

# Pre-Trip Inspection

Begin with external light check. DMV Examiner will likely assist:

- Left Turn Signal (Front and Rear)
- Right Turn Signal (Front and Rear)
- Headlights (High and Low Beam)
- Brake Lights
- Four-Way Flashers (Front and Rear)

Perform Brake Checks:

- Brake Tests – Trailer brake set (red valve pulled out, yellow valve pushed in), depress clutch, put transmission in low gear, slowly release clutch until you feel a tug. Switch parking brakes (red valve pushed in, yellow valve pulled out), and repeat tug test.
- Service Brake Tests – Release both parking brakes, depress clutch and place transmission in 1st gear. Pull ahead slowly, push in clutch, step on brake pedal (treadle valve) and bring vehicle to a stop. If so equipped, pull ahead slowly, again, push in clutch and pull down trailer brake hand valve bringing truck to a stop.
- 3 Step Brake Test – With all brakes released state the following: “We’re on flat level ground. If we were not on level ground I would chock the wheels. I will now shut off the engine but turn the ignition switch on. Please note that my air pressure gauge reads in excess of 100 psi.”
  - Now push down on the brake pedal and tell the examiner: “I will now hold 90 pounds of pressure on the brake for 1 minute. I cannot lose more than 4 psi on a combination vehicle or 3 psi on a straight truck.” Begin timing. The examiner may shorten this portion of the 3 Step Brake test.
  - At the end of one minute or when directed by examiner, release brakes and state the following: “I will now fan my brakes. Prior to reaching 60 psi I should notice visual warning. The warning may also be audible.”
  - After the Low Air Warning is received stop fanning the brakes and tell the examiner the following: “I will now continue fanning the brakes. When the air pressure reaches a level between 20 and 45 psi both brake valves should pop.” Fan the brakes until the parking brakes engage and then let the examiner know that the 3 Step Brake Test is concluded.

Once the lights and brakes have been inspected you can begin inspecting the exterior of the truck.

- Check the condition of the clearance lights. Not cracked or fogged
- Check the general appearance of the windshield, windshield wipers, hood and grill.
- Check the condition of the headlights and turn signals. Not cracked or fogged.

- Check that the bumper is relatively level indicating no flat tires or broken suspension components.
- Check for indication of leaks underneath the truck.

Open the hood and begin inspecting the engine compartment area. Remember, only inspect items unique to passenger side and then move on to driver's side. The following list includes all the items you need to check, regardless of the side on which they're found:

- Air Cleaner (Securely mounted, nothing lodged in the intake, filter clean)
- Intake tubing and hoses. Tubing not cracked or broken, rubber boots securely clamped with no abrasions, bulges or cuts (ABC's).
- Turbocharger securely mounted, clamps tight, no oil apparent oil leaks. Check exhaust tubing, as far as possible, for cracks and leaks (indicated by black soot), clamp tight.
- Coolant level in the proper operating range.
- Upper and lower radiator hoses. Not cracked or broken. Free from Abrasions, Bulges or Cuts (ABC's).
- Alternator. Securely mounted, belt or gear driven, electrical leads secure, no corrosion
- Water pump. Securely mounted, belt or gear driven, no apparent leaks.
- Belt(s). Not cut or frayed. No excessive play (often, no more than 3/4 of an inch).
- Air Compressor. Securely mounted, belt or gear driven, lines in and out secure, no leaks
- Power Steering Pump. Securely mounted, belt or gear driven, no ABC's on hoses, fittings tight, check for leaks.
- Check power steering fluid level (in proper operating range).
- Check oil level (in proper operating range).
- Air lines. No ABC's, fittings tight.
- Electrical wiring. No cut insulation, no bare wires.

Now check Steering Components:

- Steering shaft. Straight, no play in the u-joints, less than 10 degrees play (2 inches on a 20 inch wheel).
- Power steering box. Securely mounted, check for leaks, ABC's on hoses leading to and from, fittings tight.
- Pitman arm securely mounted to steering box, not cracked or broken.
- Drag link securely mounted to pitman arm and steering knuckle with castle nuts and cotter keys, no non-factory bends.
- Tie rod straight and securely mounted to steering knuckle with castle nuts and cotter pins.

