually (if present) for leakage. On 1984 and later model light truck and passenger vehicles, the catalytic con-

verter will be checked for presence and leakage. Flexible tubing which meets the requirements listed below may be used anywhere in the exhaust system.

**NOTE:** Inspection of exhaust systems covers the discharge of exhaust fumes and is not concerned with the noise level.

1. **Inspection Procedure.** The exhaust system shall be examined visually while the engine is running to determine efficiency of the system.

2. **Inspect for and reject if:**

- a. Vehicle is not equipped with a muffler.
- b. Any joint is loose or leaking, including manifolds. Does not include minor leakage at exhaust control valve (manifold damper or heat riser valve).
- c. Manifold is cracked or broken causing leakage.
- d. Holes, leaking seams, or patches on the muffler, resonators, exhaust pipe, tailpipe, or catalytic converter.
- e. Exhaust system is not secured to the vehicle by mounting brackets designed for exhaust systems (wire is not acceptable).
- f. Any brackets are loose, broken, or missing.
- g. There is excessive vibration of exhaust line.
- h. Any part of the exhaust system passes through the passenger compartment.
- i. The tailpipe is broken, pinched, or eroded off to the extent to allow exhaust fumes to penetrate into the interior of the passenger compartment.
- j. The tailpipe fails to discharge exhaust from the rear or sides or top of the passenger compartment of the vehicle.

**NOTE:** Holes in the exhaust system made by the manufacturer for drainage are not cause for rejection. The tailpipe must direct the exhaust fumes out from under the passenger compartment.

**NOTE:** On pickups not equipped with a camper or hard shell cover, holes or leaks in the tailpipe extending beyond the passenger compartment will not be cause for rejection.

**20.16 Head Lamps**

1. **Motor Vehicles.** Every motor vehicle shall be equipped

with at least two head lamps, at least one on each side of the front of the motor vehicle, which head lamps shall comply with the requirements and limitations set forth in these regulations.

Every head lamp upon every motor vehicle shall be located at a height of not more than 54 inches nor less than 24 inches to be measured from the center of such lamp to the level ground upon which the vehicle stands when such vehicle is without a load.

**2. Motorcycles, Motor-Driven Cycles, Mopeds.** Every motorcycle, motor-driven cycle, and moped shall be equipped with at least one and not more than two head lamps which shall comply with the requirements and limitations of these regulations.

Every head lamp upon every motorcycle, motor-driven cycle, and moped shall be located at a height of not more than 54 inches nor less than 24 inches to be measured from the cen-

ter of such lamp to the level ground upon which the vehicle stands when such vehicle is without a load. The head lamp on a motor-driven cycle or moped may be a single beam lamp.

**3. General Provisions.** All motor vehicles including motorcycles sold new after January 1, 1948, other than motor-driven cycles (motor scooters and motorbikes), must be equipped with multiple beam head lamps. Single beam head lamps will be permitted on those vehicles sold new prior to January 1, 1948, and on all motor-driven cycles (motor scooters, motorbikes, and mopeds).

There shall be an uppermost distribution of light, or composite beam, so aimed and of such intensity as to reveal persons and vehicles at a distance of at least 450 feet ahead for all conditions of loading (motorcycles, motor-driven cycles, and mopeds at a distance of at least 300 feet).

There shall be a lowermost distribution of light, or composite beam, so aimed and of sufficient intensity to reveal persons and vehicles at a distance of at least 150 feet ahead.

a. Single beam head lamp: A head lamp which provides only one fixed beam, which is not adjustable from the driver's seat (usually on motor-driven cycles and mopeds only).

b. Multiple beam head lamp: A head lamp which provides more than one beam, which may be selected as required from the driver's seat.

c. Dual head lamp system: Those vehicles using the dual or four head lamp system must be equipped with a combination of a #1 and a #2 type head lamp on each side of the vehicle. The use of any other type of lamp in those sockets is illegal and does not meet the inspection requirements for head lamps. The four head lamp system must be wired to burn as originally designed.

d. Other lamps: Fog lamps, auxiliary passing lamps, auxiliary driving lamps, backup lamps, and parking lamps are not required to be inspected.

e. Headlight identification: The 7-inch diameter 6000 series lamp, identified by the #2 on the lens, contains two filaments. One filament produces the upper beam, the other produces the lower beam. The original 7-inch sealed beam lamp can be identified by the absence of the #2 on the lens.

Composite 9,000 series head lamp, identified by bulb housing, lens, or lamp housing marking of DOT or SAE and/or series 9,000.

f. Retractable lamps: check if fully retractable and will fully

open and lock in a rigid position.

g. Composite head lamps: These 9,000 series headlights are of a new composite design. They consist of a lens (usually contoured to the grill and fenders of the vehicle), a reflector, and one or two halogen replaceable bulbs. These lamps are not sealed beam. Some moisture may appear in these lamp assemblies when the vehicle has not been in use. The moisture will dissipate when the lamps are turned on for a few seconds. Slight moisture will not reject these lamps. Some types of the composite headlights have a single lens but two bulbs, one of which burns on low beam and one on high beam. Most will have a single bulb that will burn on both high and low beam. Either type will pass inspection as long as the bulbs are under one common lens and are of a type meeting Department standards.

h. Halogen lamps: Acceptable if they are of the type meeting Department standards.

Head lamps approved for use on motorcycles and motor-driven cycles cannot be used on an automobile or truck and vice versa.

On motorcycles, motor-driven cycles, and mopeds without batteries, the engine should be run at high idle speed to observe operation of head lamp.

Refer to the Reference Section for further inspection procedures.

#### 4. Preparation for Head Lamp Inspection

a. Clean head lamp lenses, if necessary.

b. Check for burned out head lamp and proper beam switching.

5. **Inspection Procedure.** Check operation and condition.

#### 6. All head lamps will be inspected for and rejected if:

a. Lamp or lamp assembly is not securely fastened to the vehicle.

b. Lamp is improperly connected and does not light the proper filament for different switch positions.

c. Lamp lens is cracked, broken, discolored, or missing. (**Exception:** Composite or halogen-type lamps will not be rejected for being cracked, unless the reflector material inside the lamp is discolored or deteriorated.)

d. Lamp is not of a type meeting Department standards.

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- e. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- f. Lamp lens is rotated, upside down, canted, or is marked "Right," "Left," #1 or #2 and not appropriately installed.
- g. Lamp fails to function properly in any manner.
- h. Lamp has dirt or any contamination or discoloration inside or moisture except condensed moisture in composite head lamps non-seal beam halogen lamps.
- i. Lamp switch or dimmer switch does not operate properly and is not convenient to the driver.
- j. Foreign material placed on head lamp lens, such as shields, half of lens, paint, tape, etc., that interferes with the light beam of the lamp.
- k. Vehicle is not equipped with head lamps as required.
- l. Lamp can be moved easily by hand, due to a broken fender or loose support.
- m. Lamp is missing.
- n. Lens is other than clear (white).
- o. Any filament in head lamps fails to burn except composite lamps with more than one bulb when both upper and lower beam burn when selected.
- p. Wiring is dangling or connections are loose.
- q. A good ground is not made by the lamp mounting.
- r. Lamp is mounted on vehicle more than or less than prescribed mounting heights.
- s. Head lamp is covered by any lens or cover located in front of the head lamp which is any shade or color other than clear.
- t. There is physical damage that would obviously cause a headlight beam to fail to illuminate the roadway ahead of the vehicle sufficiently.

**20.17 Horn.** Every motor vehicle shall be equipped with a horn (electric or air) in good working order and capable of emitting a sound audible for a distance of 200 feet or more, but no horn shall emit an unreasonably loud or harsh sound or a whistle.

Bulb or hand-operated horn is acceptable if original vehicle equipment.

### 1. Inspection Procedure

- a. Sound horn.
- b. Check actuating device.
- c. Examine wiring - mounting.

### 2. Inspect for and reject if:

- a. Vehicle is not equipped with a horn.
- b. Horn or horn switch is not securely fastened.
- c. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor connections.
- d. Horn switch not readily accessible to vehicle operator.
- e. Horn is actuated by grounding two naked wires or similar method.
- f. Sound is not audible under normal conditions for 200 feet.
- g. Horn emits an unusually loud or harsh sound or whistle.
- h. Operation of the horn interferes with the operation of any other circuit.
- i. Horn switch missing or inoperative

**20.18 License Plate Lamp.** Either a taillamp or a separate lamp shall be so constructed and placed as to illuminate with a white light the rear registration plate and render it clearly legible for a distance of 50 feet to the rear. Any such lamp shall be so wired as to be lighted when the head lamps or auxiliary driving lamps are lighted.

On vehicles such as truck-tractors which require no rear registration plate, a license plate lamp would not be required. If two license plates are issued, a license plate lamp is required.

Do not reject a vehicle because the rear registration plate is obstructed.

**1. Inspection Procedure.** Check operation and condition visually.

### 2. Inspect for and reject if:

- a. Lamp is not present.
- b. Lamp is not securely mounted to the vehicle.

- c. Lamp is not placed to illuminate with a white light the rear registration plate. (Only one lamp is required.)
- d. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- e. Lamp is not wired so as to be lighted when head lamps or auxiliary driving lamps are lighted.
- f. Lamp emits a glaring light to the rear.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

**20.19 Mirror.** Every motor vehicle shall be equipped with a mirror so located as to reflect to the driver a view of the highway for a distance of at least 200 feet to the rear of such motor vehicle.

#### 1. Inspection Procedure

- a. Inspect only one mirror.
  - 1) Exterior Rearview Mirror: From the driver's position, visually inspect exterior mirror for a clear and reasonably unobstructed view to the rear. Look for correct location and stable mounting.
  - 2) Interior Rearview Mirror: From the driver's position, visually inspect interior mirror for proper mounting, location, cracks, sharp edges, and ease of adjustment.

#### 2. Inspect for and reject if:

- a. Mirror does not provide the driver with a clear view to the rear of 200 feet.
- b. Vehicle is not equipped with at least one mirror.
- c. Mirror offers unsafe interference with driver's forward vision.
- d. Reflective surface of mirror is cracked, broken, peeled, tarnished, or has sharp edges.
- e. Mirror is not mounted securely to prevent swing or excessive vibration unless the vehicle is equipped with another mirror which meets requirements.

**NOTE:** An inside mirror would meet all the above requirements. If the vehicle is equipped with more than one mirror, only one, either inside or outside, needs to meet all requirements.

**20.20 Reflectors (Rear).** Every motor vehicle, trailer, semitrailer, and pole trailer shall carry on the rear, either as a part of the tail lamps or separately, two or more red reflectors. Motorcycles, motor-driven cycles, and mopeds shall have mounted on the rear, either as a part of the tail lamp or separately, at least one red reflector.

Every reflector upon any vehicle shall be of such size and characteristics and so mounted as to be visible at night from all distances within 600 feet to 100 feet from such vehicle when directly in front of the lawful lower beams of head lamps, except that reflectors on passenger cars, motorcycles, and motor-driven cycles manufactured or assembled prior to January 1, 1972, shall be visible at night from all distances within 350 feet to 100 feet when directly in front of lawful upper beams of the head lamps.

Reflectors on passenger cars, motorcycles, motor-driven cycles, and mopeds shall be mounted at a height of not less than 15 inches nor more than 60 inches measured from the center of such reflector to the level ground upon which the vehicle stands when the vehicle is without a load. On commercial vehicles the height shall not be less than 24 inches and not higher than 60 inches above the ground on which the vehicle stands.

If the highest part of the permanent structure of the vehicle is less than the height required, the reflector shall be mounted as high as that part of the permanent structure will permit.

Rear reflectors on a vehicle shall reflect a red color.

Red reflectors required on the rear of a vehicle may be incorporated with the tail lamp assembly.

Required rear reflectors may be suspended on straps of not more than 6 inches in length.

Required rear reflectors shall be mounted with one on each side of the center of the vehicle.

Rear reflectors on pole trailers may be mounted on each side of the bolster or load.

#### 1. Inspection Procedure. Check condition and mounting.

#### 2. Inspect for and reject if:

- a. Reflector is not present.
- b. Reflector is not of red color.
- c. Reflector is not properly and/or securely mounted to the vehicle.
- d. Reflector is cracked to the extent that the reflecting ability is impaired.

