



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

## Practical Application Guide Sheet

### Engine: Supply & Backup Hoseline

**Candidate Performance Competency:** The candidate will position the pumper at a hydrant to initiate an uninterrupted water supply via Humat Valve to the Attack Engine using appropriate discharge pressure based upon fire flow provided. The candidate will assume a “heavy water” hookup is necessary to support the fire flow.

Candidate will also place a 2” 300’ Class A Foam Solution attack line in service using their engine. All discharge pressures are to be in accord with FCGO 10-03.

Note for testing: The Humat Valve will have 250’ of 4” hose terminated with a TFT Blitz Nozzle attached for the purposes of simulating the Attack Engine being supplied and associated fire flow. Prior to commencing the evolution, the nozzle must be properly stabilized and staffed.

Task	Value	Score
<b>Position and Prepare the Hydrant</b>		
1. Position Engine as not to impede incoming units and spot hydrant with desired intake.	2	
2. Stop Engine and apply parking brake.	2	
3. Engage pump. a) Listen for pump and air compressor to engage. b) Look for a speedometer reading approximately 10-15mph. c) Look for the “Ok To Pump When Lit” indicator light in cab illuminated.	2	
4. Place wheel chock on downhill side of front or rear tire. <b>(CFP)</b>	1	
5. Operator confirms the following: a) Pump panel gauges are illuminated, b) FoamLogix Pump is on, c) Air Compressor is on, d) positive discharge pressure on the Master Discharge Gauge, and e) “Tank To Pump” valve is open.	1	
6. Inspect hydrant for damage, obstructions, missing or loose blind caps, and operating nut/bonnet.	2	
7. Remove 4 ½” blind cap from hydrant, partially open hydrant and flush until water is clear or verifying no significant obstructions exist. Close hydrant.	2	

Task	Value	Score
<b>Establish Water Supply to the Attack Engine</b>		
8. Attach Humat Valve to 4 ½” connection on the hydrant with butterfly valve handle in closed position. Attach at least one gate valve on a 2 ½” hydrant outlet in the closed position to facilitate expanding the supply later. <b>(CFP)</b>	1	
9. Remove any kinks in the supply line. If possible, visually verify the supply line is connected to the Attack Engine’s intake. Charge the supply line only after the operator of the Attack Engine calls for water. <b>(CFP)</b>	1	
10. Complete the water supply to the Supply Engine. a) Remove a suitable length of 4” hose from the Supply Engine to reach between the hydrant and Supply Engine. b) Connect the supply hose to the 4½” NST threads on Humat Valve outlet c) Connect the supply hose to an appropriate MIV on the Supply Engine. Note: The Auto Fill Valve is not to be used. <b>(CFP)</b>	2	
11. Prepare for supplemental pressurization of the Humat Valve. <b>(CFP)</b> a) Remove a suitable length of 4” hose from the Supply Engine to reach between the Humat Valve and Supply Engine. b) Connect the supply hose between the Storz intake on the Humat Valve and the Officers No.1 or No.2 discharge on the Supply Engine.	2	
12. Open the butterfly valve on the Humat Valve to charge the supply to the Supply Engine.	2	
13. Adjust TPM to approximately 100psi and place Air Compressor in “OFF” mode. <b>(CFP)</b>	2	
14. Open and close applicable bleeder valve to evacuate air from the intake line. Open MIV. Note: Operator must note the static intake pressure.  Intake Pressure: _____ psi	2	
15. Candidate will calculate the friction loss in the supply line between the hydrant and Attack Engine assuming a 500gpm sustained fire flow.  Friction Loss: _____ psi	2	