Check Frame: No cracks, no rewelds and no non-factory holes, larger than 1/2 inch, without a bolt. Frame should be checked at suspension mounting points.

Check left-front suspension components:

Check Front and Rear Spring Hangers (securely mounted, no cracks, no missing bolts. Check Springs. Securely mounted, check for cracked broken, missing or misaligned spring leaves.

Check U-Bolts. Tight, if they weren't tight there would be evidence of shiny metal on the saddle).

Check Shock Absorbers. Securely mounted, not bent or leaking.

Check left-front brake components:

- Check Air-lines. Fittings tight, no ABC's.
- Check Brake Canister. Securely mounted, undamaged, belly clamp tight.
- Check Slack Adjuster and Push-rod assembly. Push-rod straight, connected to Slack Adjuster with a clevis pin and cotter key, less than 1 inch of play with brakes released.
- Check Brake Pads. No less than 5/16 friction material remaining on pad.
- Check Brake Drum. Not cracked or welded, no grease or oil present in the area.

Check left-front steering tire and wheel assembly:

- Check Rims, front and back, for cracks and rewelds. Check beads, front and rear, for damage and proper seated.
- Check Tire sidewalls, both sides, for ABC's.
- Check Tire surface for even wear and no less than 4/32 inch tread depth.
- Check Valve Stem. No damage, cap tight, this is where inflation can be checked and tire filled, if necessary.
- Check Lug Nuts to assure they're all present and tight. If they weren't tight there might be evidence of shiny metal or oxidation.
- Check Hub Cover, all bolts present and tight, no leaks.

Close the hood.

Check left side of tractor:

- Check side-marker light(s), not cracked or fogged.
- Check Side Mirror, securely mounted.
- Check Door. Opens and closes properly, hinges support weight, latches work properly, weather stripping intact and fully functional.
- Check Grab Handle(s). Securely mounted and will support weight.
- Check Entry Steps. Secure, support weight, free of grease, oil or obstruction.
- Check Emergency egress and side-compartment door; closed.

- Check Exhaust Stack. Securely mounted, no cracks or leaks (evidenced by soot), clamps present and tight.

#### Check Fuel Tank:

- Tank is securely strapped to frame and there is an insulator between tank and straps.
- Tank is not leaking.
- Tank has a cap, the cap has a gasket and the cap is tight.
- Fuel lines are free from ABC's and fittings are tight.

Check back of Cab: No intrusions into cab, reflective tape (either white or silver) present, lights, if any, free from cracks and fogging.

Check Air Lines: Fittings tight, no ABC's, pogo stick secure and supporting air lines above catwalk.

Check Electrical Cord: No cuts, no bare wire, securely fitted into plug.

Check Catwalk and Steps: Secure and able to support weight.

Check Driveshaft: Straight, no cracks or dents. U-Joints are tight, properly greased, bolts and caps are tight.

Check Frame: No cracks, no rewelds, no non-factory holes larger than 1/2 inch without a bolt.

Check Suspension Components (check one drive axle only):

Checklist for a typical 2 Airbag Suspension:

- Check Torque-Arms. Securely mounted and straight.
- Check Front Spring Mount. Securely mounted, not cracked or broken.
- Check Spring, C-Spring or Control-Arm. Securely mounted, not cracked, bent or broken.
- Check U-Bolts. Tight, if they weren't tight there'd be evidence of shiny metal on the saddle.
- Check Shock Absorbers. Securely mounted, straight, not leaking.
- Check Upper and Lower Airbag Mounts. Securely mounted, not cracked or damaged.
- Check Airbags. Inflated, no ABC's.