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- e. Reflector is discolored, deteriorated, or painted.
- f. Visibility distance is not as required.
- g. Requirements shown on lighting diagram are not met.

**20.21 Reflectors (Side).** Refer to Reference Section for lighting diagrams.

1. Required on all:

Buses 80 inches or more in overall width.  
Trucks 80 inches or more in overall width.  
Trailers and semitrailers 80 inches or more in overall width.  
Trailers and semitrailers 30 feet or more in overall length.  
Pole trailers.

a. Every required reflector upon any of the above named commercial vehicles shall be of such size and characteristics and so maintained as to be readily visible at nighttime from all distances within 600 feet to 100 feet from the vehicle when directly in front of the lawful lower beams of head lamps, except that the visibility for reflectors on vehicles manufactured or assembled prior to January 1, 1972, shall be measured in front of lawful upper beams of head lamps.

b. Reflectors on commercial vehicles should be mounted at a height of not less than 24 nor higher than 60 inches above the ground on which the vehicle stands.

c. If the highest part of the permanent structure of the vehicle is less than the height required, the reflector shall be mounted as high as that part of the permanent structure will permit.

d. Reflectors mounted on the sides near the front of a vehicle shall reflect an amber color.

e. Reflectors mounted on the sides near the rear of a vehicle shall reflect a red color.

f. Reflectors may be suspended on straps of not more than 6 inches in length.

g. On buses and trucks 80 inches or more in overall width and trailers and semitrailers 80 inches or more in overall width:

On each side, two reflectors, one at or near the front and one at or near the rear.

h. On trailers and semitrailers 30 feet or more in overall length:

On each side one amber reflector, centrally located with respect to the length of the vehicle.

i. On pole trailers:

One amber reflector at or near the front of the load (if loaded.)

**2. Inspection Procedure.** Check condition and mounting.

**3. Inspect for and reject if:**

a. Reflectors are not present.

b. Reflectors are not of the required color for the location on the vehicle.

c. Reflectors are not properly and/or securely mounted to the vehicle.

d. Reflector is cracked to the extent that the reflecting ability is impaired.

e. Reflectors are discolored, deteriorated, or painted.

f. Requirements shown on lighting diagram are not met.

g. Visibility distance is not as required.

**20.22 Safety Guards or Flaps.** Safety Guards or Flaps Requirement and Inspection.

Required on all:

Trucks or Light Trucks -

If the rearmost axle of the vehicle or (combination) has four tires or more.

Trailers or semitrailers (In combination with a towing vehicle).

Not Required:

Buses

Motor homes

Pole trailers

Truck-tractors

Safety guards or flaps shall be located and suspended behind the rearmost wheels of such vehicle or if in combination behind the rearmost wheels of such combination to within eight (8) inches of the surface of the roadway. A tolerance of four (4) inches will be allowed. Safety guards or flaps shall be at least as wide as the tires they are protecting.

Safety guards or flaps shall be of metal, rubber, rubberized material, or other substantial material, capable of remaining in place back of rear wheels by their own weight while the said vehicle is being operated. The construction of safety guards or flaps will be such that they will remain in proper place back of rear wheels and will be rigid enough to prevent slush, mud, or gravel being transmitted from the vehicle's rear wheels to the windshield of the following vehicle.

When trailers and semitrailers are presented for inspection in combination, each trailer or semitrailer will be considered a separate vehicle and safety guards or flaps will be required on the rearmost axle of each trailer or semitrailer.

1. **Inspection Procedure.** Check for presence and condition.

2. **Inspect for and reject if:**

- a. Safety guard or flap is not present.
- b. Safety guard or flap is not securely mounted.
- c. Safety guard or flap is not as wide as the tire that it is protecting.
- d. Safety guard or flap is split or torn to the extent that it is ineffective.
- e. The bottom edge of safety guard or flap is more than twelve (12) inches from the surface of the roadway.

**20.23 Seat Belts.** Front seat belts are required on every motor vehicle in which front seat belt anchorages were a part of the manufacturer's original equipment on the vehicle.

Anchorage defined: A seat belt anchorage consists of a threaded hole in suitable structure to receive the seat belt attachment fittings or a circular pluck which is welded to the vehicle chassis. Self-treading bolts are inserted into the pluck to form the complete seat belt anchorage assembly.

1. **Inspection Procedure.** Inspect front lap seat belts for frayed, split, or torn webbing; malfunctioning buckles; and loose or damaged anchorages or floor pan. Vehicles originally equipped with automatic seat belts (shoulder belts) without front lap seat belts will have the automatic belts inspected.

Front lap belts only will be inspected in all other vehicles. The ignition seat belt interlock system is not an item of inspection.

2. **Inspect for and reject if:**

- a. Front lap seat belts are required and not present.

- b. Seat belt webbing is frayed, split, or torn.
- c. Belt anchorages or attachment fittings are loose, badly corroded, missing, or not fastened to belt.
- d. Belt buckles loose or inoperative.
- e. All seat belt anchor bolts are not securely fastened to floor or are missing.
- f. Pelvic restraint is not present.
- g. Seat belt will not adjust to allow proper fit.

**20.24 Side Marker Lamps.** Refer to Reference Section for lighting diagrams.

1. Required on all:

Buses 80 inches or more in overall width.  
Trucks 80 inches or more in overall width.  
Trailers and semitrailers 80 inches or more in overall width.  
Trailers and semitrailers 30 feet or more in overall length.  
Pole trailers.

- a. Side marker lamps shall, so far as is practicable, be mounted on the permanent structure of the vehicle in such a manner as to indicate the length of the vehicle.
- b. Side marker lamps and clearance lamps may be mounted in combination, provided illumination is given as required by law.
- c. Side marker lamps mounted on the front or on the sides near the front of a vehicle shall display an amber color.
- d. Side marker lamps mounted on the rear or on the sides near the rear of a vehicle shall display a red color.
- e. Side marker lamps shall be visible under normal atmospheric conditions at a distance between 500 feet and 50 feet from the vehicle on which mounted.
- f. On buses and trucks 80 inches or more in overall width and trailers and semitrailers 80 inches or more in overall width.  
  
On each side, two side marker lamps, one at or near the front and one at or near the rear.
- g. All trailers and semitrailers 30 feet or more in overall length are required to have mounted centrally located with respect to the length of the vehicle:

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- 1) On each side, one amber side marker lamp.
- 2) On each side, one amber reflector.

h. On pole trailers:

- 1) On each side, one amber side marker lamp at or near the front of the load (if loaded).
- 2) On each side, one amber reflector at or near the front of the load (if loaded).
- 3) On the rearmost support for the load, one combination marker lamp showing amber to the front and red to the rear and side, or cluster of required color lamps.

**2. Inspection Procedure.** Check operation and condition visually.

**3. Inspect for and reject if:**

- a. Lamps are not present.
- b. Lamps are not securely mounted and properly located.
- c. Lamps do not emit required color; lens or bulb painted.
- d. Visibility requirements are not met.
- e. Lenses are discolored or missing.
- f. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

**20.25 Steering.** The steering system of the vehicle must be inspected to determine if excessive wear and/or maladjustment of the steering linkage and/or steering gear exists. Wear and adjustment of the steering system will be checked by measuring lash. Vehicle must be on a dry surface.

Lash defined: Lash is the condition in which the steering control can be turned through some part of a revolution without front wheel motion. The wheels should be loaded and positioned straight ahead.

Jamming defined: Jamming is any obstruction to the turning of the steering control caused by interference between some components of the steering system.

The obstruction would include tires too large or damaged fenders that would interfere with a full right or left turn.

**1. Inspection Procedure.** Lash or Free Play: With road wheels in straight ahead position, turn steering wheel until the turning motion can be observed at the road wheels. Measure lash. (See diagram.)

**2. Inspect for and reject if:**

a. Steering Lash (see chart)

Steering Wheel diameter	Manual Steering system	Power Steering system
14" or less.....	2".....	3"
16".....	2".....	4"
18".....	2".....	4-3/4"
20".....	2".....	5"
22".....	2-3/4".....	5-3/4"

- b. It is impossible to turn the steering wheel from full right to full left without binding or jamming other than at wheel stops.
- c. Steering mechanism is not firmly attached and free of frame cracks or missing bolts.
- d. Modification of the steering system so as to affect the proper steering of the vehicle or steering wheel has been modified or replaced with one that is noticeably smaller than original factory equipment.
- e. Any excessively worn or broken parts in the steering system.
- f. Visible leaks in power steering unit or hoses.
- g. Power steering belt is excessively cracked, frayed, or has pieces missing or tension is not adequate. Serpentine belts are not to be rejected merely for cracks in the ribs.
- h. Fluid in power steering unit is below manufacturer's recommended level. Do not overfill.
- i. On motorcycles and motor-driven cycles, handlebars or steering head is bent, loose, broken or damaged so as to cause unsafe condition in steering.
- j. On motorcycles and motor-driven cycles, handlebar grips extend to a height in excess of 15 inches above the saddle level.

On vehicles equipped with flexible couplings, or energy-absorbing steering columns, when it is obvious through a visual inspection of the vehicle that the column has been damaged and is in an unsafe condition, it should be rejected. Tilt steering wheels must lock into position. Steering wheel must be securely mounted to the steering shaft.

**NOTE:** On vehicles equipped with power steering, the fluid level, belt tension and belt condition must be checked for compliance before starting the engine to check for proper operation of the steering.

**20.26 Stop Lamp.** Every motor vehicle, trailer, semitrailer, and pole trailer shall be equipped with two or more stop lamps, except that passenger cars and trucks manufactured or assembled prior to the model year 1960 shall be equipped with at least one stop lamp.

At least two stop lamps are required on all motor vehicles, trailers, semitrailers, and pole trailers, **except that at least one stop lamp is required on all motorcycles, motor-driven cycles, and all 1959 model year and earlier passenger cars and trucks.**

A stop lamp must emit a red or amber light, or any shade of color between red and amber, and be visible from a distance of not less than 300 feet to the rear in normal sunlight. The stop lamp shall be actuated upon application of the service brake and which may, but need not, be incorporated with one or more other rear lamps.

Stop lamp lens must be of a type meeting Department of Public Safety standards.

1. **Inspection Procedure.** Check operation and condition visually.
2. **Inspect for and reject if:**
  - a. Required lamp or lamps are not present.
  - b. Lamp is not securely mounted to the vehicle.
  - c. Lamp does not emit a red or amber light which is actuated on application of the service (foot) brake.
  - d. Lamp is not visible from a minimum distance of 300 feet to the rear of the vehicle to which it is attached.
  - e. Lamp lens is painted, missing, discolored, or does not fit properly.
  - f. Wiring is shoddy or electrical connections are poor.
  - g. Lamp projects a glaring or a dazzling light.
  - h. Lamp is not mounted on rear of vehicle.
  - i. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from

the bulb to emit through the crack or break.

**NOTE:** Lamp lenses cannot be repaired with repair tape or repair kit.

**20.27 Tail Lamp.** Every motor vehicle, trailer, semitrailer, pole trailer, and any other vehicle which is being drawn at the end of a combination of vehicles shall be equipped with at least two tail lamps mounted on the rear which, when lighted, shall emit a red light plainly visible from a distance of 1,000 feet to the rear, except that passenger cars and trucks manufactured or assembled prior to the model year 1960 shall have at least one tail lamp. On vehicles equipped with more than one tail lamp, the taillamps shall be mounted on the same level and as widely spaced laterally as practicable.

Every tail lamp upon every vehicle shall be located at a height of not more than 72 inches nor less than 15 inches. Taillamps are used only to designate the rear of a vehicle.

Every tail lamp upon motorcycles, motor-driven cycles, or mopeds shall be located at a height of not more than 72 inches nor less than 20 inches. Tail lamp lens must be of a type meeting Department of Public Safety standards.

