ENGINEER CANDIDATE CERTIFICATION

BRUSH APPARATUS – MOBILE PUMPING: PTO & AUXILIARY PUMP

BUMPER LINE: 50' 1 ½"

NOZZLE: 3/8" Smooth Bore Tip

MAXIMUM TIME: N/A

TASK #	✓	TASK
1		Wear Proper PPE • Wear appropriate clothing and footwear for incident • Do not wear helmet in the cab
2		Ensure apparatus has functioning safety line, 50ft. minimum, during ALL wildland operations
3		Check for crew and apparatus security/seat belts before apparatus moves • All compartment and crew doors closed • All crew seated and wearing seat belts • Once Spring Brake is released, check for door and seatbelt warning lights
4		Turn on emergency lights and headlights
5		Turn Opticom Off
6		Monitor mobile radio at all times
7		Shifts apparatus in 4WD High or 4WD Low Range <u>if necessary</u> • HIGH is 20MPH Max • LOW Range is 15MPH Max
8		Follows driving directions correctly and spots apparatus as directed by Rater
9		Sets Parking Brake
10		Transmission in Neutral
11		Communicate safe positioning of Firefighters during mobile pumping operations and the appropriate hand signals to be utilized by Firefighters
12		Utilizes Panel in cab to engage PTO Pump

13		Switch Toggle to ON
		• Ensure two lights illuminate
		  • "PTO Engaged"
		  • "OK to Pump"

14		Keep brakes applied to prevent apparatus from rolling

15		Select Drive on transmission shifter
		• Ensure two lights illuminate
		  • "PTO Engaged"
		  • "OK to Pump and Roll"

16		Ensures Prime by checking Pressure Gauge • If pressure is low or zero, prime pump

TASK #	✓	TASK
17		Ensure firefighter has hose line connected and correct discharge opened
18		Verbally and visually, check for firefighter readiness and signal for water, return signal properly
19		When directed by Rater, begin Mobile Pumping with PTO Pump • Can operate in 2WD or 4WD • Release Parking Brake • Slowly release brake pedal to drive • Shift to lower gear if necessary, to obtain proper engine RPM and pump pressure
20		Ensure Firefighter has water flowing • Verify pump pressure on center console gauge
21		If appropriate, selects the correct percentage of foam for application • 0.3% Direct Attack & Pre-Treat Brush
22		Maintain speed of the Brush Apparatus with the Firefighter's speed on the handline
23		Maintain visual of Firefighter at all times
24		Consider utilizing left foot braking and right foot on accelerator to maintain proper, engine RPM and pump pressure
25		When directed by Rater, stop Brush Apparatus, set Parking Brake, transition from PTO Pump to Auxiliary Pump • Utilize radio, voice, hand signals, or horn signals to verify shutdown with firefighter on the line
26		Toggle (I/O) switch to "ON"
27		Ensure Yellow "Glow Plug" light turns OFF • OK to start
28		Depress Start Button • Listen for Motor to turn on
29		Ensure Prime by checking Pressure Gauge • If pressure is low or zero, prime pump
30		Operate Throttle (Turtle/Hare) to obtain proper pump pressure
31		Ensure Firefighter has water flowing • Verify pump pressure on center console gauge • Pump pressure is within 15 psi of calculated pressure
32		When directed by Rater, release the Parking Brake and Mobile Pump to objective
33		Ensure all Engine gauges are in normal range
34		Ensure all Pump gauges are in normal range • Maintain water tank at a minimum of ¼ full for apparatus and crew protection during fire-fighting operations • High Engine Temp Light (Lower Right) activates at 230* • Low Oil Pressure (Lower Left) activates at 10psi • Overspeed Alarm will activate at 3000 rpm
35		Demonstrates safe and functional driving speed for off road conditions • Does not operate in reverse
36		Ensure firefighter safety during mobile pumping operations
37		When directed by Rater, stop Brush Apparatus, set Parking Brake. This completes the Mobile Pumping Operation

TASK #	✓	TASK

MOBILE PUMPING – CRITICAL ERRORS Any critical error constitutes a failure

SAFETY VIOLATION

Errors that could cause injury, be life threatening or cause property damage

EXAMPLES:

- Failing to set parking brakes and vehicle rolls after seat belt is removed from driver
- Failing to recognize PTO and Transmission engaged correctly for mobile pumping operation
- Failing to operate Auxiliary pump appropriately for mobile pumping operation
- Running pump dry
- Charging hose before firefighter is ready for water
- Opening PTO or Auxiliary pump in a manner causing unsafe pump pressure to firefighter.
- A continuous discharge from an incorrect discharge without corrective action
- Opening an incorrect discharge wetting personnel or having water shoot across street
- Runs tank out of water
- Excessively high engine RPM without corrective action
- Backing apparatus without assistance
- Vehicle rolls while equipment is being removed

Fails to complete hose lay as outlined

Fails to demonstrate safe and functional speed and path while driving and mobile pumping

Operates Mobile Pumping in reverse

Fails to deliver water before exercise is stopped

- If candidate indicates that the evolution is complete, the candidate cannot go back and correct the error of not delivering water

Pump Pressure utilizing Auxiliary pump is not within 15 psi of calculated pressure

EXAMPLE: If calculated pressure is 150 psi, the candidate must have a pressure between 135 and 165. A pressure of 134 or lower, or 166 or higher is unacceptable

*****If at any time, which could include prior to or after any portion of this evolution, the Rater determines that your actions create a hazard which may result in injury to any person, damage to property, other vehicles, or the apparatus you will be IMMEDIATELY disqualified from any certification process and asked to turn the apparatus over to the Rater*****

TASK #	✓	TASK

MOBILE PUMPING – Shut Down Procedures

1.	Confirm with Rater on the shutdown of operations • Check verbally and visually • Utilize radio if necessary • Select safe location to park apparatus to restore systems and equipment to standby
2.	Verbally and visually inform firefighter on the hose line of shutdown • Utilize radio, voice, or hand signals
3.	Throttle down Auxiliary pump to idle slowly
4.	Switch (I/O) Toggle to off
5.	Turn off all emergency lights if safe to do so
6.	Shut down engine, if safe to do so
7.	Turn on 4-way flashers
8.	Place wheel blocks appropriately
9.	Relieve pressure on the pump • Can be done using the Tank Fill or open discharge/intake valve and corresponding bleeder valve
10.	Secure all equipment and the apparatus (nozzles, hose, compartment doors, etc.) • All equipment should be returned to same compartment where it was originally found
11.	Check water tank level, refill if necessary • Physically look in tank on top of the apparatus or for water discharging from overflow on tires • Do not rely solely on panel lights or gauges
12.	Perform safety walk around • Verify all previous steps are completed and perform any that were missed
13.	Notify Rater that the apparatus is “Road Ready” • Except for picking up wheel blocks and leaving on 4-way flashers

NOTES: