

Commercial Driver's License (CDL) Knowledge and Skills Testing Standards Update

SCHOOL TRANSPORTATION SUPERVISORS OF NEW JERSEY INC.

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General Meeting

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Disclaimer

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A Little History

- Based on broad authority of the Commercial Motor Vehicle Safety Act of 1986
- Must use a system that is comparable to AAMVA 2005 Test System (July 2010 version)
- State must use information and standards from driver/examiner manuals

A Little History

- Effective July 8, 2015
- Must use a system that is comparable to AAMVA 2005 Test System (July 2010 version)
- State must use information and standards from driver/examiner manuals
- States will lose Federal Highway \$\$ if not followed

What We Know So Far...

- What You Need To Bring To Road Test
 - Driver Application Information
 - Medical Card
 - GVWR of Vehicle Testing In
 - If automatic transmission, will not be able to drive manual transmission (restriction)
 - If hydraulic brake, will not be able to drive air brake (restriction)
 - Air Assisted Parking is **NOT** Air Brake

What We Know So Far...

- The Skills Test

- Interior – includes safe/engine start

- Exterior

- Two Types

- Front bumper to front axle includes under hood

OR

- Passenger Side of Vehicle including unique items from driver side of bus

- Some items will need to be mentioned both interior and exterior

What We Know So Far...

- For Each Item
 - Identify each part listed in section 10-11 of CDL manual
 - Point To or Touch Each Item
 - Explain What You Are Checking
 - Explain Why You Are Checking
 - You will not have to crawl under the hood or under the vehicle

What We Know So Far...

**No need to chock
vehicle unless
parked on a hill**

What We Know So Far...

- Items Are Worth Points
 - For example: Gauges – water temp, oil, RPM, amp/voltage, L turn and R turn, 4 Ways, High Beam, all 1 point, miss one, zero points
- Interior First
 - Safe Start/Engine Start (see page 11-1 of CDL manual)
 - Brake Check Part of Engine Start (see page 11-2 and 3 of CDL manual)
 - Bring a watch for brake timing

What We Know So Far...

- Oil Pressure Gauge
 - Between 40 and 60
- Temperature Gauge
 - Rising to normal, will rest about 190
- Air Pressure Gauge
 - Sit between 120 and 125, governor cut out at 125 (swish)
- Ammeter/Voltmeter
 - Amp +0, Volt 12/14
- Properly Mounted and Adjusted Mirrors
- Windshield not cracked, clean and see out
- Steering Play
- Wipers/Washers
 - Mounted, no dry rot

What We Know So Far...

- Wiper Fluid
- Lights
- Horn
- Heater/Defroster
- Fans/Vents
- Safety Belt for Driver
 - Latches, no dry rot
- Stop Arm
- Student Mirror
- Fire Extinguisher ABC
- Warning Triangles-3
- Body Fluid Kit
- Circuit Breaker or Fuses
- Emergency Equipment
- Master Switch – Amber/Red

What We Know So Far...

- Exterior Second
 - Two Types
 - Front bumper to front axle includes under hood
 - **OR**
 - Passenger Side of Vehicle including unique items from driver side of bus
- Some items will need to be mentioned both interior and exterior

What We Know So Far...

- Exterior Second
 - Front bumper to front axle includes under hood
- Some items will need to be mentioned both interior and exterior

What We Know So Far...

- Crossing Arm – not cracked, broken, bent
- Stop Arm - not cracked, broken, bent, resets, not faded, lights
- Clearance Lights – amber and red, no missing lenses, not cracked
- Amber/Red Lights – not cracked

What We Know So Far...

- Combination Lights – 4 Ways, R/L Turn Signal, Low/High Beam (white)
- Now It's Time to Open the Hood – Teach Drivers How to Unlatch and Latch Hood, Pull Forward

What We Know So Far...