At least two taillamps are required on all motor vehicles, trailers, semitrailers, and pole trailers, **except that at least one tail lamp is required on motorcycles, motor-driven cycles, and mopeds and all 1959 model year and earlier passenger cars and trucks.**

1. **Inspection Procedure.** Check operation and condition visually.
2. **Inspect for and reject if:**
  - a. Required lamp or lamps are not present.
  - b. Lamp is not securely mounted to vehicle.
  - c. Lamp does not completely emit a red light plainly visible 1,000 feet to the rear.
  - d. Lamp lens is painted, missing, discolored, or does not fit properly.
  - e. Wiring is shoddy or electrical connections are poor.
  - f. Lamp is not wired so as to be lighted when head lamps or auxiliary driving lamps are lighted.
  - g. Lamp is obstructed by any part of the body.
  - h. Lamp does not emit a red color. (See note, pg. 4-26)
  - i. Lamps are not mounted on the same level and as widely spaced laterally as practicable.
  - j. Lamps are not mounted on rear of vehicle.

k. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

**NOTE:** Lamp lenses cannot be repaired with repair tape or repair kit.

[ **NOTE:** Vehicles that are equipped from the manufacturer with approved lenses which are clear and lighted by L.E.D. lights will pass state inspection.

[ **NOTE:** Vehicles that are equipped with after market lenses which are clear and lighted by a red bulb will be rejected. (There are no red bulbs currently approved for use on vehicles.)

**20.28 Tires.** Every motor vehicle (including motorcycles and motor-driven cycles, trailer, semitrailer, pole trailer, and mobile home) registered in this state and operated on the streets and highways of this state and required to be inspected shall be equipped with tires in proper and safe condition.

Definition of terms:

**Rim:** A metal support for a tire or a tire and tube assembly upon which the tire beads are seated.

**Bead:** The part of the tire made of high tensile steel wires, wrapped and reinforced by the ply cords, which is shaped to fit the rim.

**Bead Separation:** A breakdown of bond between components in the bead area.

**Sidewall:** The portion of the tire between the tread and the bead.

**Cord:** Textile, steel wire strands, and the like, forming the plies or other structure of the tire.

**Cord Separation:** Cord parting away from adjacent rubber compounds.

**Ply:** Layer of rubber coated parallel cords forming the tire body.

**Ply Separation:** A parting of rubber compound between adjacent plies.

**Tread:** The portion of the tire that comes in contact with the road.

**Tread Separation:** The pulling away of the tread from the tire carcass.

**Tread Rib:** A tread section running circumferentially around a tire.

**Groove:** The space between two adjacent tread ribs.

**Tread Depth:** The amount of tread design on the tire. Tread depth includes both original, retread, and recapped tread design; and in respect to special mileage commercial tire design.

**Regroovable Commercial Tire:** A tire manufactured with an extra layer of rubber between the cord body and the original tread design which extra layer is designed for the purpose of recutting or regrooving, and which tire is specifically labeled as a regroovable tire.

**Belt:** A layer or layers made of fabric or other material, located under the tread area.

**1. Inspection Procedure.** Tires should be inspected visually and the tread should be measured with a tread depth gauge calibrated in 32nds of an inch if it does not have tread wear indicators.

No tire shall be passed to be in safe operating condition unless it meets the visual and tread depth requirements set forth in these regulations.

Inspection of the spare tire is not required. All tires must appear to be properly inflated - even though a gauge check is not required.

The tread depth requirement of these regulations shall apply to both tires of each set of dual wheels. The other requirements will also apply to both tires in each set of dual wheels.

Dragster tires or racing slicks without sufficient tread or which have had all tread removed are not acceptable.

**2. Inspect for and reject if:**

a. Any tire with a localized worn spot that exposes the ply or cord through the tread.

b. Any tire with tread or sidewall cracks, cuts, or snags (as measured on the outside of the tire) in excess of one inch in any direction and deep enough to expose the body cords.

c. Any tire which has any visible bumps, bulges, or knots apparently related to tread or sidewall separation or partial failure of the tire structure, including bead area.

d. Any tire which has been regrooved or recut below the original groove depth, except special (regroovable) tires which have extra undertread rubber for this purpose (commercial vehicles only) and are identified as such.

e. Any dual wheel assembly where the side of one tire is in contact with the other. (Any dual tires that contact each other.)

f. Any tire that is marked "Not for Highway Use," "Farm Use Only," "For Racing Purposes Only," or with other use restrictions that would indicate the tire is not meant for highway use. This includes temporary spares, inflatables, or small high pressure spares.

g. Any tire which has been repaired temporarily by the use of blowout patches and boots. Nail hole plugs or patches are not cause for rejection.

h. Any tire without tread wear indicators worn so that less than 2/32 (1/16) of an inch of tread design depth remains when measured (with a tread depth gauge) at the lowest points in any two adjacent major grooves in the center or middle of the tire.

i. Any tire with tread wear indicators worn so that the tread wear indicators contact the road in any two adjacent major grooves in the center or middle of the tire.

Refer to Reference Section for further tire inspection procedures.

**20.29 Turn Signal Lamps.** Every motor vehicle, trailer, semi-trailer, and pole trailer shall be equipped with electrical turn signal lamps, except that passenger cars and trucks less than 80 inches in width and manufactured or assembled prior to the model year 1960 need not be equipped with electrical turn signal lamps.

If the bed, body, cab, load, and any other equipment on a vehicle or combination of vehicles exceeds 24 inches or more to the left of the center of the top of the steering post in the same horizontal plane (that is, as high as the center of the top of the steering post) or when the distance from the center of the top of the steering post to the rear limit of the body or load exceeds 14 feet, then turn signal lamps are required, even though a hand and arm signal can be seen and the vehicle was manufactured or assembled prior to model year 1960.

**NOTE:** Required turn signal lamps must be visible to the front and to the rear of the vehicle.

**1. Electric turn signal lamp types:**

- a. Single-faced units.
- b. Double-faced units.
- c. Arrow-faced units.
- d. Kits designed to be used in conjunction with the parking light assembly.

**2. Electric turn signal lamp flashers.** All open-faced and

arrow-type turn signal lamps must flash on and off in order to clearly indicate an intention to turn.

Turn signal lamps are required on those vehicles manufactured with a right-hand (steering wheel) drive, regardless of model year.

A single lamp (large double-faced unit) on each side of a truck-tractor, which is visible to the front and rear, will suffice for turn signal lamps.

**3. Turn signal lamp mounting.** The lamps showing to the front shall be mounted on the same level and as widely spaced laterally as practicable and, when signalling, shall emit a white or amber light or any shade of light between white and amber.

The lamps showing to the rear shall be mounted on the same level and as widely spaced laterally as practicable and, when signalling, shall emit a red or amber light or any shade of color between red and amber.

Turn signal lamps on vehicles 80 inches or more in overall width shall be visible from a distance of not less than 500 feet to the front and rear in normal sunlight.

Turn signal lamps may, but need not, be incorporated in other lamps on the vehicle.

Turn signal lamps shall indicate an intention to turn by flashing lamps showing to the front and rear of a vehicle. On a combination of vehicles, turn signal lamps shall indicate an intention to turn by flashing lamps to that side of the vehicle or combination toward which the turn is to be made.

Motorcycles, motor-driven cycles, and mopeds are not required to be equipped with turn signal lamps.

Semaphore or mechanical arm devices are not acceptable as turn signal lamps.

**4. Inspection Procedure.** Check operation and condition visually.

**5. Inspect for and reject if:**

- a. Lamps are required and not present.
- b. Device is not securely mounted or properly located on the vehicle.
- c. Device is not of a type meeting Department standards.
- d. Lamp lens is discolored or missing.
- e. Wiring insulation is worn, rubbed bare, or shows any ev-

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idence of burning, short circuiting, or poor electrical connections.

f. Switch is not convenient to driver or indicator light does not operate.

g. Signal shows any color other than white or amber to the front, or signal shows any color other than red or amber to the rear.

h. Signal does not flash or is not operating properly.

i. Signal is not clearly visible to the front and to the rear of the vehicle.

j. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

**NOTE:** Selector switch must lock in proper turn position when applied but need not cancel automatically.

**NOTE:** Lamp lenses cannot be repaired with repair tape or repair kit.

**20.30 Vehicle Identification Number, Motor, or Serial Number.** Make an actual physical check of the motor block, frame, or body part where such number is located and record same on the inspection station report. If the vehicle has no such number, write "NONE" on the inspection certificate and on the inspection station report. If such number is obscured, "OBS" should be entered. Station or certified inspector suspension can result from taking this number from the old inspection certificate, title, or registration receipt.

The entire vehicle identification number must be used.

Do not reject a vehicle because it has no vehicle identification number or motor or serial number.

**NOTE:** Vehicles with altered or removed vehicle identification numbers or motor or serial numbers should be reported to your Department representative.

**20.31 Wheel Assembly.** The inspection of all wheels and rims will be visual. Spare wheels and rims will not be inspected.

Wheel covers or hubcaps may be removed from the vehicle if the certified inspector has probable cause or reason to believe that wheel or rim defects exist.

1. **Inspection Procedure.** Examine visually.

2. **Inspect for and reject if:**

a. Loose, missing, or damaged wheel studs, bolts, nuts, or lugs.

b. Any part of the wheel is bent, cracked, rewelded, or damaged so as to affect safe operation of the vehicle.

c. Wheel nuts, studs, and clamps which are loose, broken, missing, or mismatched. Adequate thread engagement is imperative. Stud and nut threads on wheel lugs must engage completely through the entire threaded portion of the nut.

d. Rims and rings which are mismatched, bent, sprung, or otherwise damaged. Check for evidence of rim slippage - this is an indication of wear of loose nuts.

e. Disc wheels with elongated bolts, holes, or cracks between hand holes or stud holes, or both.

f. Cast wheels with cracks, evidence of wear in the clamp area, or both.

g. Rims have defects or cracks to the extent that they impair the safe mounting and proper retention of tires.

h. Any wheel cannot be securely fastened to the hub of the vehicle.

i. On motorcycles and motor-driven cycles, any spokes are bent, loose, broken, or missing.

**20.32 Window Tinting.** All 1988 or newer model vehicles that have window coating, tinting, or sunscreening applied to the windows must be inspected for the following:

1. **Inspect for and reject if:**

a. Glass coating or sunscreening devices on windshields:

1) Extends downward beyond the AS-1 line or more than five (5) inches from the top of windshield on vehicles without an AS-1 line. Measurements shall be taken from inside the windshield; or

2) is red, blue, amber in color or is a reflective type.

b. Glass coating or sunscreening devices on windows:

Windows immediately to the right and left of the driver, which open, have less than 20% light transmittance.

[ **NOTE:** If one window is inspected and has more than 20% light transmittance and the other window has window tinting which is obviously the same degree of sunscreening, only the one window needs to be inspected

c. Check calibration before rejecting vehicle.

**2. Exemptions:**

a. The following will not be considered as suncreening or glass coating devices:

- 1) Rearview mirror.
- 2) Sun visors.
- 3) Motor carrier destination signs.
- 4) Rear window wipers and motors.
- 5) Trunk lid handle or hinge.
- 6) Luggage racks.

b. Do not inspect glass coating on vehicles used to transport passengers on a regular basis for a fee, (i.e., taxi, limousine, and buses).

c. Do not inspect glass coating on a vehicle that is maintained by a law enforcement agency and used for law enforcement purposes.

d. Vehicles used by persons with medical permits. Drivers of these vehicles must present a letter of authorization from the Texas Department of Public Safety to gain this exemption.

e. Multipurpose vehicles may be equipped with any non-reflective film on the side windows that is to the rear of the driver. No label required. (Those motor vehicles designed to carry 10 or fewer persons constructed either on a truck chassis or with special features for occasional off-road use.)

See Reference Section for diagram.

**20.33 Windshield Wipers.** Every motor vehicle with a windshield must be equipped with a windshield wiper or wipers adequate for cleaning rain, snow, or other moisture from the windshield; in good working order; and constructed so as to permit operation and control by the driver of the vehicle.

All motor vehicles which were originally equipped (manufactured) with one wiper, only one wiper is required; if originally equipped (manufactured) with two or more wipers, all wipers will be required. Replacement of vacuum with electric or electric with vacuum wipers is permissible. Vehicles presented for inspection without windshields will not be required to have wipers. The windshield is not an item of inspection. Manually operated wipers are permissible if original vehicle equipment.

**1. Inspection Procedure.** Inspect for satisfactory operation. (If vacuum operated, engine must be idling and control full on.)

Inspect for proper contact of blades with windshield. Raise arm away from windshield and release. Arm should return to original position and wiper blade should contact the windshield firmly.

