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| ***REPLACE WITH YOUR MASTHEAD*** |
| **VFIS logo black JPG** | **SOG Title:** |
| **SOG Number:** |
| **Original Date:** | **Revision Date:** |
| **ABC Fire Department General Operating Guideline** |

**Vehicle Inspection**

***This is a sample of a standard operating guideline (SOG) on this topic. You should review the content, modify as appropriate for your organization, have it reviewed by your leadership team and if appropriate your legal counsel. Once adopted, make sure the SOG is communicated to members, implemented and performance monitored for effective implementation.***

**Purpose:**

To ensure vehicle and equipment are in working order and that the vehicle is safe and ready to respond.

**Procedure:**

Fire apparatus shall only be operated when their mechanical condition makes it safe to do so. The following list of vehicle defects has been developed to guide apparatus operators in making decisions related to the operational safety of a fire department vehicle. If an “out-of-service” condition is discovered, the vehicle shall be placed out of service and the condition of the vehicle shall be reported to the responsible officer. The vehicle shall not be returned to service until the problem condition is resolved by a qualified individual.

The following defects and deficiencies of the driving and crew areas, the apparatus body, and the compartmentation reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Body mounting that is defective
* Cab mounting that is defective
* Seat belts that are torn or have melted webbing, missing or broken buckles, or loose mountings. Due to the extreme safety-related consequences of a defective seat belt, and the fact that one defective seat belt (unless it is the driver’s seat belt) does not render a piece of apparatus unusable, the authority having jurisdiction shall take any seating position with a defective seat belt out of service
* Cracked or broken windshield that obstructs the driver’s/operator’s view
* Missing or broken rear-view mirrors that obstruct the driver’s/operator’s view
* Windshield wipers that are missing or inoperable
* Steering wheel that has a deficiency
* Oil pressure gauge or engine or transmission temperature gauges that have failed
* Air gauge or audio low air warning device that has failed
* Door latches that are defective
* Defrosters that are defective
* Foot throttle that is defective

The following defects and deficiencies of the chassis, axles, steering and suspension systems, driveline, wheels, and tires reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Tires that have cuts in the sidewall that penetrate to the cord
* Tires that are defective
* Tires that have a tread depth of 4/32 in. (3.2 mm) or less on any steering axle or 2/32 in. (1.6 mm) or less on any non-steering axle at any two adjacent major tread grooves anywhere on the tire
* Suspension components that are defective
* Wheel fasteners that are missing or broken
* Wheels that are defective
* Axle flanges that have Class 3 leakage
* An axle that has any Class 3 leakage
* Steering components that are defective
* A steering component that has Class 3 leakage
* Driveline components that are defective

The following defects and deficiencies of the engine systems reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Air filter restriction indicator that shows maximum restriction
* Engine that won’t crank or start
* Engine system that has Class 3 leakage of oil
* Engine that is overheating
* Oil that contains coolant
* Oil that is diluted with fuel
* A fuel system component that has Class 2 leakage of fuel
* Fuel tank, mountings, or straps that are defective
* Stop-engine light that fails to turn off after engine is started

The following defects and deficiencies of the engine cooling system reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Cooling system component that has Class 3 leakage
* Coolant that contains oil
* Radiator that is defective
* Water pump bearing that is defective
* Cooling fan that is defective
* Coolant system components that are defective

The following defects and deficiencies of the transmission and clutch reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Clutch components that are defective
* Transmission components that are defective
* Shift linkages that are defective
* Automatic transmission that overheats in any range
* Automatic transmission that has a “Do not shift” light on
* Transmission components that have Class 3 leakage of transmission oil

The following defects and deficiencies of the low voltage electrical system and the line voltage electrical system reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Department of Transportation lighting that is defective
* Ignition system that is defective
* Charging system that is defective
* Grounding and bonding of the line voltage electrical system that is defective

