



Texas Department of Public Safety

COMMERCIAL VEHICLE

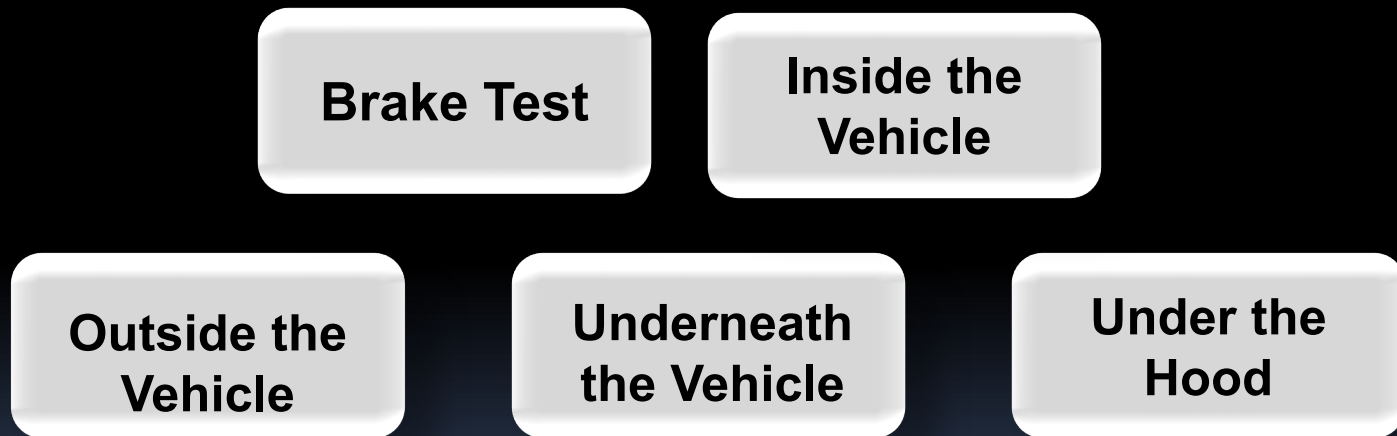
INSPECTIONS

Produced by Texas Department of Public Safety Regulatory Services Division

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COMMERCIAL CERTIFICATION FIVE-STEP SEQUENCE

To ensure an inspection is performed properly and promptly, the inspection should be performed in the following order:



Commercial Certification – Five Step Sequence

Applicants will identify the key elements and pass/fail criteria for Vehicle Commercial Inspections in order to be certified as a Commercial Inspector in the state of Texas.



OBJECTIVES

- Identify the five-step Vehicle Commercial Inspection sequence
- To become certified an applicant must:
 - Demonstrate mastery of content by scoring 80% or better on multiple choice examination.
 - Demonstrate competent skills through a practical evaluation.

Commercial Vehicles

- 26,001 pounds or more gross weight, registered weight or gross weight rating.
- Farm vehicle with 48,001 pounds or more.
- Passenger vehicle of 15 passengers or more.
- Hazardous material requiring placards.
- In Interstate commerce over 10,000 pounds.

Verify financial responsibility before proceeding with any inspection.

Check for the following:

- Insured's name
- Policy Number
- Make of vehicle
- Model of vehicle
- Effective date
- Expiration date

TEXAS LIABILITY INSURANCE CARD

INSURED'S NAME
123 TIMBERCREEK
AUSTIN TX 78752

30 Day Minimum

Policy Number:
Effective Date:
Expiration Date:

Veh.	Year	Make	Model	VIN
#1	1997	CHEVROLET	SUB R10/C10/R15/C1500	3GNEC16R5VG133033
#2	1994	GMC	PU SONOMA 2WD	1GTCS1441R8520779
#3	****	*****	*****	*****

MID-CENTURY INSURANCE COMPANY OF TEXAS 1-800-225-0011

This policy provides at least the minimum amounts of liability insurance required by the Texas Motor Vehicle Safety Responsibility Act for the specified vehicle and named insureds and may provide coverage for other persons and other vehicles as provided by the insurance policy.