- **Steering Box**
 - Securely mounted
 - Not leaking
 - No missing bolts, nuts and cotter keys
 - Check power steering hoses for cracked lines, leaks, dry rot, broken

What We Know So Far...

- **Steering Linkage**
 - Connecting links, arms and rods from the steering box to the wheel are not cracked or worn
 - Joints and sockets are not worn or cracked
 - No missing nuts, bolts or cotter keys
- **Pitman Arm and Drag Link**
 - No loose or missing bolts
 - Not cracked, damaged or broken

What We Know So Far...

- Tie rod is bolted securely and not cracked, damaged or broken
- Suspension
 - Missing, shifted, cracked or broken leaf springs
 - No illegal welds
 - Broken or distorted coil springs

What We Know So Far...

- Suspension, continued
 - If equipped with torsion bars, torque arms or other suspension components, check that they are not damaged and are securely mounted
 - Air ride suspension should be checked for damage or leaks

What We Know So Far...

- **Mounts**
 - Look for cracked or broken spring hangers
 - Missing or damaged bushings
 - Broken or missing U bolts, bolts or other axle mounting parts
 - Check at each point where they should be secured to the vehicle frame and axle(s)

What We Know So Far...

- Shock Absorbers
 - Secured, no loose or missing bolts
 - Not cracked or damaged
 - No leaks

What We Know So Far...

- Brakes

- Slack Adjustors and Pushrods

- Broken, loose or missing parts
- Manual slack adjustors – brake pushrod should not move more than 1” with brakes released when pulled by hand

- Brake Chambers

- Not leaking, cracked or dented
- Securely mounted
- No missing bolts

What We Know So Far...

- Brakes, continued
 - Brake Hoses/Lines
 - Not leaking, cracked, worn hoses, lines and couplings
 - Drum Brake (CDL Manual Figure 5.2)
 - No cracks, dents, holes or rust
 - No missing or loose bolts
 - No contaminates such as grease, oil or debris
 - Brake Linings
 - Check that a visible amount of lining is showing

What We Know So Far...

- Brakes, continued
 - Disc Brakes
 - 1/4" or more of brake pad
 - No leaks
 - Rotors - no rust

What We Know So Far...

- **Wheels**

- Rims

- Damaged or bent. Can not have welding repairs

- Tires (same size and type)

- Tread depth – 4/32 on steering, 2/32 on all others
- Tread evenly worn, no abrasions, bulges, cuts (A.B.C's) or damage to tread or sidewalls, no debris
- Valve caps and stems are not missing broken or damaged

What We Know So Far...

- **Wheels, continued**
 - Bring tire gauge, indicate proper inflation
 - No credit for simply “kicking” the tires
- **Hub Oil Seals/Axle Seals**
 - Not leaking
- **Lug Nuts**
 - All present
 - Free of cracks and distortions
 - No signs of looseness such as rust trails or shiny threads

What We Know So Far...

- **Oil Level**

- Indicate dipstick location
- Remove dipstick
- Indicate operating above refill mark and operating within safe range

- **Coolant Level**

- Inspect reservoir sight glass
- Coolant tank is secure
- If not hot, remove cap and check visible coolant level

What We Know So Far...

- **Power Steering Reservoir**
 - Indicate dipstick location
 - Remove dipstick
 - Indicate operating above refill mark and operating within safe range
 - Lines are mounted properly and secure

