

# SCOTTS VALLEY FIRE PROTECTION DISTRICT

## APPARATUS AND EMERGENCY VEHICLE MAINTENANCE PROGRAM

### ANNUAL SERVICE AND SAFETY INSPECTION

Make/Model: \_\_\_\_\_ Year: \_\_\_\_\_ Equipment I.D.#: \_\_\_\_\_

Hobbs: \_\_\_\_\_ Date: \_\_\_\_\_ Mileage: \_\_\_\_\_

Inspected By: \_\_\_\_\_

<u>Inspection &amp; Action Codes:</u>	✓	=	OK
	×	=	Repair Needed
	⊗	=	Adjustment Made

#### 1. Vehicle In-Cab Inspection:

- A. Check operation of all gauges in instrument panel .....
- B. Check operation of windshield wipers and blades .....
- C. Check horns and sirens .....
- D. Check parking brake operation .....
- E. Check clutch pedal free-play (if equipped) .....
- F. Check operation of transmission shift controls .....
- G. Check air gauge for air loss rate and record. ....
- H. Check for insurance packet .....

#### 2. Vehicle Lighting System:

- A. Check operation of instruments panel lights and in-cab courtesy lights .....
- B. Check operation of all external lights .....

#### 3. Charging System and Batteries:

- A. Check electrolyte specific gravity .....
- B. Top-off cells with distilled water .....
- C. Clean and tighten battery connections .....
- D. Check alternator output .....
- E. Load test batteries. ....

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**4. Tires and Wheels:**

- A. Check tires for wear and pressure .....
- B. Check wheels for cracks and loose retaining nuts, retorque .....

**5. Under Vehicle Chassis Inspection & Lubrication:**

A. *Front Suspension*

- 1. Inspect front axle king pins for wear and lubricate .....
- 2. Inspect front springs, spring pins, and lubricate .....
- 3. Check front brakes for wear, adjust .....
- 4. Repack wheel bearings, if needed .....
- 5. Torque U-bolts .....

B. *Steering Mechanism*

- 1. Check steering gear for wear, and bolts for tightness .....
- 2. Check for fluid leaks .....
- 3. Inspect tie-rod ends and drag link, lubricate .....

C. *Engine, Transmission and Radiator Mountings*

- 1. Check front and rear engine mounts .....
- 2. Check transmission mounts, oil lines and linkage .....
- 3. Check radiator mounts .....

D. *Engine and Transmission Oil Leakage and Service*

- 1. Check engine for oil leaks, change oil and filters .....
- 2. Check transmission for oil leaks .....

E. *Exhaust System*

- 1. Inspect system for leaks. ....
- 2. Check and tighten clamps .....
- 3. Check and tighten muffler mountings .....

F. *Pump Transmission*

- 1. Check for leaks. ....
- 2. Change fluid if evidence of contamination .....

G. *Rear Suspension*

- 1. Check condition of rear springs. ....
- 2. Check condition of rear bushings .....
- 3. Tighten U-bolts. ....

H. *Driveline*

- 1. Check condition of U-joints and slip joints. ....

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- 2. Lubricate U-joints and slip joints .....
- I. *Rear Axle(s)*
  - 1. Check brakes for wear, adjust .....
  - 2. Check for fluid leaks .....
  - 3. Check pinion shaft .....
  - 4. Check and clean breather vents .....
- 6. **Brake Air System:**
  - A. Inspect brake air lines .....
  - B. Check air tanks for water/oil accumulation .....
  - C. Check air dryer operation (if equipped) .....
  - D. Perform Brake Test – Refer to Page 7 .....
- 7. **Pump Inspection and Maintenance:**
  - A. *Pump Packing*
    - 1. Operate pump to wet packing .....
    - 2. Check packing leakage, adjust as needed .....
  - B. *Priming Tank*
    - 1. Check oil level, add if needed .....
  - C. *Priming Pump*
    - 1. Oil rotors .....
    - 2. Oil motor bearing. ....
  - D. *Shift Unit*
    - 1. Lubricate shift cylinder and piston. ....
  - E. *Pilot Valve*
    - 1. Clean screen. ....
    - 2. Lube pilot valve hand wheel assembly. ....
  - F. *Pump Operations*
    - 1. Check operation of pump shift .....
    - 2. Check pump operation .....
    - 3. Check operation of relief valve .....
  - G. *Pump Inspection Test*
    - 1. Dry vacuum test/pressure test .....
    - 2. Note leaking valves on back page .....
    - 3. Check pump master drain and discharge drains .....