Agent Name: Guy Wehman
Phone No: (512) 329-0090

A1662101

The policy must meet minimum liability requirements.

VIN/Make & Model (should be taken from vehicle).

TX DOT Cab Card or Rail Road Commission Card are acceptable.

CNG (Compressed Natural Gas)

After verifying vehicle insurance, CNG tank should be inspected, if equipped. (Customer only needs be present if tank is located in the trunk.)

A CNG equipped vehicle:

- Must Comply with the requirements of 49 CFR 571.304.
- The fuel container tank has not exceeded the expiration date.



The inspector can complete this inspection requirement through observation and/or documentation.

1

BRAKE TEST

An Inspector should inspect the following items:

**Service
Brake**

**Parking
Brake**

SERVICE BRAKE

At a speed of 20 mph, apply service brake firmly to determine if the vehicle comes to a smooth stop within the distance prescribed by the "Required Brake Performance".

Required Vehicle Brake Performance



25 Ft



30 Ft



40 Ft

Over 10,000 GVWR



50 Ft

- Check equalization and any metal to metal sounds during test.
- Check for leaks.

SERVICE BRAKE



REJECT IF:

- Red brake warning lamp or signal is on or comes on during the test.
- Brakes do not meet requirements for stopping distances for the class of vehicle.

Remember:

An Anti-lock (ABS) lamp or signal that is on or comes on during test will not cause for rejection.

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INSIDE THE VEHICLE

An Inspector should inspect the following items:

**Windshield
Wiper Controls
(On/Off Switch)**

Horn

**Turn Signals
Indicator Lamps**

Mirror

Seat Belts

Windshield

Parking Brake

Brake System

Steering

**High Beam
Indicator Lamp
(1948 & up)**

WIPER CONTROLS

Every motor vehicle with a windshield must be equipped with a windshield wiper or wipers in good working order and constructed so as to permit operation and control by the driver of the vehicle.

- Operation-should be operational.



HORN

Every motor vehicle shall be equipped with a horn in good working order and capable of emitting a sound audible for a distance of 200 feet or more.

- Switch within driver's reach.
- Mounting should be secure.
- Inspect wiring



TURN SIGNALS

- Inspect switch, lock, and indicator lamps.
-



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

MIRROR

- Check for proper number of mirrors/location; two required.
- Should not be cracked, peeled, tarnished or obstruct driver's forward vision.
- Should provide view to rear of at least 200 ft.
- Should not interfere with driver's forward vision



SEAT BELTS

- Vehicles required to be inspected for seat belts when anchorages were part of the manufacturer's original equipment.
-



WINDSHIELD

Windshield damage should not be assessed in the 2 inch border at the top of the windshield, a 1 inch border at each side of the windshield, or in the area below the topmost portion of the steering wheel.

- No cracks over $\frac{1}{4}$ inch wide.
- No damages over $\frac{3}{4}$ inch diameter (stars/rock chips).
- Damages cannot be closer than 3 inches from each other.
- No intersecting cracks.



PARKING BRAKE

The parking brake should be so designed that once applied, it shall remain applied - despite exhaustion of any source of energy or leakage of any kind.

- Operation-should hold vehicle.
- Should not have parts missing, broken, badly worn or not operating properly.
- Should not have pull cables that are badly stretched, frayed or not operating properly.