**2. Inspect for and reject if:**

a. Vehicle is not equipped with the number of wipers with which it was originally equipped.

b. Wiper is inoperative, does not operate freely, or is improperly adjusted.

c. Wiper blades have damaged, hardened, or badly worn rubber elements.

d. The portion of the rubber element that contacts the windshield is torn more than one inch on one end or is torn a total of one inch on both ends.

e. Any part of the rubber element is torn loose from the metal backing or blade base.

f. Metal parts of wiper blades or arms are damaged or come in contact with the windshield.

g. Wiper is incapable of adequately cleaning the windshield.

h. Wiper blades are not making proper contact with windshield.

i. Wiper controls are not operating properly or are located beyond the driver's reach.

**NOTE:** The rear window is not considered a windshield and any wiper present on the rear window is not an item of inspection.

**20.34 Rejected Vehicles.** Every inspection must be a complete inspection before a vehicle may be approved or rejected. In case a vehicle is rejected and the owner fails to have the necessary adjustments made to the vehicle in conformance with the minimum requirements of the Texas Vehicle Inspection Act, the required inspection fee will be charged and a rejection receipt shall be issued which lists items rejected and other required information. The rejection receipt must be delivered and explained to the owner or operator of the vehicle.

The certified inspector shall mark the back of the inspection certificate which is presently affixed to the vehicle's windshield, with

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a large "X" using a laundry marking pen, if the vehicle has failed the inspection and is issued a rejection receipt.

**DO NOT ISSUE AN OUT-OF-STATE IDENTIFICATION CERTIFICATE TO A VEHICLE WHICH IS REJECTED ON THE SAFETY INSPECTION.**

The owner or operator of a vehicle rejected must make or have made the necessary adjustment or repairs and return to the original inspection station for one reinspection within fifteen (15) days from the date of rejection (excluding the day of rejection), in order to obtain the one reinspection without charge. The rejection receipt must be delivered to the inspection station on reinspection. The vehicle owner or operator shall have the right to remove the vehicle to such place for correction upon paying the inspection fee and has the exclusive right to determine by whom any repairs will be made. The customer should be informed of all defects necessary to put the vehicle in passing condition.

The rejection receipt form must be neat and legible. It must list the reasons why the vehicle was rejected. A copy of the rejection receipt must be kept by the station as part of the inspection station records and subject to examination at any time by an authorized agent of the Department. Rejection receipts must be issued by the certified inspector for a vehicle presented for inspection that does not pass the inspection requirements. Rejection receipts are an official part of the inspection program. All rejection receipts must be completely filled in. Give original to the customer and keep one copy with the inspection station records.

Any inspection station which, for any reason, cannot reinspect a vehicle to which that inspection station has issued a rejection receipt shall return the full inspection fee. No vehicle will be rejected on any items not covered by the Vehicle Inspection Act.

A reinspection of a rejected vehicle by the initial inspection station shall only include a check of the items previously found defective unless any other obvious defects are noted. When a vehicle is repaired and returned for the one free reinspection within fifteen (15) days (excluding the day of rejection), no additional inspection fee may be charged. In the event the vehicle fails to pass this free reinspection, the inspection station's obligation is fulfilled. Any subsequent inspection shall be considered as a new inspection procedure. If the rejected vehicle is returned for reinspection to the original inspection station after the fifteen (15) days have elapsed from the date of rejection (excluding the day of rejection), or if the vehicle is presented to a different inspection station for reinspection, the vehicle will be handled as if it were being inspected for the first time.

**IMPORTANT:** A rejection receipt issued to a vehicle which does not have a valid current inspection certificate shall not entitle such vehicle to legally operate on a public street or highway.

**NOTE:** Refer to Chapter 5, Records and Reports.

**20.35 Repairs.** The owner of a vehicle is under no obligation to have disclosed defects corrected by the inspection station. They may have the necessary work done where they desire or they may do it themselves. The inspection alone is all that is required. Although an owner has a right to have the necessary repairs or adjustments made wherever they wish, they often show by their actions or remarks that they expect to secure a certificate from some other person without having the defects corrected. Please report this at once to the representative supervising your inspection station. Investigation of such cases by this Department will be the most effective way of protecting both the inspection stations which are honestly conducting inspections and the motoring public. No charge is made to vehicle owners for the certificates. The fee is for your work in making the inspections. You shall collect your inspection fee at the time of inspection whether the approval certificate is issued or a rejection receipt is issued.

Inspection stations shall not in any manner attempt to require owners or operators of disapproved vehicles to have the vehicles repaired at the inspection station. The repairs necessary for approval may be made at any place chosen by the owner or operator of the vehicle. Any and all repairs or adjustments must be specifically authorized by the vehicle owner or operator before being made by any inspection station.

After a defect requiring repair is discovered by an Official Vehicle Inspection Station, the owner of the defective vehicle shall have the right to ask for, and receive, an estimate of the cost of parts and labor necessary to accomplish such repair if the Official Vehicle Inspection Station is in the business of making such repairs. Said estimate shall not in any way obligate the owner of the defective vehicle to have their vehicle repaired at the Official Vehicle Inspection Station, nor shall it create any right for the Official Vehicle Inspection Station to make such repairs.

**NOTE:** Certain items of inspection require that established tolerances are necessary. It is necessary that every Official Vehicle Inspection Station inform the vehicle owner or operator of any borderline passage. This precaution should be taken in any instance where it can be of value to the owner of a vehicle for minimum conformance.

## 04.25.00 IDENTIFICATION CERTIFICATE - VI-30

Any vehicle last registered and titled out of state is required to pass the Texas safety inspection before it may be registered and titled in Texas except as follows:

**25.01 Exemptions to VI-30**

1. Travel trailers having gross weights of 4,500 pounds or less are not subject to safety inspection or VIN verification.
2. Certified mopeds or other vehicles which are registered but not titled are not subject to safety inspection or VIN verification as a prerequisite to registration.
3. Off-highway motorcycles which are titled but not registered for operation on the highways are not subject to safety inspection or VIN verification.
4. Mobile homes which are being registered for the sole purpose of obtaining a certificate of title and not for operation on the highways are not subject to the safety inspection requirements. Owners of this class vehicle should contact their county tax assessor-collector's office for information.
5. Vehicles registered with Antique, Parade, or Disaster Relief license plates are not subject to the safety inspection requirements since these plates are restricted and cannot be used for regular transportation. However, the applicant must furnish a self-certification statement as to the correct vehicle identification number appearing on the vehicle.

**NOTE:** Refer to Chapter 5, Records and Reports.

**REFERENCE SECTION**  
**04.30.00**

Reference Content.....	04.30.00	
Recommended Inspection Procedure .....	30.01	p. 4-33
Suggested Order of Inspection Chart .....	30.02	p. 4-34
Commercial Vehicle Lighting, Reflector Requirements .....	30.03	p. 4-35
Wheel and Tire References .....	30.04	p. 4-39
Window Tinting Procedures.....	30.05	p. 4-47
Brake Performance Chart .....	30.06	p. 4-49
Exhaust Emission Systems .....	30.07	p. 4-51
List of Approved Testing Devices .....	30.08	p. 4-55
Motor Vehicle Model Year Reference Chart .....	30.09	p. 4-57

**30.01 Recommended Inspection Procedure**

Check for evidence of Financial Responsibility

**Inside the vehicle**

1. Check horn - sound and actuating device
2. Check windshield wipers - control and operation
3. Check mirror - view to the rear and mounting (if inside only)
4. Check seat belts - presence and condition.
5. Check turn signal lamps - switch and proper indication
6. Check head lamps - turn on - beam indicator and dimmer switch

**Road Test**

1. Check steering - lash and free movement (full turn without jamming)
2. Check brakes
  - a. Service - pedal reserve, stopping ability, and equalization
  - b. Parking - pedal reserve and holding ability

**Under the vehicle**

1. Check tires - tread depth and visible cuts
2. Check wheels and rims - defective or bent
3. Check brakes
  - a. Service - leaks, defective rods, or cables
  - b. Parking - defective cables
4. Check catalytic converter - leaks, presence when required
5. Check exhaust system - muffler, exhaust pipe, tailpipe, mounting brackets, and hangers for presence and condition

**Outside vehicle - parked**

1. Check window tint (if required)
2. Check windshield wipers - required number and condition of blades
3. Check mirror - (mounting only if outside mirror required)

4. Check tail lamp(s) - operation and condition
5. Check stop lamp(s) - operation and condition
6. Check license plate lamp - operation and condition
7. Check reflectors - condition
8. Check turn signal lamps - operation and condition
9. Check head lamps - mounting, condition, and operation
10. Check commercial vehicles - clearance lamps, side marker lamps, safety guards and flaps, etc.
11. Check school buses - warning lamps, signs, fire extinguisher, crossover mirror, etc.

**Under the hood**

1. Check brakes - master cylinder fluid level - leaks
2. Check exhaust emission system - presence - if required
3. Check horn - mounting and wiring
4. Check exhaust system - manifold leaks
5. Check steering - belts - fluid level - leaks
6. Check motor number (if 1955 or earlier model)

**Completion**

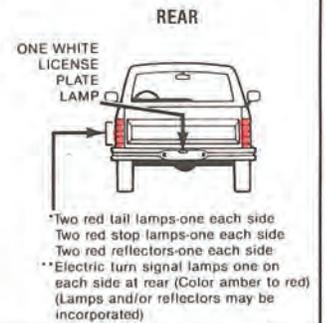
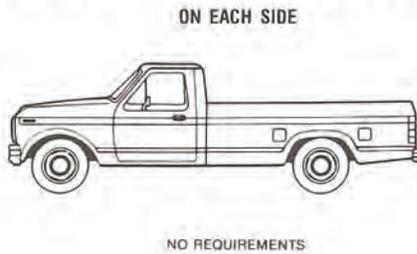
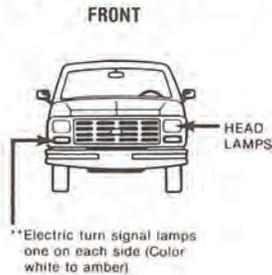
1. Check vehicle identification number (if 1956 or later model)
2. Record vehicle information on inspection station report
3. Explain rejection receipt (if issued)
4. Remove old inspection certificate
5. Issue new inspection certificate

LISTED IN SUGGESTED ORDER OF INSPECTION	INSPECT EVERY PASSENGER CAR FOR:	INSPECT EVERY PICKUP PANEL, OR TRUCK UNDER 80" WIDE FOR:	INSPECT EVERY TRUCK OR MORE IN OVERALL WIDTH FOR:	INSPECT EVERY TRUCK TRACTOR FOR:	INSPECT EVERY BUS (EXCEPT SCHOOL BUS) FOR:	INSPECT ALL TRAILERS, SEMITRAILERS, POLE TRAILERS, OR MOBILE HOMES EXCEEDING 4500 lbs. GROSS WEIGHT FOR:	INSPECT EVERY MOTOR CYCLE AND MOTOR-DRIVEN CYCLE FOR:	INSPECT EVERY MOPED-NO PED FOR:	INSPECT EVERY SCHOOL BUS FOR:
HORN	X	X	X	X	X		X		X
WINDSHIELD WIPER	X	X	X	X	X				X
MIRROR	X	X	X	X	X		X		X
STEERING	X	X	X	X	X		X		X
SEAT BELTS	X	X	X	X	X				X
BRAKES (SERVICE) (PARKING, BEGINNING WITH 1960 MODELS)	X	X	X	X	X	*3	*3		X
TIRES	X	X	X	X	X	X	X		X
WHEELS AND RIMS	X	X	X	X	X	X	X		X
EXHAUST SYSTEM	X	X	X	X	X		X		X
EXHAUST EMISSION SYSTEM (BEGINNING WITH 1968 MODELS)	X	X	X	X	X				X
BEAM INDICATOR (BEGINNING WITH 1948 MODELS)	X	X	X	X	X				X
TAIL LAMPS (2) (1 MOTOR VEHICLES 1959 MODEL OR EARLIER)	X	X	X	X	X	*2	ONE	ONE	X
STOP LAMPS (2) (1 MOTOR VEHICLES 1959 MODEL OR EARLIER)	X	X	X	X	X	*2	ONE	ONE	X
LICENSE PLATE LAMP	X	X	X	X	X	X	X		X
REAR RED REFLECTOR (2)	X	X	X	X	X	X	X	ONE	X
TURN SIGNAL LAMPS (BEGINNING WITH 1960 MODELS)	X	X	X	X	*1	*1			*1
HEAD LAMPS (2) (4 IN 4 HEADLAMP SYSTEMS)	X	X	X	X	X		ONE	ONE	X
WINDOW TINTING/GLASS COATING 1988 MODEL & NEWER	*5	X	X	X	X				
MOTOR, SERIAL, OR VEHICLE IDENTIFICATION NUMBER	X	X	X	X	X	X	X		X
CLEARANCE LAMPS			X	X	*2	*2			*2
SIDE MARKER LAMPS			X	X	*2	*2			*2
SIDE REFLECTORS			X	X	*2	*2			*2
CAB LAMPS				X					
CENTER SIDE MARKER LAMP AND REFLECTOR (30" OR MORE OVERALL LENGTH)				X		X			
SAFETY GUARDS OR FLAPS		*4	*4			**4			
RED WARNING LAMPS (2 FRONT-2 REAR-ALTERNATELY BLINKING)									X
SIGNS (SCHOOL BUS 8" IN HEIGHT ON FRONT AND REAR)									X
FIRE EXTINGUISHER (ONE QUART CHEMICAL)									X
CONVEX (CROSSOVER) MIRROR									X

