

# Highway Truck Pre-Operation Inspection



## Best Practice Series BP-5



Many accidents involving highway trucks could be avoided with a pre-operation inspection. A thorough pre-operation inspection takes very little time and effort, but can greatly reduce the frequency and severity of accidents.

A checklist will remind you of the specific checks which should be done in a logical order. The checklist should include but not be limited to the following:

### Personal Safety Items

- Depending on surrounding circumstances, always wear appropriate personal protective equipment, i.e., hard hat, safety boots, safety glasses or goggles, gloves, hearing protection, and dust mask or respirator.
- Don't wear jewelry that may get caught on controls or other machine parts.

### Prepare the Machine

- Park the machine on flat ground (if possible) and note its general condition.
- Chock the machine against movement.

- Look beneath the power train for signs of oil, coolant, grease, or fuel leaks.
- Review the last machine inspection report. Note any defects reported by previous driver. Confirm that repairs were made.

### Engine Compartment

- Check engine oil, coolant, power steering, and transmission fluid levels.
- Check all hoses for signs of leakage or seeping.
- Check for oil accumulations on engine.
- Be sure all drive belts are in good condition and properly adjusted.
- Check steering system components for damage, leakage, etc.
- Inspect wiring for cracked or worn insulation.

### Inside the Cab

- **Check Emergency Equipment** - Ensure that you have a fully charged fire extinguisher, 3 red reflective emergency triangles, and spare fuses. Flares, lanterns, and flags are optional.
- Set the parking brake, place the transmission in "neutral," start the engine, and listen for unusual noises.
- **Condition of Controls** - Check for looseness, sticking, damage, or improper setting of:
  - » steering wheel excessive play – refer to the manufacturer's or the Commercial Vehicle Safety Alliance (CVSA) manual for allowable play
  - » clutch for excessive free travel
  - » accelerator
  - » foot brake
  - » trailer brake

- » parking brake
- » retarder and transmission controls
- » interaxle differential lock
- » engine brake

- Check all gauges and warning devices for proper range, level, and operation.
- Check horn(s), backup lights, backup alarm, headlights, dimmer switch, turn signals, 4-way flashers, and clearance and running lights for condition and operation. Use a buddy system to check lights.
- Ensure that there is a serviceable seat that is firmly attached.
- Check to see that the seat is adjustable to accommodate maximum use of all controls.
- Clean and check the windshield for cracks and damage.
- Clean and adjust mirrors.
- Make sure windshield wipers and washers are working.

### Outside the Cab — Front and Left/Right Side

- **Steering System** - Look for loose, worn, bent, broken, or missing parts.
- **Suspension (Both Sides)** - Check leaf spring and/or shock strut mounting hardware for broken or missing parts.
- Examine leaves for misalignment or contact with the machine's body, and check for flat or damaged shock struts.
- **Front and Rear Brakes** - Check brake lines for damage and insecure mounting. Check brake linings, if visible, for large cracks and missing pieces, and verify that there is no oil or grease on linings, drums, or discs. Listen for air leaks and with the aid of a coworker who can apply/release

the brakes, check for excessive slack adjuster travel. If equipped, visually inspect the main air supply tank and lines. Drain any moisture from the tank using the appropriate draining procedures. Check condition of dust boots on slack adjusters.

- **Front and Rear Machine Tires** - Check tires for bulges, leaks, sidewall separation, cuts, exposed fabric, worn spots, and evidence of misalignment. In case of bulges or separation, move away from the tire and notify the appropriate supervisor. See that tires are properly inflated and do not contact any part of the machine.
- **Dual Wheels** - Tires should be the same type and evenly matched, with no debris stuck between them.
- **Front and Rear Wheels** - Check for defective welds, cracks or breaks, especially between stud holes; unseated locking rings; broken, missing or loose lugs, studs or clamps; bent or cracked rims. Look for scrubbed or polished areas on either side of the lug indicating a slipped rim. The valve stem should be sitting straight between the wheel spokes.
- **Frame** - Look for cracked or sagging rails. Check for broken or loose bolts or brackets.
- **Battery** - Be sure the battery and battery box is securely mounted to the machine, battery fluid is at the proper level, and all caps are on and securely tightened.

#### Left Side of Tractor/Trailer

- **Fuel Tank** - Check fuel level. Look for unsecured mounting, leaks, or damage. Make sure that the fill cap is tight and the fuel crossover line is secure.
- **Air and Electrical Lines** - Check all lines between the tractor and the trailer for tan-

gles, crimps, chafing, or dragging. Check connections and listen for leaks.

- **Hose Couplers** - Check connections for damage, and look and listen for leaks.
- **Fifth Wheel Connection** - Check for cracks along the fifth wheel plate and mounting area. Be certain that locking jaws are properly engaged. Check for loose or missing nuts and bolts. The operating handle is to be closed and latched.
- **Cargo** - Ensure that all doors, latches, compartments, blocking and bracing, chains, straps, etc., are secured. Make sure that the load has not shifted.

#### Rear of Trailer

- **Lighting** - Check stop lamps, turn signals, emergency flashers, reflectors, and clearance and marking lights for proper operation, color, and cleanliness. Ensure that the license plate is visible and lighted. Use a buddy system to check lights.
- **Suspension** - Check the condition of springs, spring hangers, shackles, and U-bolts. See that the axle is properly aligned.
- **Wheels, brakes, suspensions, tires** - Inspect these items as described earlier.

#### Right Side of Tractor/Trailer

Inspect all items on the right side of the tractor and trailer just as you did on the left side.

- **Exhaust System** - Check for secure mounting and leaks under the cab. Verify that fuel, air lines, or electrical wires do not touch the exhaust system. Look for carbon deposits around seams and clamps that indicate exhaust leaks.
- **Spare Tire** - Ensure that the spare tire is secure, inflated, and in good condition.

- **Landing Gear or Dollies** - Ensure that landing gear or dollies are fully raised. Check for missing, bent, or damaged parts, and be certain that the crank handle is secured.
- **Paperwork** - Check to see that the machine is properly registered, licensed, placarded, etc.

If applicable, update the machine's logbook, complete the inspection report, and verify that you have permits, inspection stickers, and medical certificate and waiver (if required) before starting on your trip.

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