Task	Value	Score
<p>16. Candidate will determine if the pressure must be boosted through the Humat Valve to maintain adequate residual pressure at the Attack Engine.</p> <p>a) Friction loss, elevation gain/loss, and intake pressure at the Supply Engine are all considerations</p> <p>b) Minimum relay pressure using 4" supply hose is 20psi (Supply Engine Intake pressure - FL ± EL &gt;20psi?)</p> <p>c) Minimum relay pressure using 3" supply hose is 50psi (Supply Engine Intake pressure - FL ± EL &gt;50psi?)</p> <p>d) Hydrants must always be fully open regardless of pressures</p>	5	
<p>17. If deemed necessary in Step 16, provide supplemental pressure to the Attack Engine by charging the hose supplying the Humat Valve. Adjust the throttle to achieve the desired discharge pressure. (PDP = 20psi or 50psi + FL ± EL)</p> <p style="text-align: right;">Discharge Pressure: _____ psi</p>	5	
18. Adjust TPM as needed.	2	
19. Close "Tank to Pump" and ensure water tank is full. Note: at no time should filling the water tank impact the ability to deliver the necessary supply to the Attack Engine.	2	
20. Ensure that there is a means for water to be constantly circulating through the pump for cooling in the event that all lines are shut down. TRV should not activate. <b>(CFP)</b>	2	
21. Monitor pump panel, pump, engine compartment gauges, and radio.	2	
22. Candidate will contact the operator of the Attack Engine to verify adequate supply and pressure. Direct communication is preferred over radio contact on the operations or talk-around channels.	2	
<b>Prepare to Expand the Water Supply</b>		
<p>23. Expand the water supply to the Supply Engine while the hydrant and supply to the Attack Engine remain open.</p> <p>a) Remove a suitable length of 4" hose from the Supply Engine to reach between the hydrant and Supply Engine.</p> <p>b) Connect the supply hose to the previously installed gate valve on the hydrant</p> <p>c) Connect the supply hose to an appropriate MIV on the Supply Engine.</p>	2	
24. Charge the supply hose by opening the hydrant gate valve.	2	
25. Open and close applicable bleeder valve to evacuate air from the intake line. Open MIV.	2	
26. Candidate will note discharge pressure and adjust the throttle as needed to maintain appropriate pressure to the Attack Engine.	2	

Task	Value	Score
<b>Deploy a Preconnect</b>		
27. Assistant deploys a 2" 300' preconnect from the Supply Engine. Operator confirms clear hosebed and assists hose deployment as necessary.	2	
28. Adjust TPM to appropriate pressure. <b>(CFP)</b>	3	
29. Open the proper discharge valve on pump panel.	2	
30. Allow foam solution to fill attack line at default setting percentage. <b>(CFP)</b>	2	
31. Throttle up to proper discharge pressure for deployed attack line. <b>(CFP)</b> Discharge Pressure: _____ psi	5	
32. If boosting pressure through the Humat Valve, adjust the applicable discharge to maintain appropriate supply pressure to the Attack Engine.	5	
33. Adjust TPM to if necessary. <b>(CFP)</b>	2	
34. Check attack line to ensure charging, freedom from obstructions, and remove all kinks missed by crew.	2	
35. Monitor pump panel, pump, engine compartment gauges and radio.	2	
<b>Return to Service</b>		
36. Adjust throttle to idle.	2	
37. Turn Foam Pump off and flush fresh water through hoseline until clear water flows.	3	
38. Close all discharges.	2	
39. Ensure water tank is full.	2	
40. Close all intakes. Disengage pump and adjust TPM to zero.	2	
41. Upon request by the Attack Engine, close the hydrant.	2	
42. Open applicable bleeders and drains to relieve pressure.	2	
43. Refill Class A Foam tank using EZ-Fill system.	2	
44. Clean strainer after every CAFS use.	2	
45. Ensure that Engine is ready for service.	2	
<b>Total Points</b>	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) Not delivering the requested product
- b) Improper setting of the TPM at any stage of the evolution
- c) Loss of water/pressure in either the supply line or hand line
- d) Incorrect connection of the Humat Valve
- e) Charging the supply to the Attack Engine before requested
- f) Using the Auto Fill Valve
- g) Failing to shut off CAFS air compressor
- h) Not using Officers No.1 or No.2 discharge to supply the Humat Valve
- i) Activation of Attack Engine’s Intake Relief Valve
- j) Failure to attach gate valve to the 2 ½” outlet on the hydrant prior to charging
- k) Failure to flow pre-connected line per FCGO 10-03 (plain water pressures)
- l) Failure to use wheel chock
- m) Activation of TRV

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

\_\_\_ **PASS**    \_\_\_ **FAIL – Overall Points**    \_\_\_ **FAIL – Critical Failure Point**

\_\_\_\_\_  
**Evaluator Name**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Evaluator Signature**