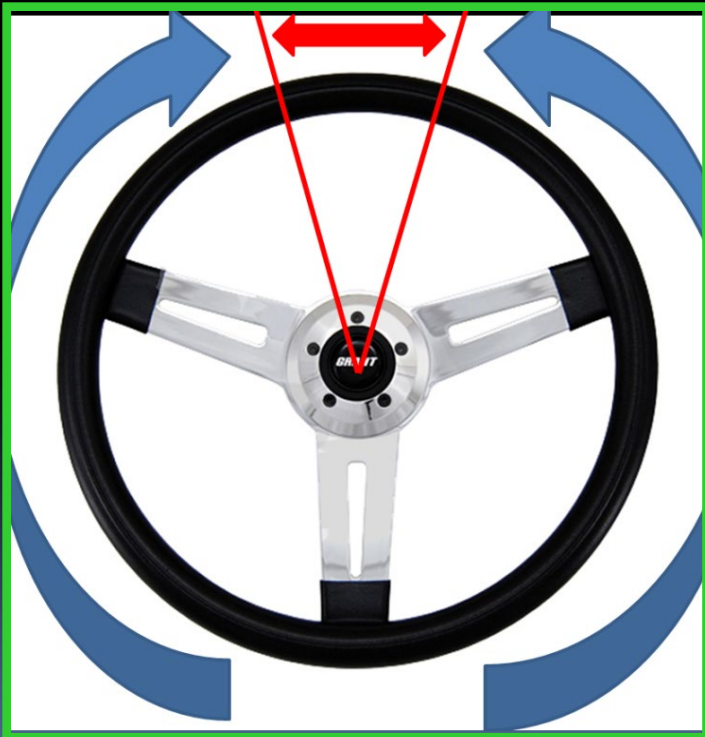
BRAKE SYSTEM

- Low Air Warning device or light should activate @ approximately 55 psi.
- The low air pressure warning device notifies the driver of air pressure loss.
- Inspect Tractor protection valve; it protects the brake system on the tractor in case the trailer breaks away.
- The foot valve is the control point of the vehicle's service brakes.
- The relay emergency valve applies the trailer brakes without activating the tractor's service brakes.



STEERING LASH

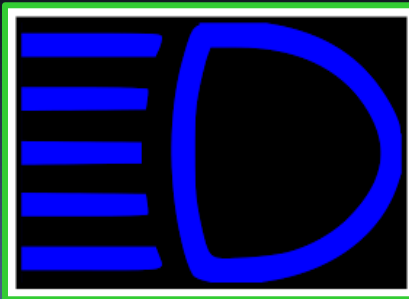
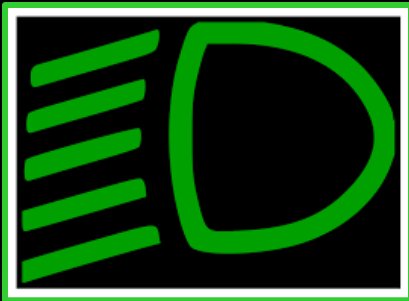
The steering system of the vehicle must be inspected to determine if excessive wear and/or maladjustment of the steering linkage and/or steering gear exists.



- Inspect lash & free movement.
- Inspect wheel size and steering column.

HIGH BEAM INDICATOR

Shall be equipped with a beam indicator which shall be lighted whenever the uppermost distribution of light from the head lamp is in use and shall not be otherwise lighted.



- Required on 1948 and newer.
- Should work properly.
- Can be any color.

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OUTSIDE THE VEHICLE

An Inspector should inspect the following items:

Tires

Mud Flaps

Wheels

Wipers

**Lighting
Equipment**

**Glass
Coating/Tint**

**Fuel
System**

TIRES

All tires on a vehicle will have proper tread depth; Front 4/32 and Rear of at least 2/32 of an inch and be in safe operating condition.

Inspection Procedure:

- Check tread depth & condition; tread depth taken from any two adjacent major grooves in the center of the middle of the tire.
- Recaps, ok on front axle (except buses) providing the tread depth on the recap is at least 4/32 and is in good condition.
- NO re-grooved/recapped on front axle of buses.
- No mixing bias and radial tires on the steering axle.
- Should not have tread or sidewall separation.



MUD FLAPS

Required on Trucks/Light Trucks behind the rearmost axle or (combination) if it has 4 or more tires (always required on dual wheel pickups).

Inspection Procedure:

- Height/Width required (as wide as tires they are protecting; no more than 12" above roadway).
- Truck-Tractors not pulling a trailer "bobtailing" do not require mud flaps to pass state inspection.