Checklist for a typical 4 Airbag Suspension:

- Check Torque-Arms. Securely mounted and straight.
- Check Wishbone. Securely mounted, not cracked or broken.
- Check Control Arms. Securely mounted, not bent or broken.
- Check Upper and Lower Airbag Mounts. Securely mounted, not bent or broken.
- Check Airbags. Inflated, no ABC's.
- Check Shock Absorbers, Securely mounted, straight and not leaking.

- Lower Airbag Mount securely clamped to axle with U-Bolts or Clamps. Tight.

#### Checklist for a typical Spring Suspension:

- Check Torque-Arms. Securely mounted and straight.
- Check Front and Rear Spring Mounts. Secure, not cracked or broken.
- Check U-Bolts. Tight, if not there would be evidence of shiny metal on saddle.
- Check Springs. Look for cracked, missing or misaligned leaves.
- Check Shock Absorbers. Securely mounted, straight, not leaking.

#### Check Brake Components on one drive axle:

- Check Air-lines. Fittings tight, no ABC's.
- Check Brake Canister. Securely mounted, undamaged, belly clamp(s) tight.
- Check Slack Adjuster and Push-rod assembly. Push-rod straight, connected to Slack Adjuster with a clevis pin and cotter key, less than 1 inch of play with brakes released or no less than a 90 degree angle between Slack Adjuster and Push-Rod when set.
- Check Brake Pads. No less than 5/16 friction material remaining on pad.
- Check Brake Drum. Not cracked or welded, no grease or oil present in the area.

#### Check Dual Tire and Wheel Assembly:

- Check all four rim faces for cracks or rewelds.
- Check all four beads. Properly seated and free from damage.
- Check all four sidewall surfaces for ABC's.
- Check both tire faces for even wear and more than 2/32 inch tread depth.
- Check that the tires are the same size, type and height.
- Check Valve Stem for damage, this is where tire inflation can be checked, with a gauge, and tires inflated if need be. Cap is tight.
- Check Lug Nuts. All are present and tight. If they weren't tight there might be evidence of oxidation or shiny metal indicating one or more were loose.
- Check Axle Seal. All bolts present and tight, no leaks.
- Check Budd Spacing. There should be no gap between the rims, there should be a gap between the tires and there should be nothing lodged within that gap.

#### Check Rear of Tractor:

- Check Tail Lights. Not cracked or fogged.
- Check License Plate. Secure, tags are current.
- Check Mud Flaps. Not torn more than 1/4 of width, reflective tape present (full width), not dragging or hanging higher than bottom of hub.

## Check Coupling Components:

### Prior to Coupling:

- Check Apron for cracks or damage.
- Check Kingpin. Straight, no damage.
- Check Fifth-wheel Plate. Properly greased, no cracks or damage.
- Throat of Fifth-wheel free of debris.
- Release Arm is in the open, unlocked, position.
- Locking Jaws are in the open, unlocked, position.
- Pivot pins are present and keepers are present.
- If Sliding Fifth-wheel, slide is undamaged and locked in place.
- Platform undamaged and secured to Frame with a minimum of 5 bolts on each side.

### After Coupling:

- Check that there is no gap between Apron and Fifth-wheel.
- Check that Release Arm is in the closed, locked, position.
- Check that Locking Jaws are completely closed around the shank of the Kingpin.

With the Tractor Exterior Inspection concluded you can move on to the Trailer.

### Check the front, or bulkhead, of the trailer:

- Check Clearance lights, not cracked or fogged.
- Check body for damage or intrusions into the cargo area.
- Check Glad-hand connections for security.

### Check Left Side of Trailer:

- Clearance lights, marker lights and turn signals free from cracks or fogged lenses.
- Reflectors clear and serviceable, side of trailer fitted with DOT Reflective tape covering at least 50% of trailer side.
- Landing gear securely mounted, in the up, travel, position. Cross bracing undamaged and handle stowed.
- Frame cross-members all present, not cracked or broken.
- Check swing-door hanger or keeper.

Check Trailer Frame: No cracks, no rewelds and no non-factory holes larger than 1/2 inch without a bolt.