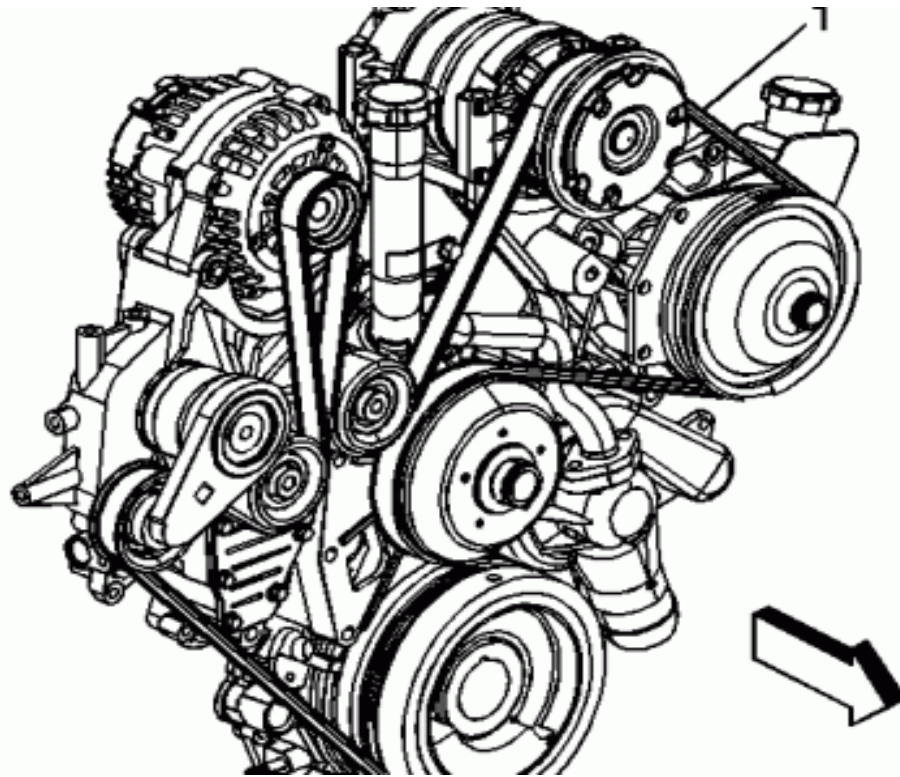
What We Know So Far...

- Alternator (Belt Driven)
 - No loose or missing bolts
 - No frayed wires
 - Not cracked, broken or damaged
 - No loose or missing parts
- Water Pump (Belt Driven)
 - No loose or missing bolts
 - Not cracked or broken and is not leaking
 - All hoses connected securely and no dry rot, kinks or leaking

What We Know So Far...

- Engine Compartment Belts
 - Check the following belts:
 - Power steering belt
 - Water pump belt
 - Alternator belt
 - Air compressor belt
 - Check belts for snugness (up to $\frac{3}{4}$ " play at center of belt)
 - Tell examiner which component(s) are belt driven
 - Operating properly and not damaged or leaking and are mounted securely

Serpentine Belt Diagram



For Example Purposes Only
Belt routing patterns differ

What We Know So Far...

- Fuel Tank

- Tanks are secure
- Caps are tight
- No leaks from tank or fuel lines

- Battery Box

- Batteries are secure
- Connections are tight and do not show excessive corrosion
- Cell caps are present
- Cover and door are secure

What We Know So Far...

- **Drive Shaft**

- Straight and centered
- Not hanging on hangars
- Not bent or cracked
- Couplings secure and free of foreign objects

- **Exhaust System**

- Not damaged
- No sign of leaks such as rust or carbon soot
- Connections are tight
- Mounted securely

What We Know So Far...

- **Frame**

- No cracks, broken welds, holes or other damage to longitudinal frame members, cross members, box and floor

- **Splash Guards/Mud Flaps**

- Not damaged
- Mounted securely

What We Know So Far...

School Bus Specific Items

What We Know So Far...

- **Emergency Equipment**

- Spare Electrical Fuses/Circuit Breakers
- Three Reflective Triangles – not broken
- Fire Extinguisher - properly charged and rated
- Emergency Kit
- Body Fluid Clean Up Kit

- **Lighting Indicators**

- Alternating Flashing Amber and Red Lights Indicator
- Strobe Light Indicator

What We Know So Far...