Exceptions: *Truck tractors, motor homes, buses, pole trailers.*



WHEELS

Inspection Procedure:

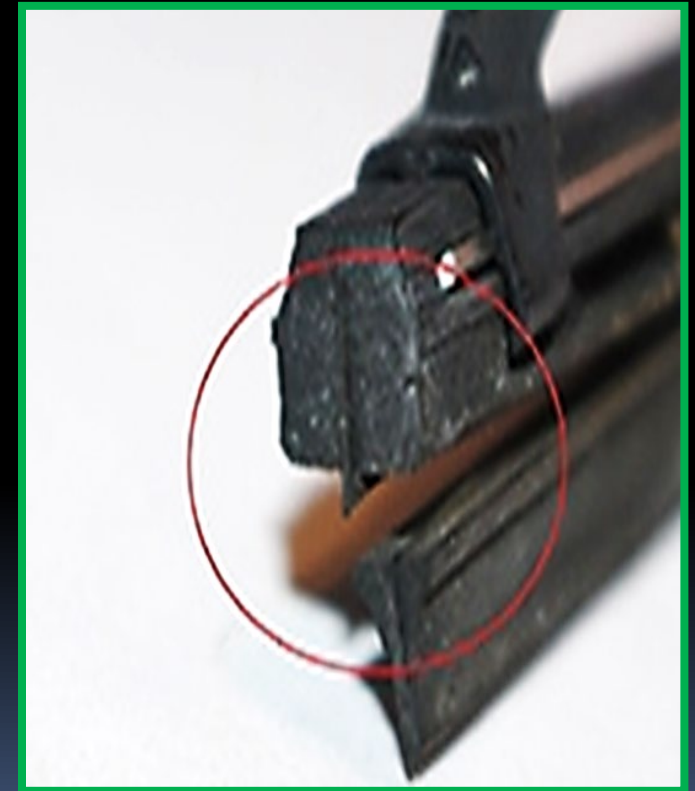
- Lugs, bolts & nuts/Condition – nothing missing.
- No loose, missing, broken, cracked, stripped, damaged or otherwise ineffective wheel studs, bolts, nuts, or lugs.
- Any part is bent, cracked, or damaged so as to affect safe operation of the vehicle is a fail.



WIPERS

REJECT IF:

- Tears (no more than 1" or a combination of 1" on both sides).
- Number required (as many as originally equipped).



LIGHTING/EQUIPMENT

Every motor vehicle shall be equipped with at least two head lamps (2; clear/white), at least one on each side of the front of the motor vehicle. Glass or composite lens with condensation will not fail; a sealed beam lamp will fail for having condensation; height requirement: 25" – 54".

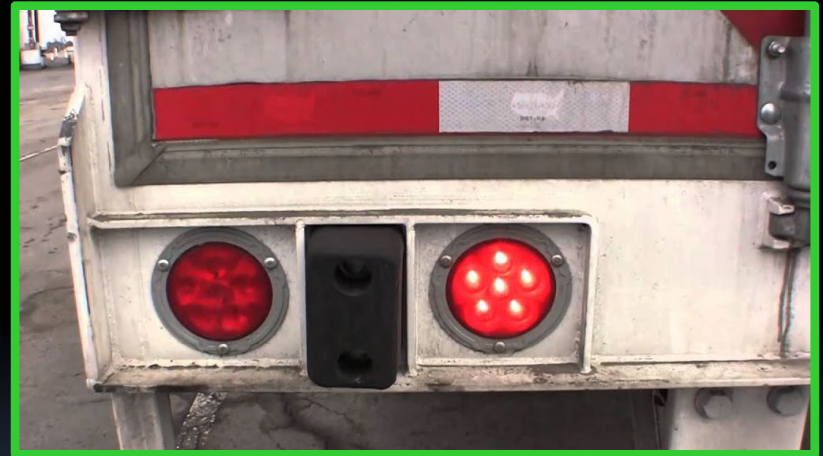
- Stop Lamps (1959/older, 1 stop lamp; 1960/newer, 2; red or amber in color) height requirement: 15"-72".
- Tail lamps (1959/older, 1 tail lamp; 1960/newer, 2; red in color) height requirement: 15" – 72".
- LED tail lamps may have no more than 50% of diodes malfunctioning.