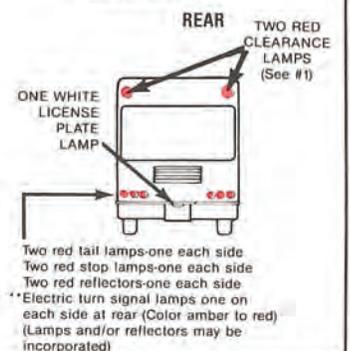
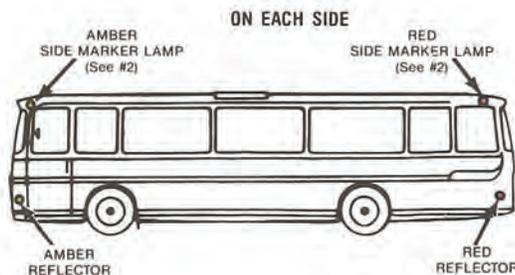
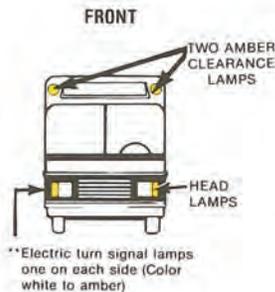
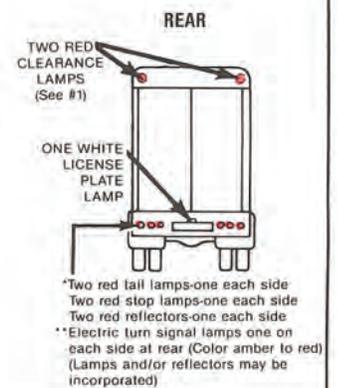
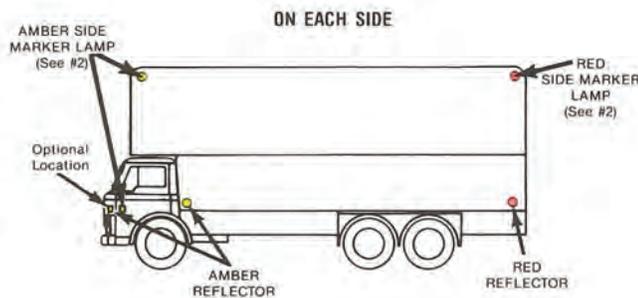
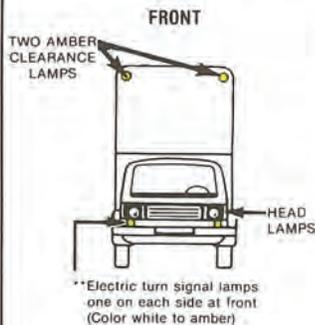
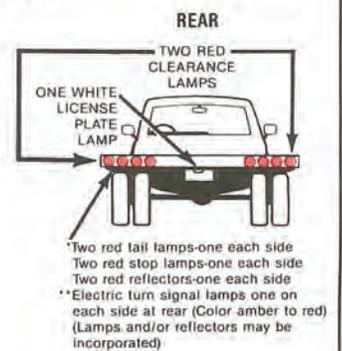
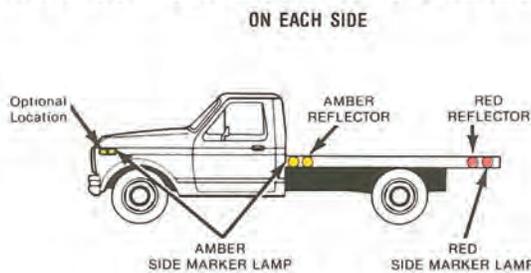
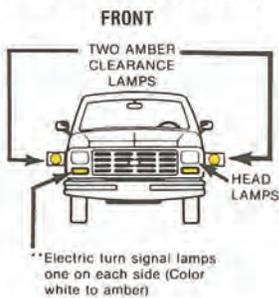
\*1. Turn signals required on all vehicles over 80" in overall width  
 \*2. Clearance and Side Marker Lamps and Side Reflectors if 80" or more in overall width  
 \*3. No Parking Brake required  
 \*4. Safety Guards or Flaps if has 4 tire or more on rearmost axle  
 \*(Not required on pole trailers)  
 \*5. Window Tinting/Glass Coating inspection is required on all passenger cars 1988 and newer except vehicle used to transport passengers on a regular basis for hire or used by a person with a medical permit

# TEXAS DEPARTMENT OF PUBLIC SAFETY COMMERCIAL VEHICLE LIGHTING AND REFLECTOR REQUIREMENTS

## ON EVERY TRUCK OR BUS LESS THAN 80" IN OVERALL WIDTH

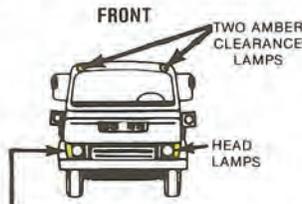


## ON EVERY TRUCK OR BUS 80" OR MORE IN OVERALL WIDTH



1. Identification lamps are not required, but if present, rear clearance lamps may be mounted at an optional height.
  2. Front and rear side marker lamps may be mounted at optional height.
    - \*Trucks manufactured or assembled prior to model year 1960 required to have at least one tail lamp
    - \*\*See turn signal regulations on back of this sheet.
    - \*\*\*Turn signal lamps on truck tractors may be incorporated into one double-faced lamp mounted on each side of vehicle provided signal is visible to front and rear when truck tractor is operated as single unit.
- If two license plates are issued rear plate must be illuminated.

### ON EVERY TRUCK-TRACTOR



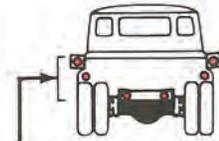
\*\*\*Electric turn signal lamps one on each side (Color white to amber)

ON EACH SIDE



NO REQUIREMENTS

REAR



Two red tail lamps-one each side  
Two red stop lamps-one each side  
Two red reflectors-one each side  
\*\*\*Electric turn signal lamps one on each side at rear (Color amber to red) (Lamps and/or reflectors may be incorporated)

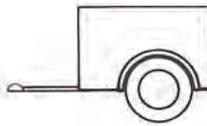
### TRAILERS LESS THAN 80" IN OVERALL WIDTH

FRONT



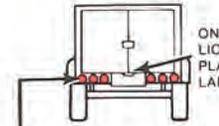
NO REQUIREMENTS

ON EACH SIDE



NO REQUIREMENTS

REAR



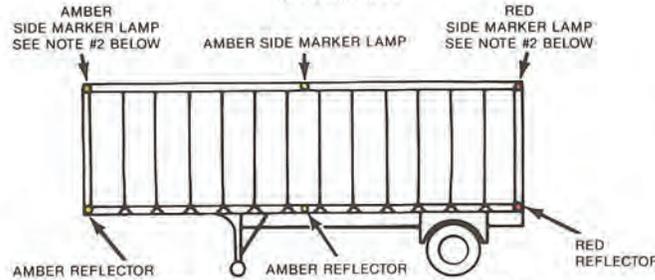
ONE WHITE LICENSE PLATE LAMP  
Two red tail lamps-one each side  
Two red stop lamps-one each side  
Two red reflectors-one each side  
Electric turn signal lamps one on each side at rear (Color amber to red) (Lamps and/or reflectors may be incorporated)

### TRAILERS 80" OR MORE IN OVERALL WIDTH

FRONT

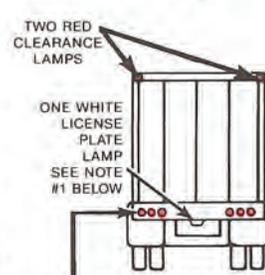


ON EACH SIDE



Intermediate side marker lamp and reflector required only on trailers measuring 30 feet or more in length.

REAR



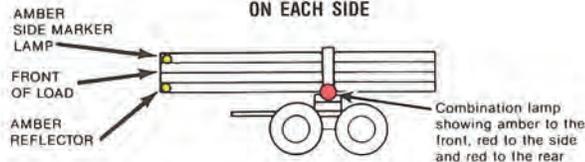
TWO RED CLEARANCE LAMPS  
ONE WHITE LICENSE PLATE LAMP SEE NOTE #1 BELOW  
Two red tail lamps-one each side  
Two red stop lamps-one each side  
Two red reflectors-one each side  
Electric turn signal lamps one on each side at rear (Color amber to red) (Lamps and/or reflectors may be incorporated)

#1. Identification lamps are not required, but if present, rear clearance lamps may be mounted at an optional height.

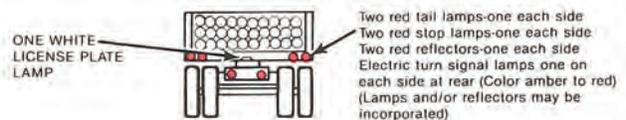
#2. Front and rear side marker lamps may be mounted at optional height.

### ON EVERY POLE TRAILER

ON EACH SIDE



REAR



Two red tail lamps-one each side  
Two red stop lamps-one each side  
Two red reflectors-one each side  
Electric turn signal lamps one on each side at rear (Color amber to red) (Lamps and/or reflectors may be incorporated)

**EQUIPMENT AND VEHICLE STANDARDS**

1. **Definition.** Vehicle equipment means a system, part, or device that is manufactured or sold as original equipment, as replacement equipment, or as an accessory for a vehicle or a device or article of apparel manufactured or sold to protect a driver or passenger of a vehicle.

2. **Standards - Federal Motor Vehicle Safety Standard.** The performance standard for vehicle equipment established by the Texas Department of Public Safety shall be identical to the applicable federal standard.

Lighting Device - FMVSS 108

- Backup Lamp
- Clearance Lamp
- Hazard Warning Lamp, Signal, Flashers, and Switches
- Headlamp - Sealed and Nonsealed Beam and Housing
- Identification Lamp
- License Plate Lamp
- Parking Lamp (Front Position Lamps)
- Reflex Reflector
- Replacement Lenses
- School Bus Alternating Warning Lamp, Signal, Flashers, and Switches
- Side Marker Lamp
- Stop Signal Lamp
- Tail Lamp (Rear Position Lamps)
- Turn Signal Lamp, Signal, Flashers, and Switches
- Triangle Warning Device - FMVSS 125

Safety Glass and Glazing - FMVSS 205

Seat Belts - FMVSS 209

3. **Standards - Society of Automotive Engineers.** The performance standard for vehicle equipment established by the Texas Department of Public Safety in which no federal standard is in effect shall be identical to the applicable standard adopted by the Society of Automotive Engineers.

