

**Best Practices- Developed by the  
Surface Haulage Safety Task Force  
in Cooperation with MSHA**

**100-TON OR LESS TRUCK  
PREOPERATION INSPECTION**

Many accidents involving on/off road trucks could have been avoided with a thorough preoperation inspection. A thorough preoperation inspection takes very little time and effort, but can greatly reduce the frequency and severity of accidents.

Use an inspection checklist to help identify safety hazards and operational readiness of the machine you are operating. The checklist should include but not be limited to the following:

**Personal Safety Items**

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

Before checking fluid levels, park the machine on flat ground, chock the wheels and set the parking brake. If the machine is loaded, avoid getting under the load.

**External Checks**

- Make sure the access ladder is free of debris, securely fastened to the truck, and in general good condition. After confirming its condition, climb the ladder to the cab.

**CAUTION: Use the handrails, face the ladder and maintain the "three-points-of-contact" (2 feet and 1 hand or 1 foot and 2 hands) whenever climbing or descending the boarding ladder or steps.**

- Clean cab windows, and adjust and clean all mirrors.
- Switch "on" all exterior lights including the emergency flashers (if so equipped). The lights should be checked during the inspection to ensure that they are working.
- Return to ground level and continue the inspection.

- Do not smoke while making an inspection; many fluids, lubricants, etc. are potential explosive hazards.
- Ensure that all lights are illuminated. Clean lenses if necessary.
- Visually inspect the underside of the truck for indications of damage and leakage. Make sure fuel, coolant, grease, hydraulic hoses, etc., are free of kinks and cracks, and secured away from moving parts.
- If you are required to check fluid levels, be sure that the grab irons, hand holds, steps, ladders, service platforms, etc., are free and clear of mud, ice, snow, and debris.
- Check for proper levels of engine, transmission, hydraulic, coolant, and battery fluids.
- Remove from the engine compartment any trash, tools, rags, etc., that could jam controls, damage the engine, or cause a fire.
- Visually inspect the condition of the radiator. Ensure that it is free of debris that could interfere with its cooling capability.
- See that all engine drive belts are in good condition and fan guards are in place.
- Ensure that the air ducting from the filter assembly to the engine is not cracked, missing, or has holes in the rubber connections. **Note: This is a critical inspection item. If the engine takes in unfiltered air, extensive damage to the engine will occur.**
- Check suspensions, shock struts, leaf springs, etc., for proper inflation, leakage, or damage.
- Check externally mounted fire extinguishers or fire suppression system components for condition and serviceability. Make sure that you know how to operate them in an emergency.
- Visually check steering system components for evidence of leaks or damage.
- Visually inspect all tires for deep cuts, missing chunks, and proper inflation; wheels and rims for missing or loose lug nuts and cracks. If there is any abnormal bulging or tread/sidewall separation immediately move away from the tire and notify the appropriate supervisor.
- If equipped, visually inspect the main air supply tank and lines. Drain any moisture from the tank using the appropriate draining procedure.

- Visually inspect steering system components: ball joints or clevis assemblies, tie rods, bell cranks, and steering cylinders. If any piece is damaged or leaking, do not drive the truck. Report the condition immediately.
- On trucks equipped with an automatic lubrication system, check for leaks throughout the system, and ensure that the level of the lubricating grease in the main supply reservoir is adequate.

### **Operator's Cab**

- Remove or secure trash, tools, or any loose objects which could jam a control or prevent the operator from performing a critical control function.
- Adjust the operator's seat to the best driving position for maximum comfort and safety.
- Clean mirrors and windows, and adjust mirrors for maximum visibility.
- Check gauges and warning lights before starting the engine and after the engine is running for proper warnings and indications.

Turn "ON" the master switch, or any other switch(s) required to start the engine.

- Be sure that the:
  - » Parking brake is "set."
  - » Transmission/shifter is in "neutral."
  - » Starting air pressure is adequate (on airstart trucks).
  - » Circuit breakers are all in the operating position (pushed "IN").
  - » Appropriate "AID" or other auxiliary warning indicators flash and alarms sound.
  - » Engine function gauges and warning lights are working.
- If equipped, verify the operation of the secondary (emergency) steering and braking systems.

- Warn any people in the area that you are going to start the truck. Make sure they are clear of the truck, sound the horn, and wait an appropriate amount of time before starting the engine.

### **Starting the Engine**

Do not accelerate a cold engine. Allow the engine to idle until coolant temperatures show that the engine is warmed up. If the engine does not start, refer to the appropriate engine manual for additional instructions.

- As soon as the engine is started and operating, check all gauges and indicators for proper reading.
- Make sure that windshield wipers are working.
- Check the service brakes for operation. Apply and hold the brake pedal, feel for pedal movement, and make sure there is no drop in brake pressure once the brakes are applied.
- Ensure the area around the machine is clear, and check all braking systems according to the manufacturer's recommendations.
- When the engine coolant temperature, oil pressure, system air pressure, and amperage and voltage levels reach normal operating ranges, the truck may be put into operation.

Complete required inspection reports. Report mechanical problems and safety hazards immediately, and most of all, do not operate an unsafe machine.

Proceed with caution and follow all haulage safety rules and procedures.

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