Turn signal lamps: required on all vehicles beginning 1960 or newer (2 in front, white or amber; 2 in rear, red or amber); turn signal lamps on the front of the truck-tractor that are two-faced and visible to the rear will not be rejected or failed for not having no rear turn signals.



White or **AMBER** to the Front

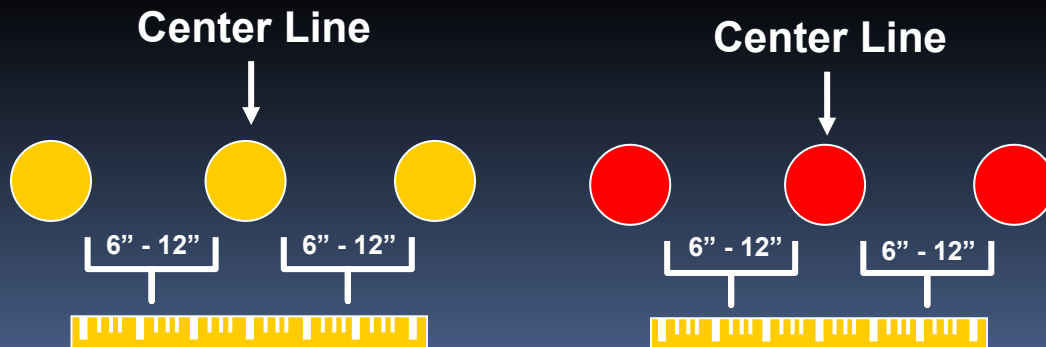


Red or **AMBER** to the Rear

- 1 Backup Lamps; Clear/White.
- 1 License Plate Lamp; Clear/White.
- Hazard Warning Lamps of Proper Color (Front – Amber; Rear – Amber or Red).
- Side Marker Lamps: Amber to the front and middle; Red to the rear.



- Clearance Lamp (Amber to the front and middle, red to the rear).
- Identification Lamp (80" or more in width. Not closer than 6", or more than 12").

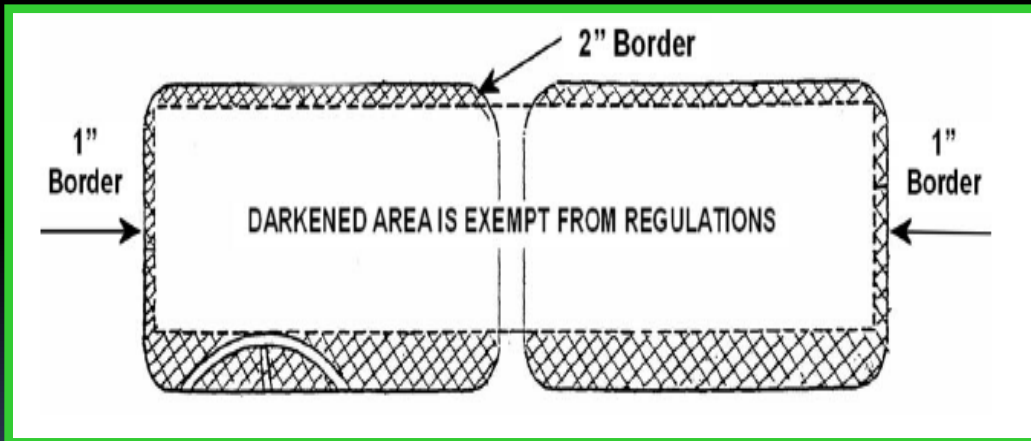


- 2 Reflectors (Red); Height requirement: 15"-60".
- Use of reflex tape: at least 50% of trailer; all of rear as much as practicable.
- Mounting/Physical damage; wiring should not be shoddy; lamp lenses should not be broken and should fit properly; all lamps should be securely mounted, not loose.
- No use of repair tape or repair kit.