### Check Trailer Brake Components on one axle:

- Check Air-lines. Fittings tight, no ABC's.

- Check Brake Canister. Securely mounted, undamaged, belly clamp(s) tight.
- Check Slack Adjuster and Push-rod assembly. Push-rod straight, connected to Slack Adjuster with a clevis pin and cotter key, less than 1 inch of play with brakes released or no less than a 90 degree angle between Slack Adjuster and Push-Rod when set.
- Check Brake Pads. No less than 5/16 friction material remaining on pad.
- Check Brake Drum. Not cracked or welded, no grease or oil present in the area.

#### Check Trailer Suspension Components on one axle:

- Check Torque-Arms (if any). Securely mounted and straight.
- Check Front and Rear Spring Mounts or Airbag mounts. Secure, not cracked or broken.
- Check U-Bolts. Tight, if not there would be evidence of shiny metal on saddle.
- Check Springs or Airbags. Look for cracked, missing or misaligned leaves in springs and/or check that Airbags are inflated and free from ABC's.
- Check Shock Absorbers. Securely mounted, straight, not leaking.

#### Check Dual Tire and Wheel Assembly:

- Check all four rim faces for cracks or rewelds.
- Check all four beads. Properly seated and free from damage.
- Check all four sidewall surfaces for ABC's.
- Check both tire faces for even wear and more than 2/32 inch tread depth.
- Check that the tires are the same size, type and height.
- Check Valve Stem for damage, this is where tire inflation can be checked, with a gauge, and tires inflated if need be. Cap is tight.
- Check Lug Nuts. All are present and tight. If they weren't tight there might be evidence of oxidation or shiny metal indicating one or more were loose.
- Check Axle Seal. All bolts present and tight, no leaks.
- Check Budd Spacing. There should be no gap between the rims, there should be a gap between the tires and there should be nothing lodged within that gap.

#### Check Rear of Trailer:

- Check Clearance Lights, not cracked or fogged.
- Check Doors ensuring they are closed, latched in place and the handles are stowed. Check Swing-Door keepers.
- Check Door Hinges ensuring they will support the weight of the door.
- If there is a lift gate, ensure that it is in the up and locked position.
- Check Tail Lights, not cracked or fogged.
- Check DOT Bumper. Secure and unbroken.

- DOT Reflective Tape covering 100% of the width of trailer and/or DOT Bumper.
- Mud Flaps secure and serviceable.

**This concludes the exterior portion of the Pre-Trip Inspection and you can begin the Interior Inspection.**

Upon entering the cab, mention that the tractor is equipped with a 10 B:C Fire Extinguisher, 3 Reflective Triangle and Spare Fuses (unless fully equipped with Circuit Breakers).

Then perform the following inspection:

- Check Seat Belt: Not cut or frayed, latches and unlatches properly. Put on seat belt and ask examiner to do the same if they have not done so.
- Check Mirrors: Properly adjusted, not broken, check for cracks.
- Windshield: No cracks longer than 4 inches, no intersecting cracks, no dings larger than a dime, no stickers blocking vision.
- Safe Start:
  - Turn Key to "On" position and wait for gauges to cycle.
  - Depress Clutch.
  - Check that Gearshift lever is in the neutral position.
  - Start the engine and slowly release the clutch.
- Check Gauges:
  - Ensure that Oil Pressure rises to operating level within 10 seconds of starting engine.
  - Check that Volt Meter for proper charge.
  - Check that Water Temperature is rising but not overheating.
  - Check Air Pressure Gauge(s) and ensure that pressure reaches operating range (between 100 and 125 psi).
- Check Dashboard Indicator lights (left and right turn signal indicators, high beam indicator and 4-way flashers).
- Check that Heater and Defroster is working properly.
- Check that Windshield Wipers and Washers are working properly.
- Check that Horns are working properly.

**This concludes the Pre-Trip Inspection as outlined in the CDL Manual. Remember, each state follows their own guidelines so the exact order in which the inspection may be done may differ but, essentially, the inspection will cover the preceding items.**