The following defects and deficiencies of the air brake system reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Service brakes that have an air pressure drop of more than 2 psi (13.8 kPa) in 1 minute for single fire apparatus or more than 3 psi (20.7 kPa) in 1 minute for combination fire apparatus, with the engine stopped and the service brakes released
* Leak-down rate (time) of the applied side of the air brake that is more than 3 psi (20.7 kPa) in 1 minute for single fire apparatus or more than 4 psi (27.6 kPa) in 1 minute for combination fire apparatus, with the engine stopped and the service brakes applied
* Brakes that are out of adjustment
* Braking system components that are defective
* Braking operation that is ineffective
* Parking brake operation that is ineffective
* Air compressor that fails to build air pressure
* Air compressor that fails to maintain 80-90 psi (552-621 kPa) pressure in the system with the service brakes applied and the engine at idle, or air compressor that fails to fill the air system to the air compressor governor cutout pressure with the service and parking brakes released
* Friction surfaces, brake shoes, or disc brake pads that have grease or oil on them
* Brake lining or pads that are worn beyond the brake system manufacturer’s minimum specifications
* Rotors and drums that are worn beyond the brake system manufacturer’s minimum specifications
* Antilock braking system (ABS) warning indicator that is activated

The following defects and deficiencies of the hydraulic brake system reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Brake system components that have Class 2 leakage of brake fluid
* Friction surfaces, brake shoes, or disc brake pads that have grease or oil on them
* Braking system components that are defective
* Braking operation that is ineffective
* Parking brake operation that is ineffective
* Brake warning light that is activated or brake pedal that falls away or drifts toward the flooring when brake pressure is applied
* Brake lining or pads that are worn beyond the brake system manufacturer’s minimum specifications
* Rotors and drums that are worn beyond the brake system manufacturer’s minimum specifications
* Anti-lock braking system warning indicator that is activated

The following defects and deficiencies of the fire pump system reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Pump test results that fall below 90 percent of the original rating of the pump when tested in accordance with NFPA 1911, Standard for Service Tests of Fire Pump Systems on Fire Apparatus
* Pump that will not engage
* Water tank that will not hold water
* Pressure control system that is not operational
* Pump transmission components that have Class 3 leakage of fluid
* Pump transmission lubricant that is contaminated
* Pump panel throttle that is defective

The following defects and deficiencies of the aerial device and its systems reduce the operational safety and performance of the fire apparatus and shall be considered out-of-service criteria:

* Power takeoff (PTO) that will not engage
* Stabilizer system that is defective
* Aerial device that is defective
* Hydraulic system components that are defective
* Cable sheaves that are defective
* Cables that are defective or frayed
* Base and section rails that show ironing beyond the manufacturer’s recommendations
* Aerial device that is structurally deformed
* Torque box structure or fasteners that are defective
* Turntable fasteners that are defective or missing

The visual inspections, operational tests, and load tests defined in NFPA 1914, Standard for Testing Fire Department Aerial Devices, shall be conducted at the following times:

* At least annually
* After major repairs or overhaul
* Following the use of the aerial device when the aerial device could have been subjected to unusual operating conditions of stress or load
* When there is reason to believe that usage has exceeded the manufacturer’s recommended aerial device operating procedures

The complete inspections and tests including the non-destructive testing (NDT) defined in NFPA 1914, Standard for Testing Fire Department Aerial Devices, shall be conducted at least every 5 years. NDT shall be conducted whenever visual inspection or load testing indicates a potential problem or when there is a desire to further confirm continued operational safety.

If the fire apparatus is equipped with a fire pump, the pump shall be service-tested in accordance with NFPA 1911, Standard for Service Tests of Fire Pump Systems on Fire Apparatus, at least annually and whenever major repairs or modifications to the pump or to any component of the apparatus that is used in pump operations have been made.

Testing of the braking system, including antilock brake systems and auxiliary brake systems, shall be conducted at a prescribed interval, not to exceed the manufacturer’s recommendations, at least annually, or whenever adjustments, repairs, or modifications have been performed on any component that can affect the proper operation of the braking system or systems. All testing shall be conducted at a location and in a manner that does not violate local, state, or federal traffic laws.

***This is a sample guideline furnished to you by VFIS. Your organization should review this guideline and make the necessary modifications to meet your organization’s needs. The intent of this guideline is to assist you in reducing exposure to the risk of injury, harm or damage to personnel, property and the general public. For additional information on this topic, contact your VFIS Risk Control representative.***

**References:**

West Redding (CT) VFD – GOG 10-EVO-1017 Developed/Revised/Reviewed by VFIS ETC