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- 4. Check oil bearing reservoir .....
- 8. Engine and Support Systems:**
  - A. *Engine Fuel System*
    - 1. Check fuel for water contamination .....
    - 2. Inspect fuel lines for proper mounting .....
  - B. *Engine Tune-Up (Outside Labor)*
    - 1. Check and adjust engine shut down mechanism .....
    - 2. Check throttle operation for full-fuel positioning .....
    - 3. Check engine breathers and air box drains. ....
    - 4. Check engineer panel throttle operating mechanism. ....
  - C. *Engine Air System*
    - 1. Replace air filter element .....
    - 2. Check air system piping, tighten clamps & support brackets .....
    - 3. Replace air compressor air filter element (if equipped). ....
    - 4. Check air compressor governor operation .....
  - D. *Engine Cooling System*
    - 1. Check cooling system and inspect for leaks .....
    - 2. Tighten hose clamps as required .....
    - 3. Check anti-freeze concentration, add as required .....
    - 4. Replace water filter element (if equipped) .....
    - 5. Check radiator pressure cap .....
    - 6. Check operation of cooling fan .....
    - 7. Inspect drive belts, adjust if necessary .....
- 9. Cab Inspection and Maintenance:**
  - A. *Lubrication*
    - 1. Lubricate door hinge pins .....
    - 2. Lubricate door latches. ....
  - B. *Cab and Engine Cover*
    - 1. Tighten engine cover bolts. ....
    - 2. Check operation of cab lifting mechanism .....
- 10. Chassis Dynamometer Test: (Outside Labor)**
  - A. Re-check vehicle fluid levels .....
  - B. Test engine power output. ....
  - C. Check engine in-cab instruments for proper operation .....

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11. **Vehicle Road Test:**

- A. Check engine operation .....
- B. Check transmission shift points .....
- C. Check Vehicle handling .....
- D. Evaluate overall vehicle performance. ....

12. **Other Equipment:**

- A. *Portable Generator*
  - 1. Check fluid level .....
  - 2. Change oil, if needed .....

13. **Inventory:**

- A. *Check actual inventory against recorded inventory*
  - 1. Note all discrepancies on inventory pages .....

Items Requiring Additional Service:

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Recommendations:

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## Apparatus Brake Test

<b>TEST 1</b>	Pressure Buildup Cutoff Point	Low-Pressure Warning Governor Cutoff	
<i>NOTE: Chock Wheels</i>			
1. Drain tanks to Zero PSI		OK	NOT OK
2. Start engine, run at fast idle (LOW PRESSURE WARNING SHOULD BE ON) .....		<input type="checkbox"/>	<input type="checkbox"/>
3. LOW PRESSURE WARNING CUTOOUT (Should cutout between 50-70 psi) .....		<input type="checkbox"/>	<input type="checkbox"/>
4. BUILD UP TIME – Pressure builds from 0 – 90 PSI in _____ .....		<input type="checkbox"/>	<input type="checkbox"/>
5. GOVERNOR CUTOOUT – Cuts out at correct pressure .....		<input type="checkbox"/>	<input type="checkbox"/>
(Check manufactures recommendations – usually between 100 – 130 PSI)			
<b>TEST 2</b>	Leakage Reservoir Air Supply		
(FULL PRESSURE, ENGINE STOPPED)			
1. Allow pressure to stabilize, at least 1 minute			NOT OK
2. Observe pressure gauge, time for 2 minutes		OK	OK
3. PRESSURE DROP: SINGLE VEHICLE Should not be more than 2 PSI in 1 minute ...		<input type="checkbox"/>	<input type="checkbox"/>
<b>TEST 3</b>	Leakage Service Air Delivery		
(FULL PRESSURE, ENGINE STOPPED)			
1. Apply foot valve, allow pressure to stabilize for at least 1 minute			NOT OK
2. Hold foot valve application, observe gauge and time for 2 minutes		OK	OK
3. PRESSURE DROP: SINGLE VEHICLE Should not be more than 3 PSI in 1 minute ...		<input type="checkbox"/>	<input type="checkbox"/>
<b>TEST 4</b>	Automatic Emergency System		
(WITH KEY ON-SPRING BRAKE OFF) (PRESSURE ABOVE 70 PSI, ENGINE STOPPED)			
1. Make foot brake applications until low-pressure indicator comes on. If above 70 PSI or below 50 PSI, correction needed .....		<input type="checkbox"/>	NOT OK
2. Continue foot brake applications until spring brakes apply automatically. If above 45 PSI or below 20 PSI, needs correction .....		<input type="checkbox"/>	<input type="checkbox"/>
<b>TEST 5</b>			
1. Engine on 33 to 45 degree hill. Set emergency brake:		OK	NOT OK
FORWARD .....		<input type="checkbox"/>	<input type="checkbox"/>
BACKWARD .....		<input type="checkbox"/>	<input type="checkbox"/>
2. At 20 m.p.h., apply foot brake. Must stop within 40 feet .....		<input type="checkbox"/>	<input type="checkbox"/>