Lighting Devices - SAE

Auxiliary

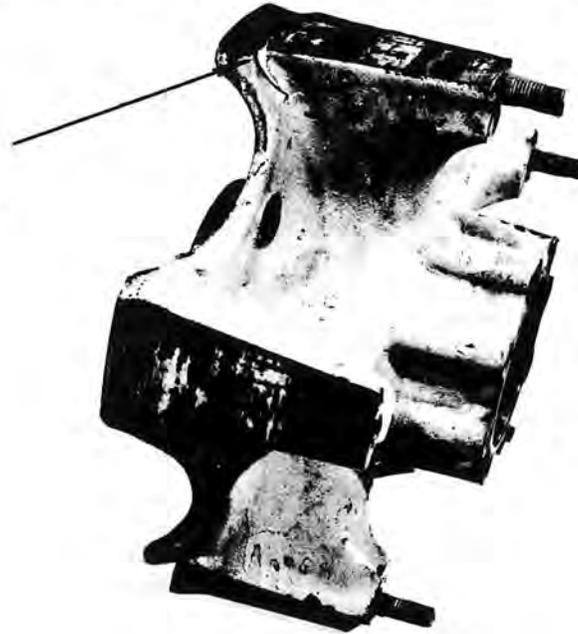
Auxiliary Low Beam (Passing Lamp) .....	J582
Driving Lamp .....	J581
Fog Lamp .....	J583
Spot Lamp .....	J591
High Mounted Stop and Turn Signal Lamp .....	J186
Cornering Lamp .....	J852
Side Turn Signal Lamp .....	J914
Flashing Warning Lamp for Emergency Vehicle .....	J595
360° Emergency Warning Lamp.....	J845

Special Vehicle Equipment - SAE

Warning Lamp Alternating Flashers.....	J1054
Motorcycle Auxiliary Front Lamps .....	J1306

**ADDITIONAL WHEEL AND TIRE INFORMATION**

**CRACK**



**CRACKS THROUGH SIDE RING**

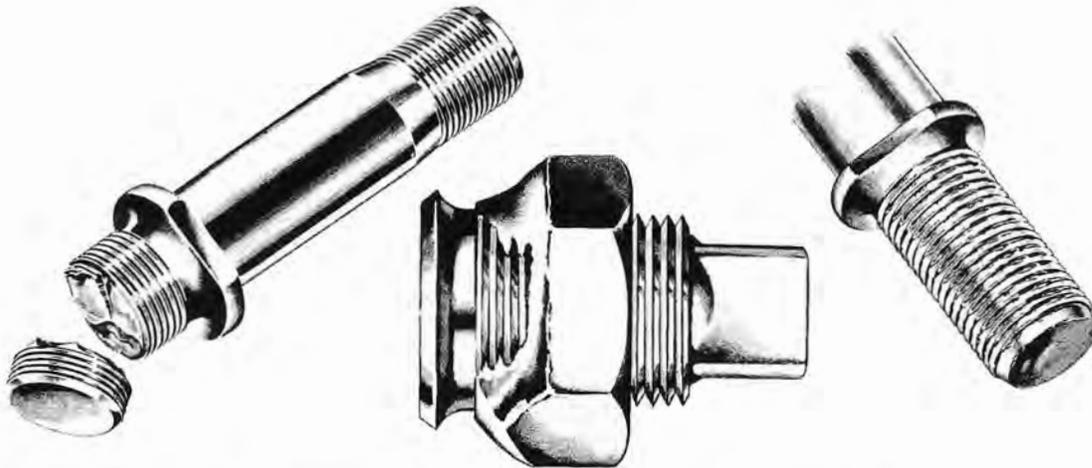


**SPRUNG SIDE RING**

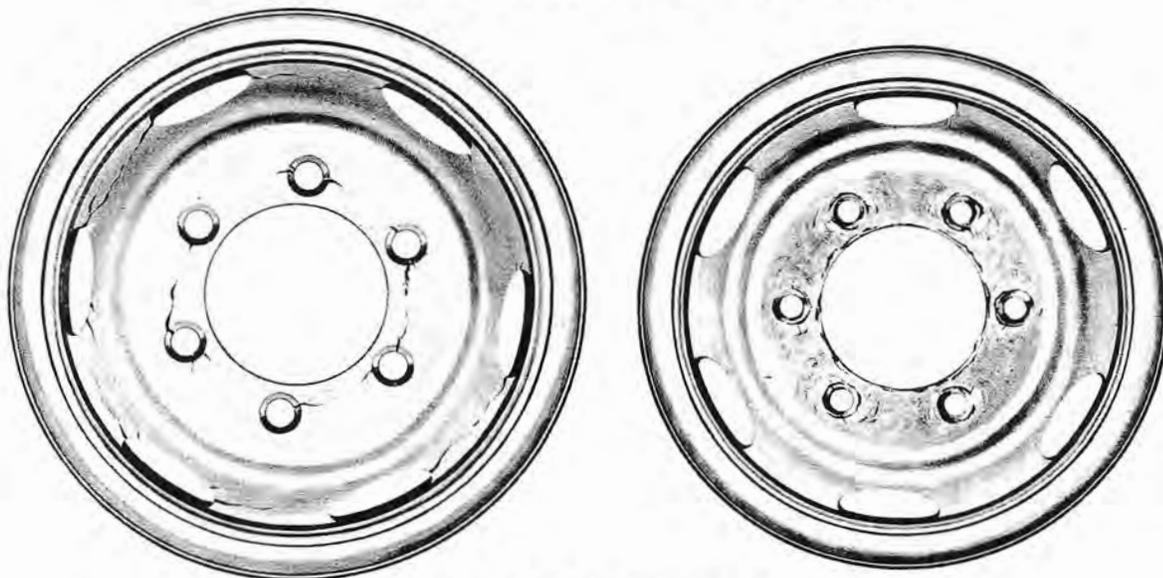
## ADDITIONAL WHEEL AND TIRE INFORMATION



**DEFECTIVE RIMS**



**DEFECTIVE WHEEL NUTS AND STUDS**



**CRACKS BETWEEN STUD HOLES IN DISC**

Measure the tread in two adjacent tread grooves in the center or middle.

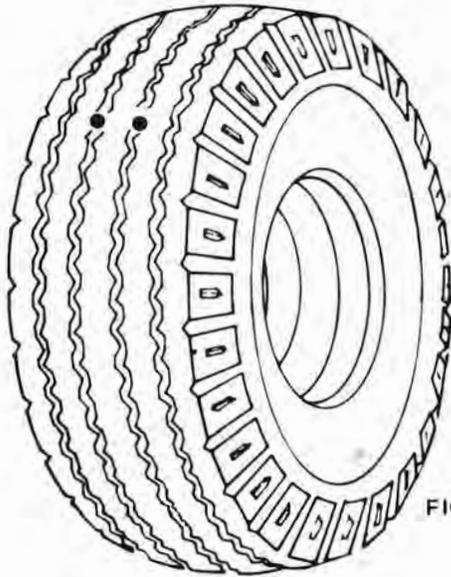


FIGURE 1

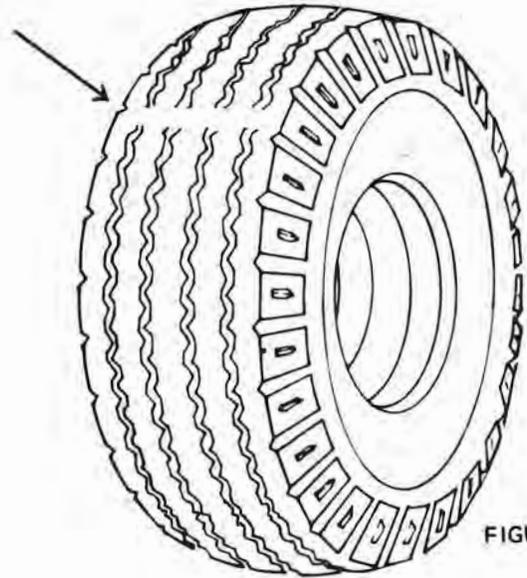
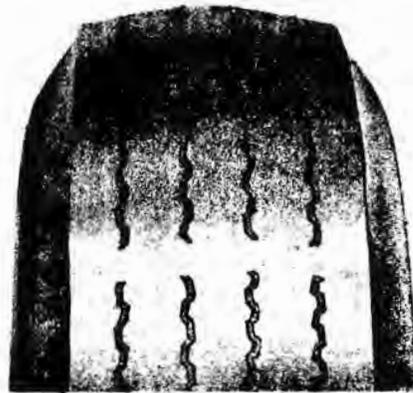
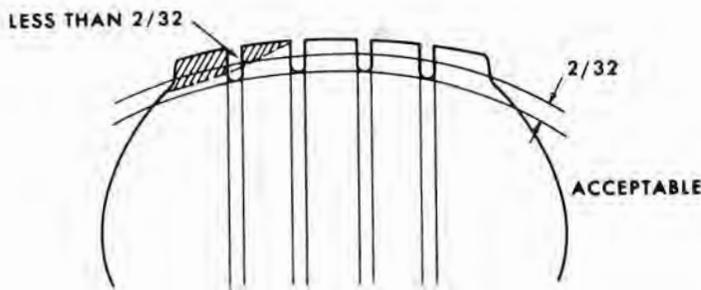


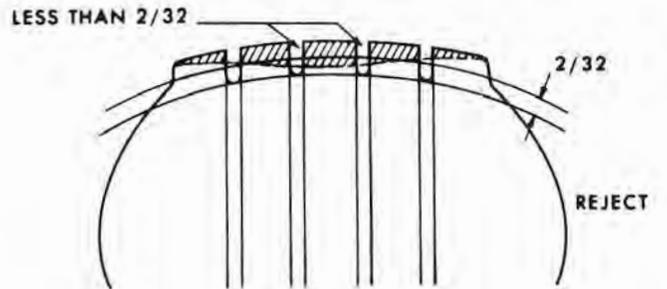
FIGURE 2



TREAD WEAR INDICATOR



ACCEPTABLE TREAD WEAR



REJECTABLE TREAD WEAR

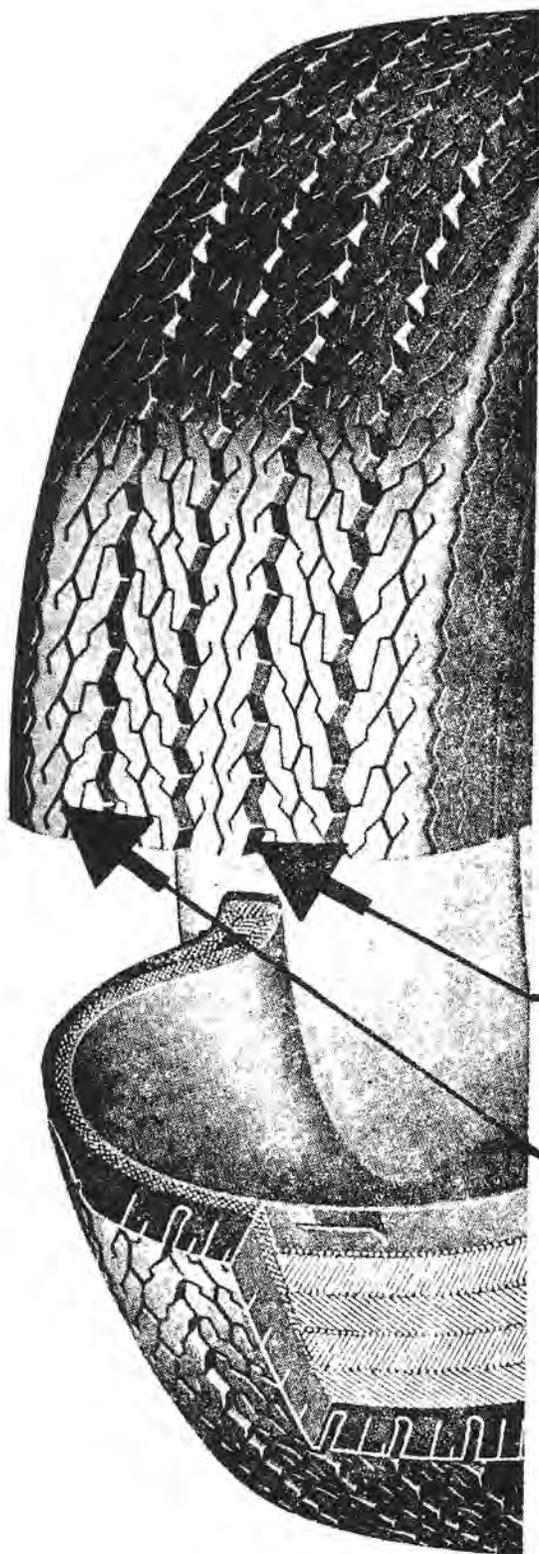
### HOW TO MEASURE TIRE TREAD DEPTH

Pictured below are typical examples of tread designs used in truck tires. In measuring tires which are worn evenly across the tread, a tread depth gauge, calibrated in 32nds of an inch, should be in-

serted only in major tread grooves extending around or across the tread surface as illustrated by an arrow. Measurements should never be taken in minor grooves as illustrated below with an "X."







