



MONTGOMERY COUNTY FIRE AND RESCUE SERVICE  
DRIVER/OPERATOR TRAINING PROGRAM

**Compressed Air Foam System (CAFS)  
Engine Certification  
Incumbent Driver/Operator**

Trainee Name: \_\_\_\_\_ ID# \_\_\_\_\_ Station: \_\_\_\_\_

Unit Stock #: \_\_\_\_\_ Mentor Name: \_\_\_\_\_

This certification program is for use by personnel who have been previously certified by MCFRS as Engine Driver/Operators of non-CAFS pumping apparatus.

Date of Engine Driver Certification or Successful Completion of Practical Testing: \_\_\_\_\_  
Only personnel previously certified or tested as Engine driver/operators may utilize this documentation.

*I certify that I have completed the training and experience indicated below.*

\_\_\_\_\_

Trainee Signature \_\_\_\_\_ Date \_\_\_\_\_

*I have verified the information contained in this packet and concur with certification of this trainee on the apparatus specified.*

\_\_\_\_\_

Supervisor Signature \_\_\_\_\_ Date \_\_\_\_\_

Supervisor Name: \_\_\_\_\_

Distribution: Safety Section Chief, Supervisor File, MCFRTA Driver Training, Personnel File, Employee  
Route original documents to the trainee's PSHQ or LFRD Personnel File.

Section	Competencies	Trainer Initials	Date Completed
<b>1.0</b>	<b>Maintenance</b>		
1.1	Trainee will demonstrate routine inspection and maintenance tasks using a CAFS-equipped pumping apparatus.		
1.2	Trainee will identify and explain the frequency and procedure for maintaining the following:		
	a. water from the air/oil separator;		
	b. Hale valve grease fittings; and		
	c. CAFS air injection controller grease fittings.		

<i>Section</i>	<i>Competencies</i>	<i>Trainer Initials</i>	<i>Date Completed</i>
<b>2.0</b>	<b>General Pump Operations</b>		
2.1	Trainee will demonstrate placing the apparatus into pump gear.		
2.2	Trainee will explain the controls and pump panel indicators for the CAFS-equipped pump.		
2.3	Trainee will explain emergency operations during malfunctions or mechanical failures of the CAFS-equipped pump.		
2.4	Trainee will describe the operation of the Total Pressure Master Relief Valve. (TPM)		
2.5	Trainee will explain the procedure when an audible engine alarm is sounding.		
2.6	Trainee will demonstrate the operation of the TPM (total pressure master relief valve)		
2.7	Trainee will explain why the TPM valve should be reset to "0" after each use.		
2.8	Trainee will describe the operation of the Master Intake Valves and identify their locations.		
2.9	Trainee will identify the location, capacity, and outboard relief valve settings of the high-flow discharges.		
<b>3.0</b>	<b>Compressed Air Foam System Components</b>		
3.1	Trainee will demonstrate knowledge of the CAFS air compressor.		
	Describe the operating characteristics of the CAFS air compressor and identify its location		
	Trainee will identify the designed operating pressure range, required RPM, and output volume for: a) each discharge; and b) the entire system.		
	Explain the function, location, and maintenance requirements for the water/oil heat exchanger.		
	Explain the function, location, and maintenance requirements of the water/oil heat exchanger strainer, including safety precautions when inspecting.		
	Explain the function, location, and maintenance requirements for the air/oil separator.		
	Demonstrate the CAFS compressor on/off button and identify the operating modes available, their effects on the compressor, and application of each of the following modes: a. On; b. Standby; and c. Off.		

<i>Section</i>	<i>Competencies</i>	<i>Trainer Initials</i>	<i>Date Completed</i>
3.2	Trainee will demonstrate knowledge of the FoamLogix foam proportioning system.		
	Describe the operating characteristics, pressure limitations, and flow limitations.		
	Power button location and operation.		
	Information button location, operation, and what information can be displayed.		
	Purpose and operation of the up and down arrow keys and permissible operating ranges.		
	Purpose and interpretation of the bar graph display.		
3.3	Trainee will demonstrate knowledge of the CAFSPro Controller.		
	Power button location and operation.		
	Information button location, operation, and interpretation of the information displayed: <ul style="list-style-type: none"> <li>a. Air flow;</li> <li>b. Air/water ratio;</li> <li>c. Compressor temperature; and</li> <li>d. Hours run.</li> </ul>		
	Purpose and operation of the up and down arrow keys and associated bar graph.		
<b>4.0</b>	<b>CAFS Operations</b>		
4.1	Trainee will demonstrate adjusting the air/water ratio. Trainee will explain when the ratio may need to be changed. Trainee will explain when the ratio may not be changed.		
4.2	Trainee will describe the GPM and pressure limitations for CAFS operations.		
4.3	Trainee will describe the correlation between the CAFS compressor and pump impeller RPM.		
4.4	Trainee will describe the 4 situations where CAFS cannot be used.		
4.5	Trainee will explain "slug flow" and corrective action.		
4.6	Trainee will explain "chatter" and corrective action.		
4.7	Trainee will explain the procedure for using the EZ fill system to fill the Class "A" foam tank.		
4.8	Trainee will identify the discharges that are CAFS capable, Class "A" foam solution capable, and which are only plain water capable.		

Incumbent CAFS Engine Operator Certification

<i>Section</i>	<i>Competencies</i>	<i>Trainer Initials</i>	<i>Date Completed</i>
4.9	Trainee will demonstrate CAFS operations for fire attack using the appropriate intake and auto fill feature.		
4.10	Trainee will demonstrate pumping a single 1¾" CAFS attack line flowing 120GPM and 60CFM.		
4.11	Trainee will identify the minimum intake pressure required for the auto fill feature to operate.		
4.12	Trainee will demonstrate the procedure for transitioning from CAFS operation to plain water and how to shut down the air compressor.		
4.13	Trainee will explain why transitioning from CAFS to plain water may be necessary.		
4.14	Trainee will demonstrate the procedure for flushing a CAFS system.		