GLASS COATING/TINT

- Min. Percentage (**70%**) – below minimum fails (side windows immediately to right and left of driver).
- Windshield; no lower than 2" from top, no more than 1" from the sides, and no more than the top most portion of steering wheel.



FUEL SYSTEM

- NO leaks; must have filler cap present; fuel tank must be securely mounted.



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UNDER THE VEHICLE

An Inspector should inspect the following items

Steering

**Air
Compressor**

**Exhaust
System**

**Brake
System**

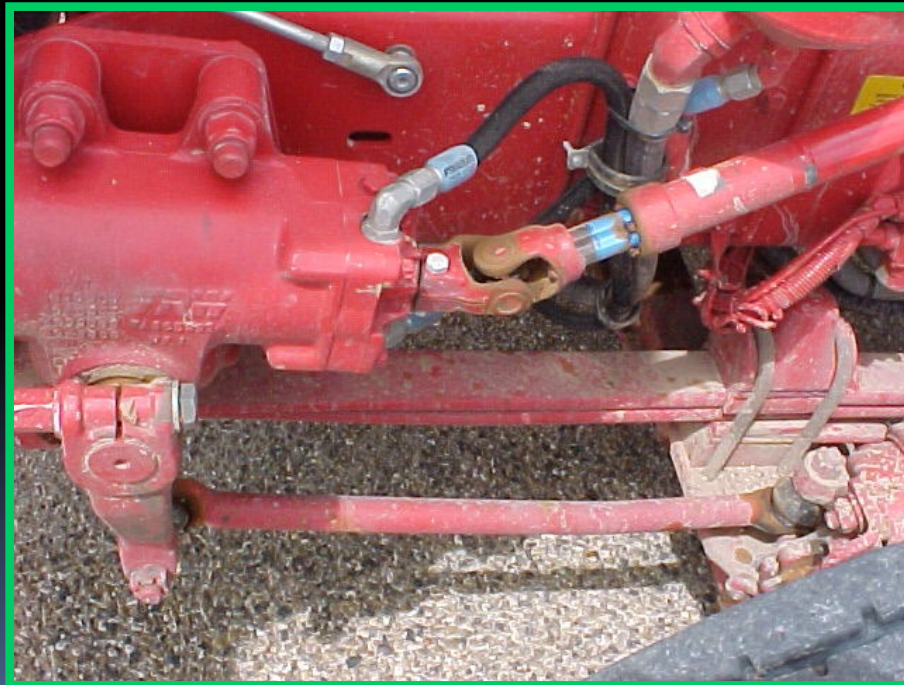
**Coupling
Devices**

Suspension

Frame

STEERING

- Column: no absence or looseness of U-bolts; reject if tilt steering wheel fails to lock into position.
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STEERING

- Inspect Front Axle Beam.
- Gear Box: no loose or missing mounting bolts; any crack(s) in box or mounting brackets fails.
- Pitman Arm: no looseness of the arm on the steering gear output shaft.