- **Lights/Reflectors**
 - Stop Arm Light
 - Strobe Light
 - Alternating Flashing Amber Lights
 - Alternating Flashing Red Lights
- **Student Mirrors - Internal and External**
 - Proper Adjustment
 - Brackets not damaged, mounted securely and no loose fittings
 - Clean, not dirty

What We Know So Far...

- **Stop Arm**
 - Mounted securely to the frame
 - No loose fittings
 - Not damaged
- **Passenger Entry/Lift**
 - Not damaged
 - Operates Smoothly
 - Closes securely from inside

What We Know So Far...

- Passenger Entry/Lift, continued
 - Hand Rails secure and step light working
 - Steps must be clear and tread not loose or worn excessively
 - Lift not leaking, damaged, operates smoothly or missing parts
 - Explain how lift should be checked for correct operation
 - Fully retract lift and latch securely

What We Know So Far...

- **Emergency Exits (Window, Door, Hatch)**
 - Not damaged, operates smoothly and closes securely from the inside
 - Warning device operating properly
- **Seating**
 - No broken seat frames
 - Frames firmly attached to the floor
 - Seat cushions are attached securely to seat frames

What We Know So Far...

- Aisle
 - Tread not loose or worn excessively
 - Aisle clear of debris - 12" clearance
 - Clean
- Dome Lights
- Step well light
- Activate back up alarm
- Windows Go Up and Down

What We Know So Far...

- Hint
 - First time you hear examiner say” Give me more detail”
 - Second time you hear, big problem with how information is being presented, could be headed for failure
 - ***However, no guarantee will be said!***
- If you fail, bring fail/denial form letter back, determines random

What We Know So Far...

- **Basic Vehicle Control Skills Test**
 - Must include one exercise from each of the three categories:
 - **Category One**
 - Straight Line Backing
 - **Category Two**
 - Offset Backing to the left
 - Offset Backing to the right
 - **Category Three**
 - Parallel park (driver side)
 - Parallel park (conventional)
 - 90 degree alley dock

What We Know So Far...

- Basic Vehicle Control Skills Test, continued
 - Scoring
 - Crossing Boundaries (encroachments)
 - Number times you touch or cross over an exercise boundary line
 - Each encroachment will count as an error
 - Pull Ups
 - Stops and reverses direction to get a better position
 - Stopping without changing direction does not count as a pull up. Initial pull ups not penalized
 - Excessive pull ups will count as errors

What We Know So Far...

- Basic Vehicle Control Skills Test, continued
 - Outside Vehicle Observations (Looks)
 - Safely stop and exit vehicle to check external position
 - Place vehicle in neutral and set parking brake
 - Must do so by safely facing vehicle and maintaining 3 points of contact with the bus at all times
 - When exiting bus, firm grasp on handrail at all times

What We Know So Far...

- **Basic Vehicle Control Skills Test, continued**
 - If you do not safely secure or safely exit the vehicle, it may result in an automatic failure of the basic skills
 - Maximum number looks – 2 except for straight line backing which is 1
 - Each time you open the door, move from seated position or walk to the back, it's scored as a look

What We Know So Far...

- Basic Vehicle Control Skills Test, continued
 - Final Position
 - Important to finish each exercise exactly as the examiner has instructed
 - If not, you could fail the basic skills test
 - See section 12

What We Know So Far...

- On Road Driving
 - See section 13
 - Turns
 - Intersections
 - Urban/Rural Straight
 - Lane Changes
 - Expressway
 - Stop/Start

What We Know So Far...

- On Road Driving, continued
 - Curve
 - Railroad Crossing
 - Bridge/Overpass/Sign
 - Student Discharge (see section 10)
 - Clutch/Gear Usage (manual)
 - Brake Usage
 - Lane Usage

What We Know So Far...

- On Road Driving, continued
 - Steering
 - Regular Traffic Checks
 - Use of Turn Signals

What We Know So Far...

