Recent events have shown the value and importance of assuring that fire apparatus systems are fully operational, especially safety systems such as brakes, lights etc. Special attention must be paid to vehicles equipped with air brakes. To be of the most value, inspections should be conducted at the start of each shift. Vehicles with defects, particularly in safety related systems, should be taken out of service immediately and not put back on the line until all defects have been corrected.

The NFPA recommends each vehicle be inspected every day. The following is a 7-step procedure for pre trip inspections on fire apparatus.

There are two principles recommended when conducting a vehicle inspection:
• Conduct the inspection the same way each time using a written checklist.
• Report in writing any deficiencies found.

Your department should also conduct post- trip inspections after each use including the following items:
• Cleaning a vehicle
• Replacing supplies
• Refueling and checking fluid levels
• Reporting unusual occurrences and or malfunction

**Pre-Trip Inspection Checklist**

The following pre-trip inspection checklist is recommended for conducting regular inspections of emergency vehicles.

1. **Vehicle Overview- Approach Vehicle & Look for Leaks**
   As one approaches the vehicle, look at its general condition. Look for damage or if the vehicle is leaning. Check under the vehicle for fresh oil, coolant, grease, or fuel leaks. Review the vehicle log. Verify if any discrepancies noted have been addressed.

2. **Check the Engine Compartment**
   First, verify that the parking brake is engaged. Ensure, if appropriate, that the wheels are chocked, and secure any loose items in the cab. Access the engine compartment. Proceed to check the following:
   • Engine Oil Level
   • Coolant Level and Condition of Hoses
   • Power Steering Fluid Level
   • Windshield Washer Fluid Level (if so equipped)
   • Belts for Tightness and Wear (learn characteristics of belts on vehicle)
   • Leaks in Engine Compartment
   • Battery Fluid Level and Connections (may be located in another area)
   • Automatic Transmission Fluid Level (engine must be running)
3. Start Engine and Check Inside Cab
Get in cab, check to ensure parking brake is engaged and the automatic transmission is in “Park.”

- Start engine and listen for any strange or unusual noises.

- Look at all gauges and verify they are registering normal ranges.
  - Oil Pressure
  - Ammeter/Voltmeter
  - Coolant Temperature
  - Engine Oil Temperature
  - Warning Lights and/or Buzzers

- Check operation of all controls
  - Steering Wheel
  - Accelerator
  - Brakes (Parking, Service, Secondary Braking System)
  - Transmission
  - Horn(s)
  - Windshield Wiper/Washer
  - Light Switches and Indicators

- Check windshield; check and adjust mirrors

- Check other cab controls (intercom system)

4. Check Headlights, Signal Lights, Warning Lights, and Audio Devices
After completing the cab check, check the audio devices and then proceed to check each lighting system independently as follows:

- Running and parking lights, including brake lights
- Turn signals and four-way flashers
- Headlights (low and high beam) and Emergency Traffic Movers (ETMs or WigWags), if so equipped.
- Hosebed or other working area lights
- Emergency strobe light system (intersection, side, and other)
- Emergency flashing light system (front and rear)
- Roof light bar

- Departments should also keep a log book in the vehicle for quick access, so the next driver can read and see if a prior reported problem was repaired or not.

5. Conduct Walk Around Inspection
After extinguishing all lights, a walk around inspection should be carefully conducted. Begin at the left front of the vehicle. The inspection should proceed around the vehicle in a clockwise direction (left front, front, right front, right side etc.) checking the following:

**Left Front** – Check left front wheel and tire- condition, tread, and inflation; observe left front suspension.

**Front** – Check windshield, wipers, and if so equipped, washers; front bumper, appearance/cleanliness of audio devices; lamps and reflectors (clean and undamaged).

**Right Front** – Check right front wheel and tire- condition, tread, and inflation; observe right front suspension.

**Right Side** – Cab doors and closure should work; check for body damage; check right side including any special provisions (pump panel, patient compartment door, etc, and equipment, if any); and check compartments and compartment doors.

**Right Rear** – Check right rear wheels and tires- condition, tread, and inflation; observe right rear suspension.

**Rear** – Check hosebed or rear patient compartment doors, or other body features, if any; lamps and reflectors (clean and undamaged).

**Left Rear** – Check left rear wheels and tires- condition, tread, and inflation; observe left rear suspension; check fuel fill.

**Left Side** – Check compartments as well as compartment and cab doors; all closures should work properly. Check for body damage.

**Pump Operator’s Position** – Check pump panel- caps, valves, drains, and equipment, if vehicle is a fire vehicle.

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6. Check Controls and Indicators at Pump Operator’s Position or Any Other Special Function Components, Wherever Located.
Get in vehicle, start engine, and engage the pump (aerial, etc.) Move to pump operator’s position and proceed to check out each system on the panel as follows:

• Engine controls and indicators
• Fire pump controls and indicators
• Other controls and indicators, including pump panel lights

If other special function components exist, develop inspection procedures for such components.

7. Check Brake System (Air Brakes)
The steps for the air brakes test are as follows.

A. Bring the vehicle up to max psi and shut off the vehicle. Place chocks at the rear tire (front and back of tire) then release the parking brake. If possible remove the ignition keys when leaving the vehicle to place the chocks.

B. Check for air leakage. With vehicle off and parking brake released, watch the air gauge for 1 minute and the vehicle cannot have more than 2 psi of pressure drop. Apply the service brake and after the gauges stop moving hold brakes for 1 minute and watch the gauge. The gauge cannot drop more than 3 psi.

C. Test the low-pressure alarm. Turn on the electrical system. Pump the brake down until the audible and visual alarm come on (should come on prior to 60 pounds).

D. Check that the spring brake applies. Pump the brake pedal down until the parking brake knob pops out. Refer to the manufacturer’s specification for proper psi (every vehicle is different).

E. Start the vehicle and build up the air in fire apparatus. It needs to be build up to 85–100 psi in 30 seconds, for commercial vehicles the time is 45 seconds.

F. Test the parking brake. With the vehicle running, place the transmission in gear and gently apply the accelerator to pull the vehicle against the brakes. I recommend placing the vehicle on a steep incline and apply the parking brake. If they want to place the vehicle in gear, DO NOT apply the accelerator.

G. Test the service brakes. Pull forward at 5 mph, apply the service brake and stop. Check to see that the vehicle does not pull to either side and that it stops when brake is applied.