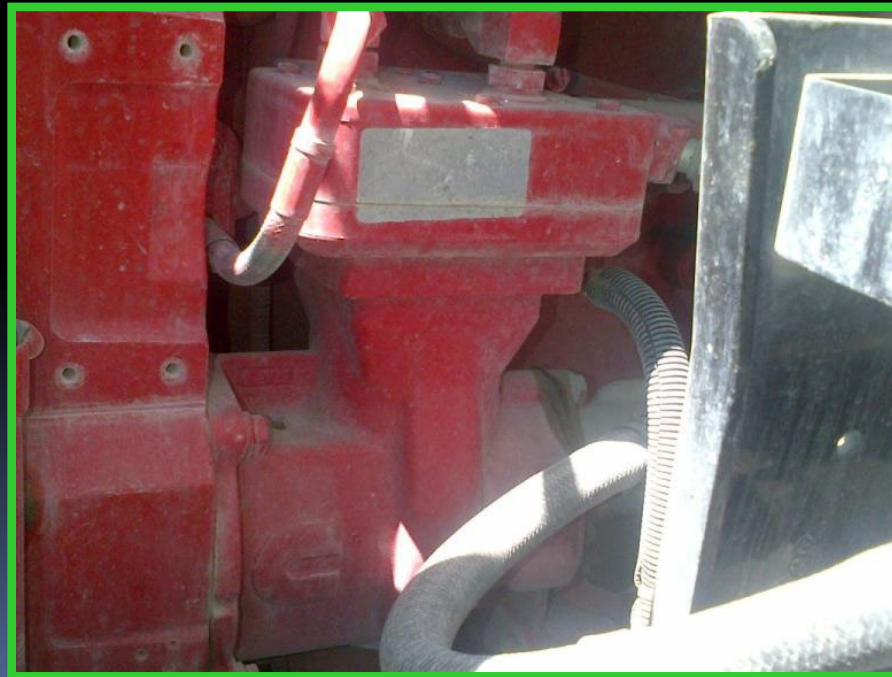
STEERING

- Tire rods and drag links: no loose clamp(s) or clamp bolt(s); any looseness in any threaded joint fails.
- Ball and socket joints: Any movement under steering load of a stud nut; any motion, other than rotational, between any linkage member and its attachment point of more than $\frac{1}{4}$ inch, fails.



AIR COMPRESSOR

- Inspect belts, loose bolts, pulley.
 - Main purpose of air compressor; source of energy for the air brake system.
 - The governor regulates system air pressure by cycling the compressor.
-



EXHAUST SYSTEM

- Inspect manifold, gaskets, exhaust pipe, muffler, resonator, supporting hangers.
- Leaks, holes & patches: fail.
- Must have proper hangers.
- Catalytic converter (required on '84 & up).
- Location of discharge: should discharge exhaust from rear, sides or top of the passenger compartment of vehicle.



Exceptions: Holes in the exhaust system made by the manufacturer for drainage are not cause for rejection.

BRAKE SYSTEM

- NO damaged, frayed, leaking hoses or cables.
- NO Visible/Audible leaks.
- NO missing or broken components (shoes, pads, drums, lining, anchor pins).
- The brake drum can become very hot – never touch it during and inspection.



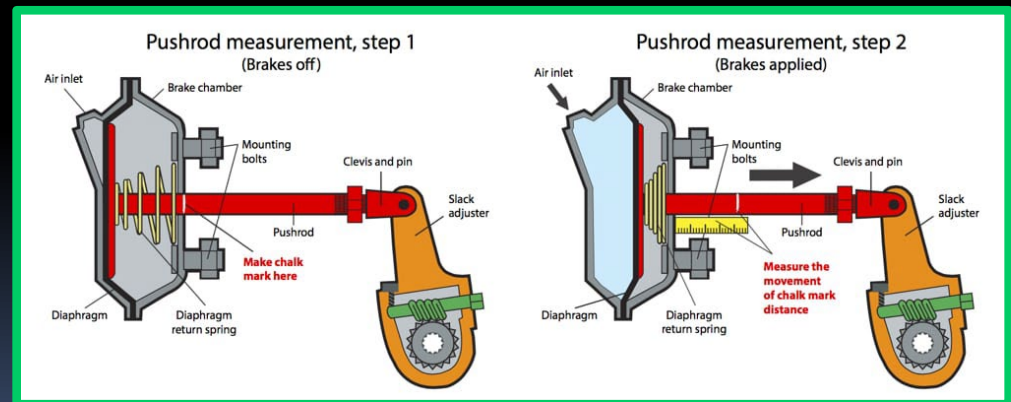
BRAKE SYSTEM

- The anchor pin secures the nonexpanding end of the brake shoes to the axle.
- The brake lining can wear thin with use.
- Readjustment limits-any brake beyond the readjustment limit shall be rejected.
- Slack adjusters link the push rod to the “S” cam brake shaft and serve as a means of taking up the slack in the brake system.