You Tube Video Help

<https://www.youtube.com/watch?v=YBWCLEKnGUw>

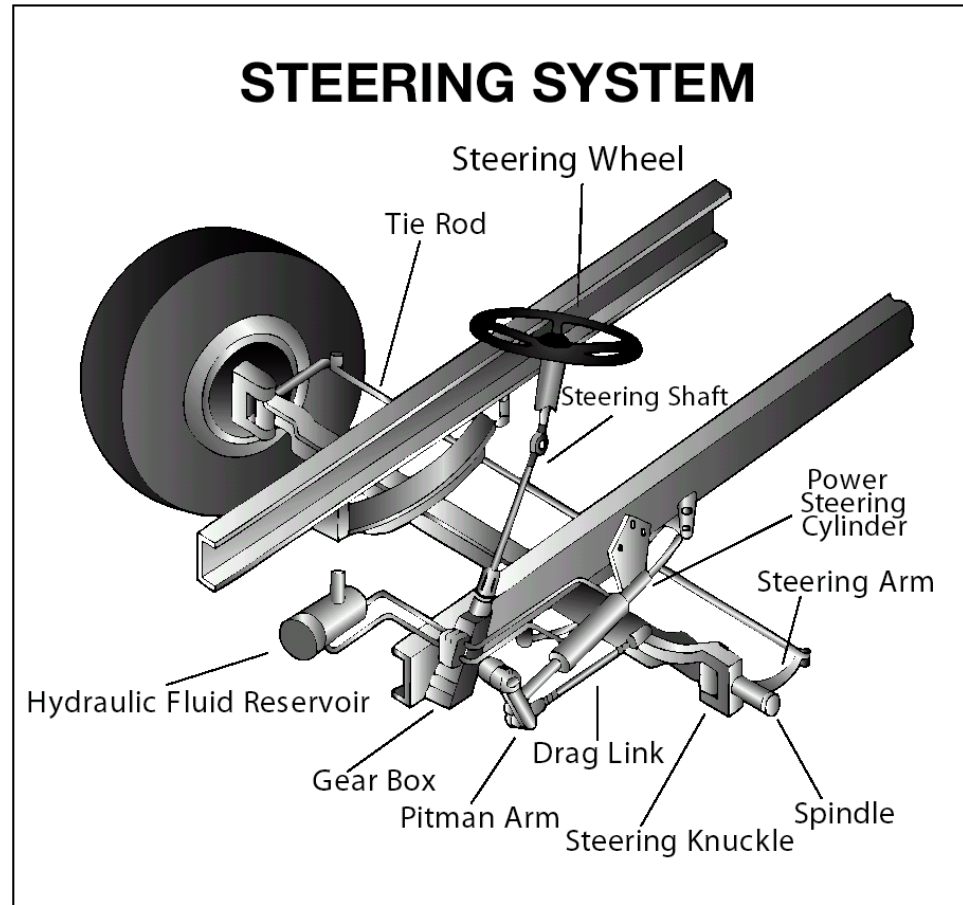
You must be willing to design, change or revise your current training methods for success!