### HOW TO MEASURE TIRE TRENDS

When measuring tread depth, a gauge calibrated in 32nd's of an inch should be used.

The gauge should be placed at the point in one of the treads indicated by a short arrow. Depth reading should not be taken in treads marked with long arrow, since these are classified as "minor" treads.

Persons taking measurements will have to use discretion in measuring tread depths not pictured here. However, measurements should not be made in treads which are obviously of a "minor" nature.

#### MAJOR TREAD GROOVE

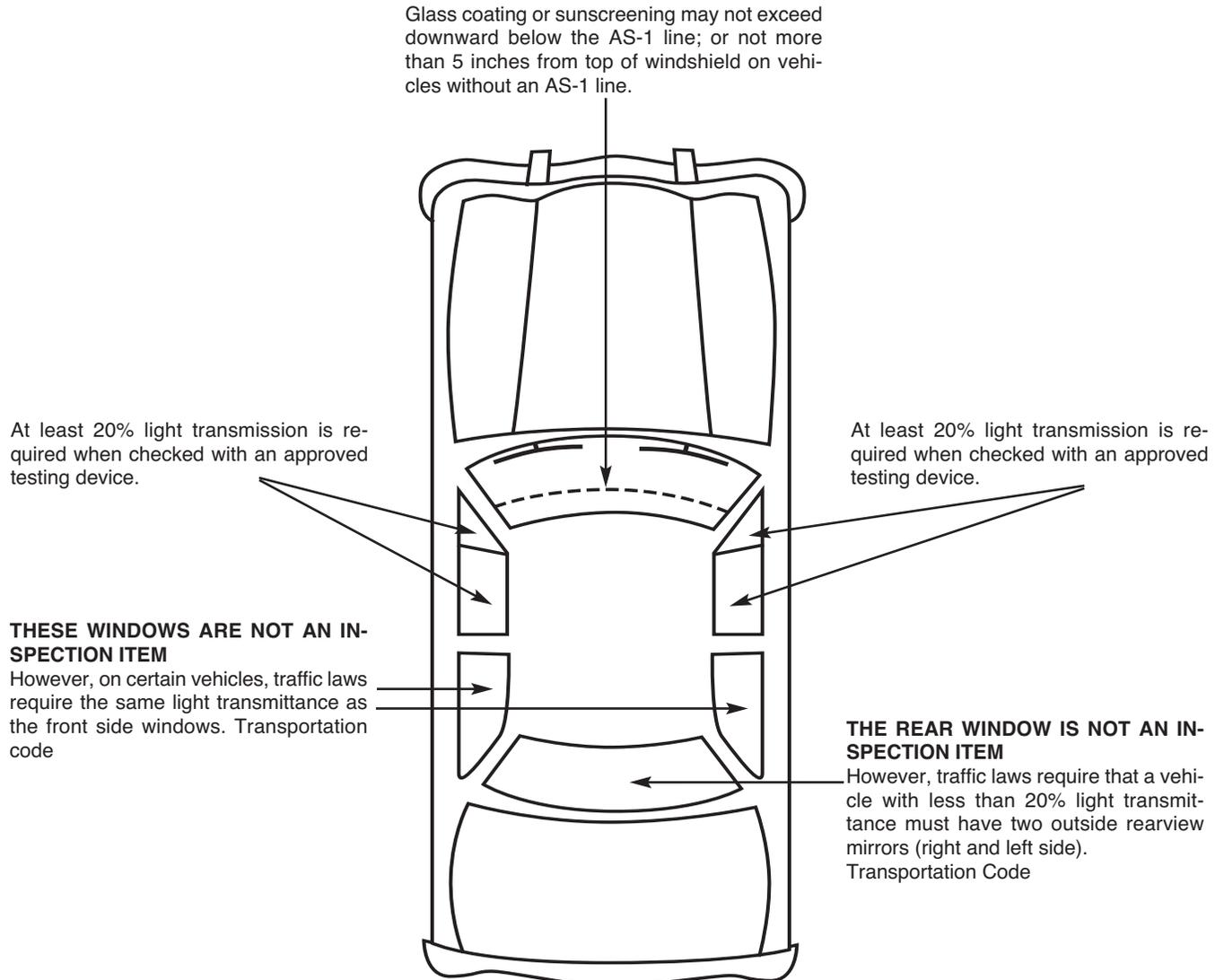
Grooves in the tread design molded through the complete thickness of the tread rubber running around and/or across the tire surface.

#### MINOR TREAD GROOVE

Remaining tire tread design other than major tread grooves.



## INSPECTION PROCEDURE FOR SUNSCREENING DEVICES ON 1988 AND NEWER MODEL MOTOR VEHICLES



### EXEMPTIONS:

1. This inspection procedure does not apply to a vehicle that is used to transport passengers for a fee, i.e., Taxi, Limousine, etc.
2. This inspection procedure does not apply to a vehicle that is maintained by a law enforcement agency and used for law enforcement purposes.

For medical reasons an exemption is available for the driver or passenger with a physician's written medical statement and a letter of authorization from the Department.

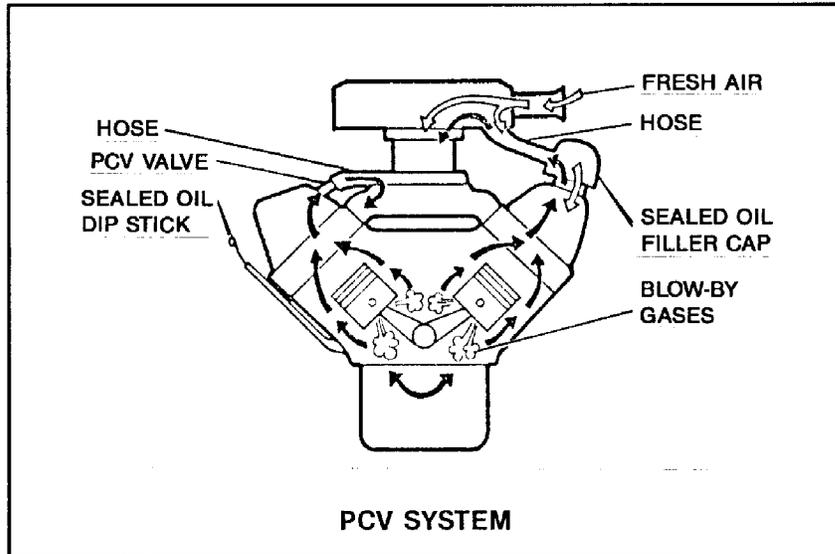
A letter of request by the individual seeking exemption accompanied with the physician's statement must be addressed to:

Texas Department of Public Safety  
Traffic Law Enforcement Division  
PO Box 4087  
Austin, Texas 78773-0500

The letter of authorization for the exemption from the Department of Public Safety must be presented for inspection.

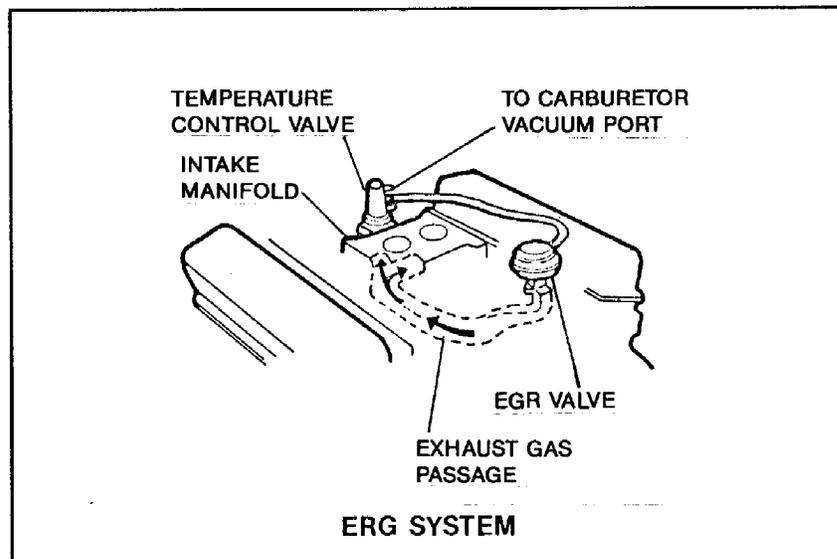
It is not a violation to sell or offer for sale a vehicle with uncertified window film.

	1	2	3	4
	Classification of Vehicles	Braking force as a percentage of gross vehicle or combination weight	Deceleration in feet per second	Brake system application and braking distance in feet from an initial speed of 20 mph
A	Passenger vehicles with a seating capacity of 10 people or less including driver, not having a manufacturer's gross vehicle weight rating	.....52.8%	17	25
B	Single unit vehicles with a manufacturer's gross vehicle weight rating of 10,000 pounds or less	.....43.5%	14	30
C-1	Single unit vehicles with a manufacturer's gross weight rating of more than 10,000 pounds	.....43.5%	14	40
C-2	Combination of a two-axle towing vehicle and a trailer with a weight of 3,000 pounds or less	.....43.5%	14	40
C-3	Buses, regardless of the number of axles, not having a manufacturer's gross weight rating	.....43.5%	14	40
C-4	All combinations of vehicles in driveway, towaway operations	.....43.5%	14	40
D	All other vehicles and combinations of vehicles	.....43.5%	14	50



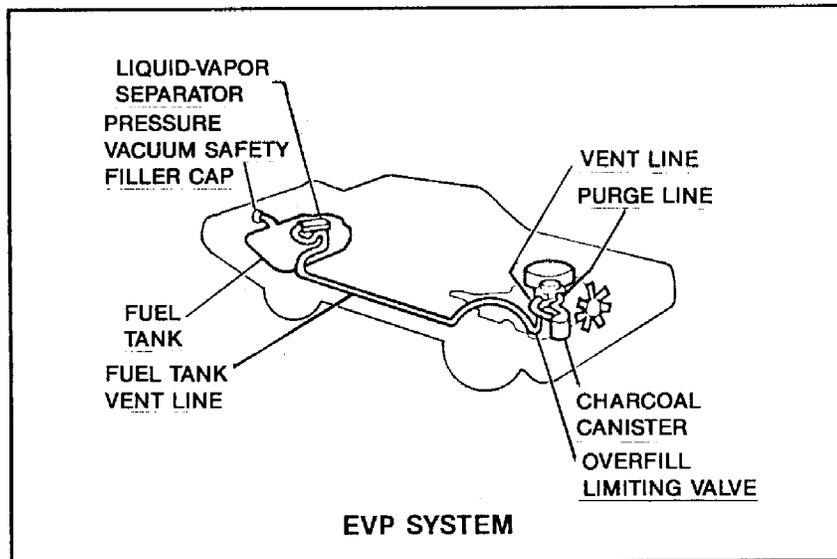
**POSITIVE CRANKCASE VENTILATION SYSTEM (PCV)**

The purpose of the PCV system is to direct blow-by gases in the crankcase back into the combustion chamber to be burned in the normal combustion process. This reduces hydrocarbon emissions to the atmosphere and also helps prevent oil dilution and sludge formation in the crankcase.



