



**MONTGOMERY COUNTY FIRE AND RESCUE SERVICE
DRIVER/OPERATOR TRAINING PROGRAM**

Practical Application Guide Sheet

Tanker: Pump Inspection & Knowledge

Candidate Performance Competency: Candidate will perform a daily checkout of the pump and associated components; including the main pump, pump operation, fire hose, nozzles, and appliances. Candidate will demonstrate a thorough knowledge and understanding of the capabilities of the systems common to Montgomery County Tankers. During the physical checkout, the candidate will explain weekly and monthly maintenance procedures. The exact sequence of steps as listed in this PAGS are not critical, however the candidate must approach the inspection in methodical and logical manner.

Task	Value	Score
Walk Around (35 points)		
1. Position the Tanker on a reasonably level stable surface.	1	
2. Apply parking brake, turn motor off and place wheel chock on the downhill side of the front or rear tire. (CFP)	2	
3. Ensure all discharge caps and intake plugs are present and secure.	2	
4. Open all bleeders and drains.	1	
5. Exercise gate valves for all pre-connected hoselines and lubricate as necessary.	2	
6. Close all bleeders and drains.	2	
7. Inspect all hose loads for the following: (CFP) a) proper length/amount of hose b) load configuration, proper ear lengths, stability of stacks c) nozzle patterns adjusted to straight stream d) nozzle bales closed e) no obvious damage to nozzles or hose f) secure retention nets/flaps	2	
8. Candidate will verbalize the following for each separate hose load on the apparatus as applicable: a) total length b) hose diameter c) nozzle type d) smooth bore diameter e) rated nozzle flow f) rated nozzle pressure	5	

Task	Value	Score
9. Inspect all exterior compartments for correct contents and condition of items. Candidate will display a thorough knowledge of inventory prior to opening each compartment.	10	
10. Inspect the Primer Pump or Manifold as appropriate. Candidate will explain the principle of the primer system.	2	
11. Inspect the Gearbox Assembly. Candidate will explain the purpose of the Gearbox Assembly.	2	
12. Verify all relief valve discharges are secure, free of debris, and not capped.	2	
13. Verify that all discharge valves are closed prior to placing pump in gear. (CFP)	2	
Pump Engaged (46 points)		
14. Start motor and view gauges for operation and normal readings.	1	
15. Engage pump. Listen for pump to engage. See applicable visual cues in the cab - speedometer reading, "Ok To Pump When Lit" indicator light.	1	
16. Operator confirms the following: a) Pump panel gauges are illuminated, b) positive discharge pressure on the Master Discharge Gauge, and c) "Tank To Pump" valve is open.	2	
17. Note the water tank level and visually verify the tank level. Candidate will verbalize the water tank and portable water tank(s) capacities.	10	
18. Open Pump Cooler valve. Partially open Tank Fill valve to aid with pump cooling.	4	
19. Regarding the TPM, the candidate will: (CFP) a) check operation of the TPM at 100psi b) check operation of the TPM at 150psi c) note that the internal relief valve is activating at the correct pressure on the master discharge gauge (solid indicator light)	2	
20. With TPM set just above 100psi, throttle up to generate 100psi discharge pressure and observe the Master Discharge Gauge for proper tracking of water pressures.	2	
21. Regarding the primer system, the candidate will: a) adjust the throttle to 1,100rpm and engage the primer until water discharges under the vehicle. b) For rotary vane primers, do not "bump" test nor engage the primer for greater than 45 seconds. c) explain the mechanics of the primer system.	2	
22. Verify the air horn switch functions at the pump panel.	1	

Task	Value	Score
23. Regarding the direct tank fill inlets, the candidate will identify the locations, explain the function, and any identified pressure limitations.	10	
24. Regarding the pump panel discharges, the candidate will do the following in the order shown: a) adjust TPM to just above 150psi. b) engage primer until water discharges beneath the truck c) ensure all discharges are securely capped (CFP) d) open the discharges e) adjust discharge pressure to 150psi f) compare the readings on the Master Discharge gauge and all discharge gauges. Note any variations over 10psi as a defect. g) return throttle to idle h) close all discharges i) open appropriate bleeders to relieve pressure on the discharges (CFP) j) adjust TPM to zero Account for each manual override knob.	5	
25. Disengage the pump.	1	
26. Regarding each MIV, the candidate will: a) Remove each intake cap b) Open and close each MIV using the switch at the pump panel and verify the valve operated. c) Account for each manual override knob. d) Visually inspect each intake screen and explain purpose of screens. (prevent debris from entering the pump; sacrificial anode to reduce corrosion of internal pump components)	5	
Prepare Apparatus for Service (7 points)		
27. Remove all discharge caps and intake plugs to drain water. Secure all caps and plugs. Lubricate parts as necessary.	2	
28. Verify the following settings to ready the Tanker for service: a) throttle is at idle b) TPM is at zero c) Pump Cooler is open d) Engine Cooler is closed e) water tank is full	5	

Weekly Maintenance (10 points)		
<p>29. Candidate will verbalize the sequence to exercise and verify operation of the TPM external relief valve. The sequence is as follows:</p> <ul style="list-style-type: none"> a) Establish a positive pressure water source via MIV b) Adjust TPM to approximately 200psi c) Increase discharge pressure to 150psi d) Decrease TPM setting until the external relief valve discharges water to the ground. Verify that that the orange indicator light is flashing. e) Increase the TPM setting until the external relief valve closes. f) Reduce throttle to idle and close the MIV. 	5	
<p>30. Candidate will verbalize the procedure to back flush the pump. See Engine PAGS for Back Flush Centrifugal Pump. Back flushing will also occur following drafting operations.</p>	5	
Monthly Maintenance (2 points)		
<p>31. Candidate will demonstrate a working knowledge of lubrication of the following valves:</p> <ul style="list-style-type: none"> a) LDH Discharge b) Tank to Pump <p>Candidate will explain what grease to use, how much grease to inject, what position the valve should be in while injecting the grease, and the steps to exercise each individual valve.</p>	2	
Total Points	100	

Critical Fail Points

Failure to successfully perform any of the following components will result in an automatic failure of this evolution regardless of total score.

- a) Failure to use wheel chock
- b) Activation of TRV
- c) Failure to ensure discharge caps are secured before pressurization
- d) Failure to relieve pressure from discharges following testing
- e) Unintended charging of any preconnected hose loads (exception: mechanical failure of discharge valves or seals)
- f) Improper testing of the TPM at any stage
- g) Improper sequencing of steps that result in incomplete testing of functions or components
- h) Failure to ensure all equipment is secured to the apparatus
- i) Failure to ensure proper hose and appliance configurations

Evaluator: Initial beside the final outcome of the exam below.

____ **PASS** ____ **FAIL – Overall Points** ____ **FAIL – Critical Failure Point**

Evaluator Name

Date

Evaluator Signature