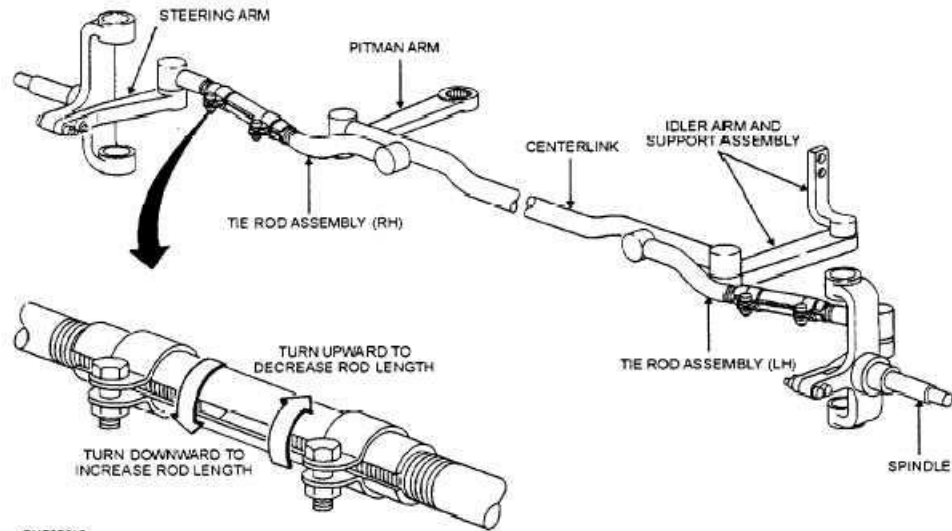
Common Terms

- Securely mounted
- No missing nuts or bolts
- No missing (part or parts)
- Proper color
- No broken, bent, cracks, damage, worn or dents (part or parts)
- No dry rot
- No leaks, not leaking