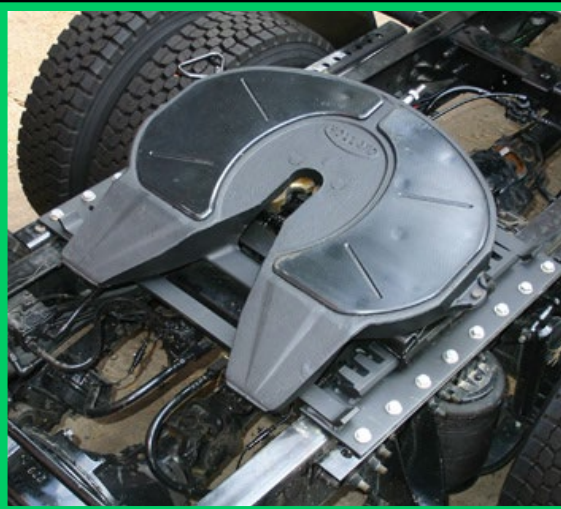
BRAKE SYSTEM

- Brake adjustment is the most common cause of loss of braking efficiency in an air brake system.
- Inspect brake chambers; these are used to convert the energy of compressed air into mechanical energy. (When brakes are applied, the push rod is forced out of the brake chamber. When brakes are released, the push rod is pulled back into the chamber.)
- No improper repairs.
- Inspect breakaway devices.
- Inspect vacuum reserve.



COUPLING DEVICES

- Inspect mounting.
- Inspect movement between parts.
- Inspect fasteners, welds, cracks.
- Inspect if pivot bracket pin is missing.
- Inspect if there is movement between pivot and bracket pin.



COUPLING DEVICES

- Check movement between upper & lower 5th wheel halves.
- When the horizontal movement between the upper and lower fifth wheel halves exceed $\frac{1}{2}$ of an inch on the lower coupler, the vehicle will be rejected or failed.
- Inspect King Pin, locking mechanism; should not have any locking pins missing.
- Inspect safety chains or cables.
- A fifth wheel allows free rotation between the tractor and semitrailer.



SUSPENSION

- No deflated or cracked air bags, broken or missing parts; deflated air suspension.
- Cannot have crack(s) on any leaf springs.
- Inspect U-bolts. U-bolts attach leaf springs to the axle.



FRAME

- Cannot be cracked, broken, loose, sagging.
- Check fasteners, locking pins, adjustable axle assemblies.
- Check to make sure frame does not contact tire/wheel.



5

UNDER THE HOOD

An Inspector should inspect the following items:

**Exhaust
Emissions
System**

**Master
Cylinder**

**Power
Steering**

EXHAUST EMISSIONS SYSTEM

- Inspect items required & condition; no leaks.



MASTER CYLINDER

- Leaks: fail
- Fluid level (no more than 1" below top or reservoir or recommended level).



POWER STEERING

- Inspect belt/lines (condition).
 - Leaks: Fail
 - Fluid level (no more than 1" below top or reservoir).
-



PENALTY SCHEDULE

Figure: 37 TAC §23.62(b)

Violations and Penalty Schedule

Category	1 st	2 nd	3 rd	4 th
A	\$250	\$500.00	6 month suspension	12 month suspension
B	\$500.00	12 month suspension	Revocation	Lifetime revocation
C*	12 month suspension	Revocation	Lifetime revocation	
*Category C violation §23.62(c)(3)(D).	Revocation	Lifetime revocation		
D (Failing to possess a valid driver's license)	Suspension until bar removed			
E	\$500.00	12 month suspension	Revocation	Lifetime revocation
Administrative action (Failure to pay)	Suspension until penalty is paid in full			

If a certified inspector changes their place of employment, the Department representative must be notified immediately.

If a certified vehicle inspector changes their name or place of residence, the inspector must notify the Department of their new permanent street address within 30 days of the date of change.

**Remember, you have a responsibility to
the motorist and to the citizens of Texas
to ensure that their vehicles are
SAFE!**



RETURN

- **DO NOT WRITE IN BOOKLETS**
- **MUST SCORE AN 80 TO PASS**
- **CANNOT USE NOTES**