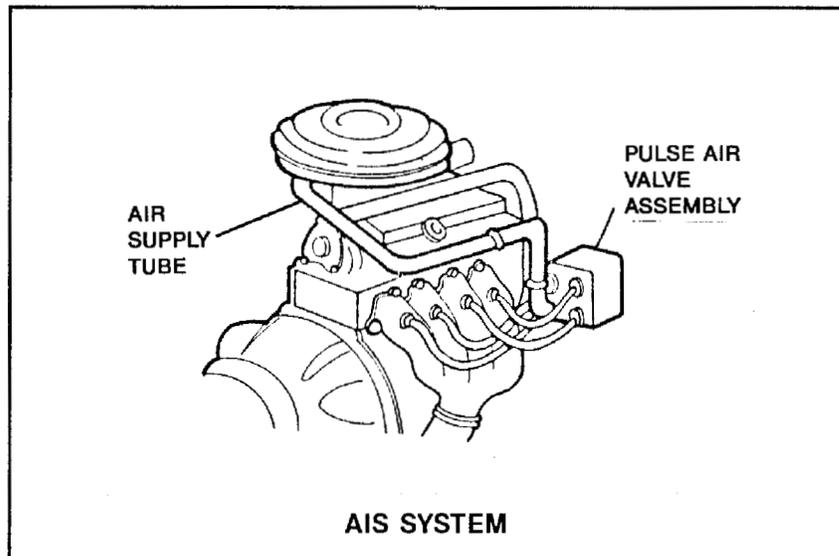
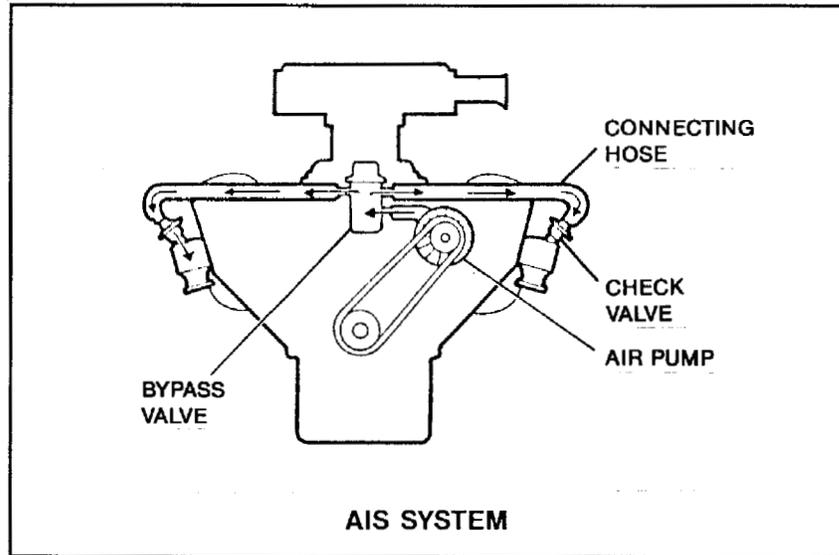
**EXHAUST GAS RECIRCULATION SYSTEM (EGR)**

The purpose of the exhaust gas recirculation system is to supply, in the proper proportion, inert gas to the air/fuel mixture in the intake manifold. This dilution of the air/fuel mixture reduces the peak flame temperatures during combustion and reduces the amount of oxides of nitrogen (NOx) in the exhaust.



**EVAPORATIVE EMISSION SYSTEM (EVP)**

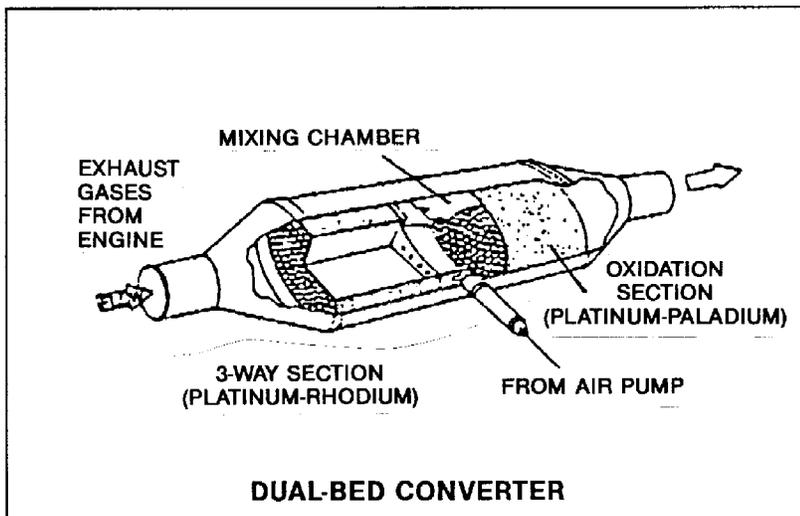
The evaporative emission control system restricts the release of hydrocarbons (HC) to the atmosphere, the result from fuel evaporating from the fuel tank and carburetor vents.



#### AIR INJECTION SYSTEMS (AIS)

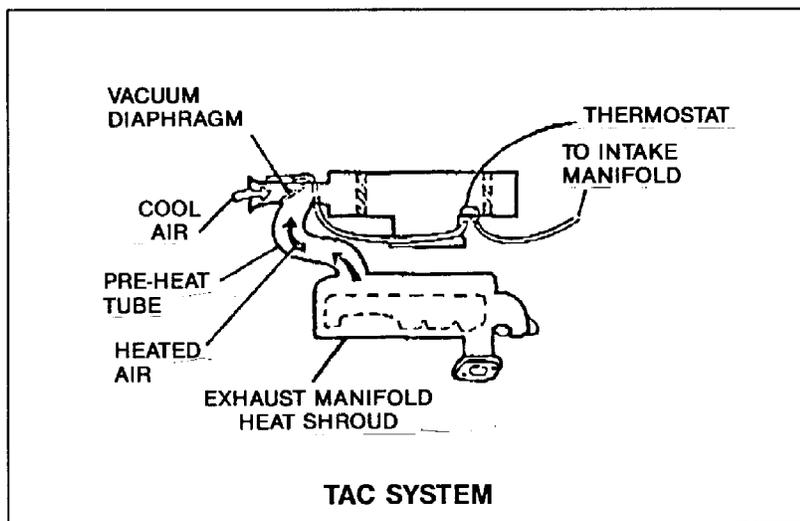
The purpose of the air injection system is to supply additional oxygen (air) at the exhaust ports near the exhaust valves to extend the combustion process into the exhaust system. The system can be equipped with or without an external air pump. This system reduces the unburned hydrocarbon and carbon monoxide emissions after they leave the combustion chambers.

**EXHAUST EMISSION SYSTEMS**



**CATALYTIC CONVERTER SYSTEM (CAT)**

The catalytic converter system reduces the amount of exhaust emissions after they leave the combustion chamber. By treating the exhaust after it leaves the engine, the converter does not adversely affect normal engine performance. A very important requirement for operation of the converter is the use of UNLEADED FUEL.



**THERMOSTATIC AIR CLEANER (TAC)**

The TAC system is designed to provide air to the carburetor during cold-engine operations. By providing heated air during engine warm-up conditions, the amount of choke operation is reduced, thus improved gas mileage, cold engine driveability is improved and carburetor icing eliminated. This system also results in reduced carbon monoxide and hydrocarbon emissions.

## LIST OF APPROVED TESTING DEVICES

### DECCELEROMETERS

AMINCO-JAMES  
Model 5-4015  
American Instrument Company  
Silver Springs, Maryland 20910

ATLAS (Bear)  
Model EB-495  
Atlas Company  
Springfield, New Jersey 07081

BOWMONK  
Model Mark III  
Lasco Importers  
123 West 47th Avenue  
Vancouver, Canada

MUTHER  
Model Stopmeter  
Muther Manufacturing Company  
44 Binford Street  
Boston, Massachusetts 02210

VC 2000 Braking Test Computer  
Minnetonka Warehouse Supply, Inc.  
Verlcom VC000 Computer Division  
6008 Culligan Way  
Minnetonka, Minnesota 55345

BEAR (Marquette)  
Models 46-154 (1148), 47-16(4505), 47-105(450W), 47-107(4506)  
440441, 451W, 1145, 4510, 4511  
Marquette Mfg. Company  
3800 North Dunlap Street  
St. Paul, Minnesota 55112

FRASER GAUGE  
Models FBT-101, FBT-102, FBT-2000 and FBT-BSP  
1352 Harvard Road  
Grosse Point, Michigan 48211  
(313) 832-0020

### BRAKE MACHINES

ATLAS (Bear)  
Model EB450W  
Atlas Company  
Springfield, New Jersey 07081

BEAR  
Model 47-700, 47-800  
8001 Angling Road  
Kalamazoo, Michigan  
Approved for front-wheel drive vehicles

CLAYTON  
Models B 8 CP-200; B 8 CP-400  
Clayton Mfg. Company  
Post Office Box 550  
El Monte, California 91734

HEKA BRAKE ANALYZER  
76 University Avenue  
Rochester, New York 14605  
HUNTER ENGINEERING COMPANY  
Model B400  
Approved for front-wheel drive vehicles

AMMCO  
Models 7350, 7375  
(Bennett-Feragan)  
Ammco Tools, Inc.  
2100 Commonwealth  
North Chicago, Illinois 60064

BEAR (Marquette)  
Model 47-108495  
Marquette Mfg. Company  
3800 North Dunlap Street  
St. Paul, Minnesota 55112

JOHN BEAN  
Models 1360, 1361  
John Bean Division  
FMC Corporation  
Lansing, Michigan 48909

TAPLEY  
Models 84, 87  
Tapley Products  
53 Park Place  
New York, New York 10007

WEAVER  
Models WY-400, WY-75, WY-75.36,  
Weaver Division, Dura Corporation  
Walter Kidde & Company, Inc.  
Paris, Kentucky 40361

**04.30.08**

**MAHA USA**

Model IW 2 PROF1  
148 E. Highway 134  
Pinckard, AL 36371  
(847) 609-2580

Mustang Dynamometer  
2300 Pinnacle Pkwy.  
Twinsburg, Ohio 44087-2368  
Model: MD-03K-BT-SL  
Approved for front wheel drive vehicles  
(330) 963-5400

Hunter Engineering Company  
Model B400 and B400T  
Approved for front wheel drive vehicles  
11250 Hunter Drive  
Bridgeton, Missouri 63044-2391  
(314) 731-3020

Vehicle Inspection Systems, Inc.  
Model VIS Performance Brake Tester (PBBT)  
(This model commonly known as VIS-Check)  
2400 Lake Orange Drive, Suite 105  
Orlando, Florida 32837  
(407) 206-3615

**TINT METERS**

Laser Labs, Inc.  
Models 100, 200 and 400  
454 Firt Parish Road  
Scituate, Massachusetts 02066  
1-800-452-2344

Monroe PMP (Previously approved as Pocket Detective Tint Meter)  
Models 2.1 (Part #801-0) and new model 2.1  
68 South Squirrel Road  
Auburn Hills, MI 48326-3249  
1-800-440-3967

**LASH TESTING DEVICES**

LASH CHEK  
Model VTI  
Wallace Instruments, Inc.  
Post Office Box 831  
Gladewater, Texas 75647

**GAS CAP TESTERS**

Stant Mfg. Co.  
Models 12370, 12470, 12300, 12400, 12440  
1-800-822-3121 Ext. 330

Waekon Corporation  
Models FPT 2600 EX1, FPT 27-EX1  
1-800-367-9235

## MOTOR VEHICLE MODEL YEAR

### 30.09 MOTOR VEHICLE YEAR MODEL REFERENCE CHART

On 1981 and later year model vehicles the 10th digit from left to right will designate the year model of a motor vehicle according to the following chart:

VEHICLE MODEL YEAR					
1980	.....A	1990	.....L	2000	.....Y
1981	.....B	1991	.....M	2001	.....1
1982	.....C	1992	.....N	2002	.....2
1983	.....D	1993	.....P	2003	.....3
1984	.....E	1994	.....R	2004	.....4
1985	.....F	1995	.....S	2005	.....5
1986	.....G	1996	.....T	2006	.....6
1987	.....H	1997	.....V	2007	.....7
1988	.....J	1998	.....W	2008	.....8
1989	.....K	1999	.....X	2009	.....9
<hr/>					
2010	.....A	2020	.....L	2030	.....Y
2011	.....B	2021	.....M	2031	.....1
2012	.....C	2022	.....N	2032	.....2
2013	.....D	2023	.....P	2033	.....3
2014	.....E	2024	.....R	2034	.....4
2015	.....F	2025	.....S	2035	.....5
2016	.....G	2026	.....T	2036	.....6
2017	.....H	2027	.....V	2037	.....7
2018	.....J	2028	.....W	2038	.....8
2019	.....K	2029	.....X	2039	.....9

NOTE: Do not include special characters such as asterisk, stars, etc.

NOTE: This chart does **not** apply to **trailers**