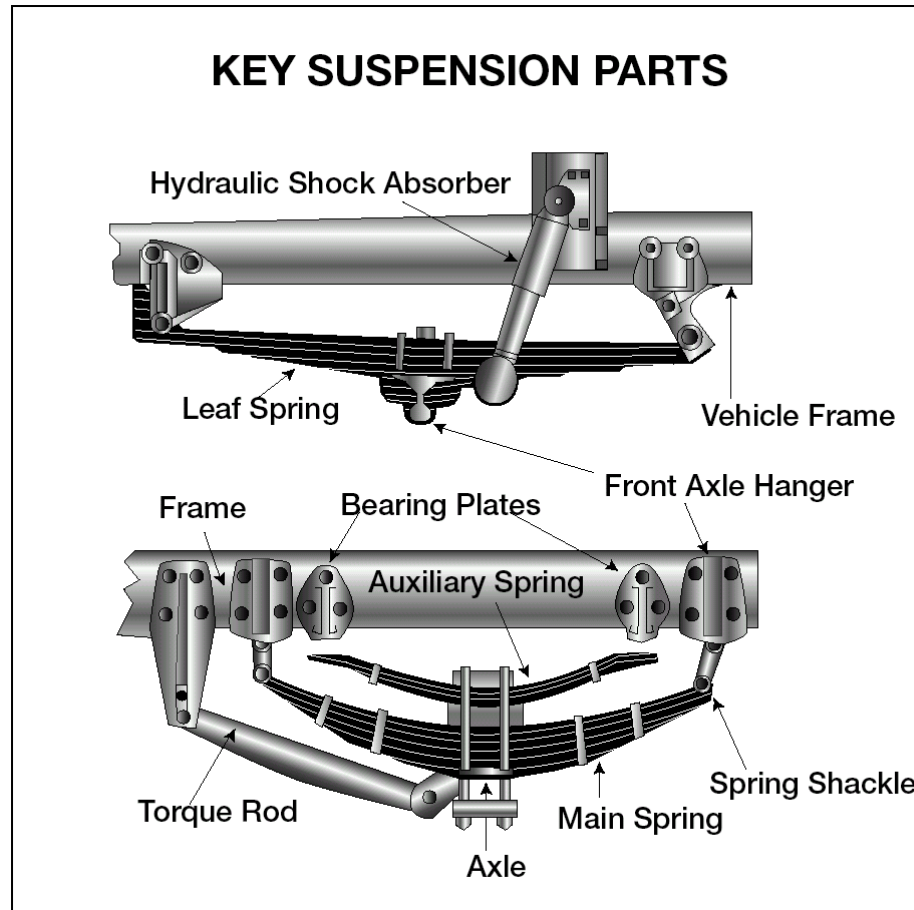
Steering System



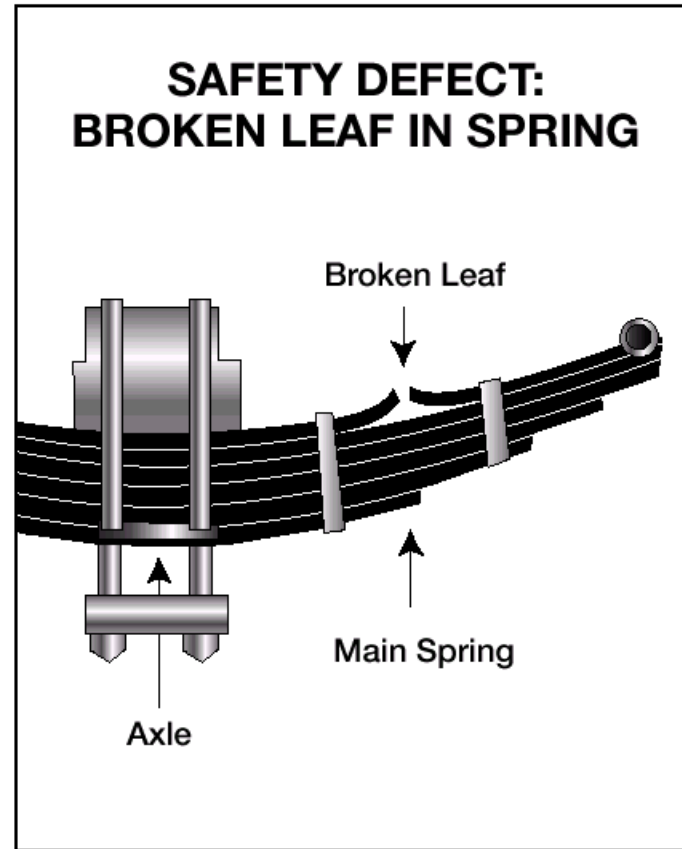
Pitman Arm



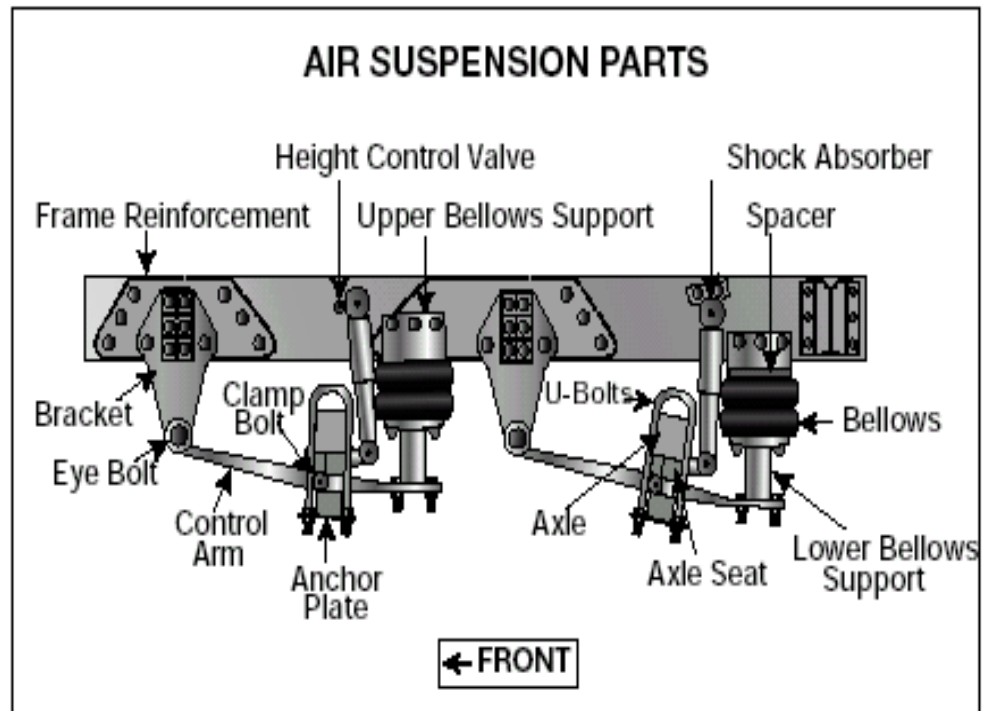
Key Suspension Parts



Safety Defect – Leaf Spring



Air Suspension Parts

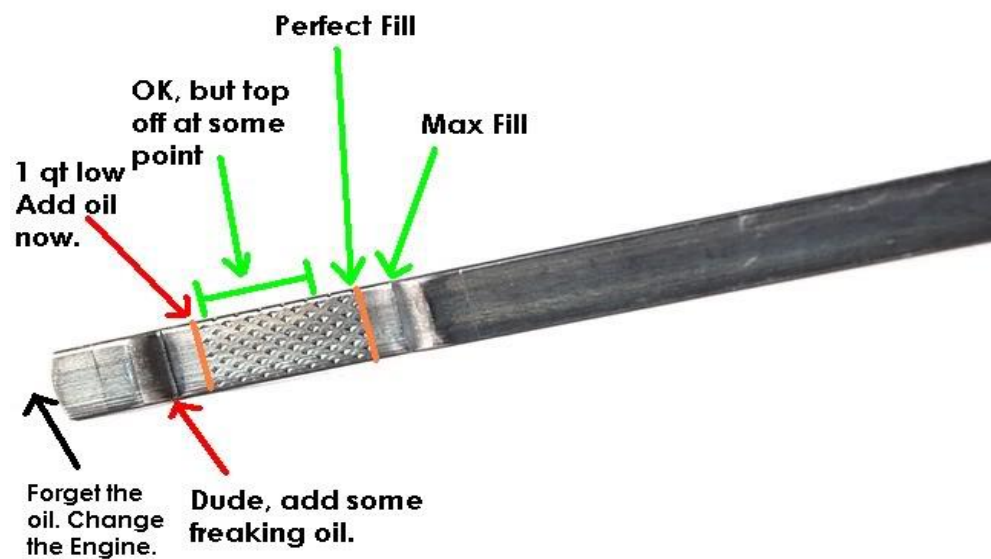


