



# FIRE PROTECTION TRAINING

Procedures Handbook 4300

PUMPING

<b>TOPIC:</b>	HOW TO PUMP FROM TANK, MAIN PUMP – MODEL 34 OR 35
<b>TIME FRAME:</b>	:30
<b>LEVEL OF INSTRUCTION:</b>	Level II
<b>BEHAVIORAL OBJECTIVE:</b>	
<b>Condition:</b>	A CAL FIRE engine Model 34 or 35 with a full tank of water, and the following items and conditions: Tank suction valve open, tank fill valve set appropriately, suction inlet valve closed, a pre-connected 100 foot length of 1-½" or 1-¾" hose with a combination nozzle and a suitable area to safely deploy a hoseline and produce an effective fire stream. Student and assistant in appropriate PPE per CAL FIRE policy, less SCBA.
<b>Behavior:</b>	The student will spot the engine, direct an assistant to pull the appropriate pre-connected hoseline and supply an uninterrupted stream of water, at 150 psi (±20). After completing this evolution, the student will then return the apparatus to its original condition.
<b>Standard:</b>	With a minimum of 80% accuracy within two minutes, according to the job breakdown
<b>MATERIALS NEEDED:</b>	<ul style="list-style-type: none"><li>• One (1) CAL FIRE Model 34 or 35 engine with a full tank of water</li><li>• 100 feet of 1-½ " or 1-¾ " hose with a nozzle and a shut off</li><li>• One (1) assistant</li><li>• Appropriate PPE per CAL FIRE policy, less SCBA</li></ul>
<b>REFERENCES:</b>	<ul style="list-style-type: none"><li>• Vehicle Manufacturer's Operation and Maintenance Guide</li></ul>
<b>PREPARATION:</b>	The ability to expeditiously initiate a fire stream with tank water is a basic engine operator skill.



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## PRESENTATION

OPERATIONS	KEY POINTS
1. Spot engine at designated location	1a. Windows and all doors closed for safety
2. Shift transmission to neutral	
3. Set spring brake	
4. Prepare the engine to pump	4a. Place foot on service brake b. Engage midship pump switch <ul style="list-style-type: none"><li>• Engine transmission remains in neutral</li></ul>
5. Exit engine and set chock blocks	5a. In accordance with CAL FIRE policy <ul style="list-style-type: none"><li>• Gloves may be removed after chock blocks are set in order to operate the engine or pump, but must be donned when working with equipment such as hoses, appliances and the hydrant</li></ul>
6. Instruct assistant to deploy a pre-connected 1-½" or 1-¾" hoseline	6a. Hoseline must be at least 100' <ul style="list-style-type: none"><li>• Assistant shall deploy the hose after being instructed to do so by the student</li></ul>
7. Ensure valves and switches are in appropriate position	7a. Tank suction valve switch on pump panel in "OPEN" position b. Cycle transfer valve switch on pump panel to the "PRESSURE" position c. Press "PRESET" on pump boss (Preset to 100 PSI Engine Pressure)



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## PRESENTATION

OPERATIONS	KEY POINTS
8. Confirm assistant is ready for water and loudly state, "Water Coming"	8a. Do not charge hoseline without checking with assistant to ensure they are ready
9. Charge hoseline	9a. Open discharge valve slowly and completely  b. Allow assistant to check for adequate nozzle pattern and water flow  c. Do not increase pump pressure until assistant has checked nozzle pattern and flow
10. Increase pump pressure to 150 psi ( $\pm 20$ psi)	10a. Turn pump control knob to indicate 150 psi ( $\pm 20$ psi) on the Pump Boss and pump discharge gauge
11. Achieve adequate hose stream of 150 psi ( $\pm 20$ psi) with all valves and controls in the appropriate position.	
12. Open tank fill valve	12a. Approximately 10 psi pressure drop to achieve pump cooling
13. Notify assistant to shut down hoseline by loudly stating, "Shut Down"	
14. Close the discharge valve	14a. Slowly and completely  b. Shut down the hoseline prior to shutting down pump
15. Return pump to idle	15a. Press red "idle" button on pump panel Pump Boss



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## PRESENTATION

OPERATIONS	KEY POINTS
16. Shut down pump	16a. Return to cab and place foot on service brake  b. Move the pump switch to the "ROAD" position  c. Shift transmission to road gear to ensure the pump is disengaged  d. Return transmission to neutral
17. Return engine to response ready condition	17a. Re-bed fire hose on engine  b. Refill water tank if needed



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## ***APPLICATION:***

The student will practice performing the operations in the job breakdown while under supervision.

## ***EVALUATION:***

The student will complete a manipulative performance test at a time determined by the instructor.

## ***ASSIGNMENT:***

Practice this job in order to prepare yourself for the upcoming performance test.