Oil Pressure/Dipstick

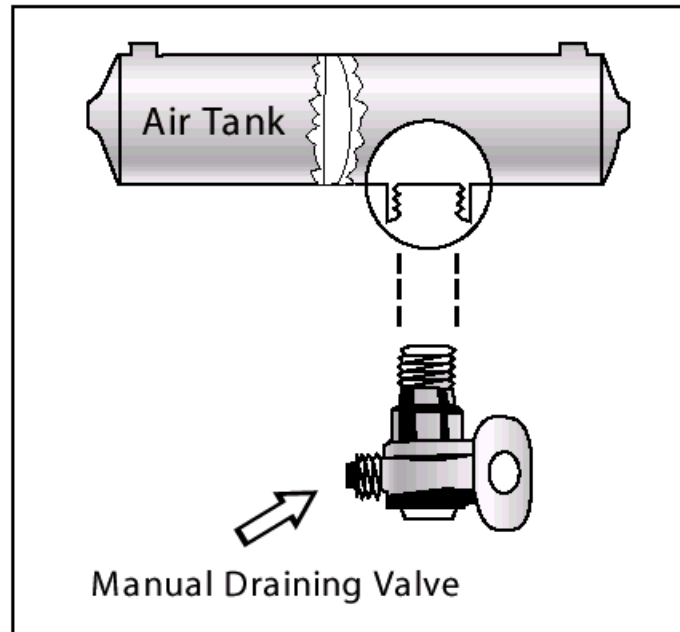


OIL PRESSURE

- Idling 5-20 PSI
- Operating 35-75 PSI
- Low, Dropping, Fluctuating:
STOP IMMEDIATELY!
Without oil the engine can be destroyed rapidly



Air Tank - Manual



Drum Brake

