



FIRE PROTECTION TRAINING

Procedures Handbook 4300

PUMPING

TOPIC: HOW TO PUMP FROM A HYDRANT – MODEL 34 OR 35

TIME FRAME: :30

LEVEL OF INSTRUCTION: Level II

BEHAVIORAL OBJECTIVE:

Condition: A CAL FIRE Model 34 or 35 engine, a full tank of water, and the following items and conditions: Tank to pump valve open, tank fill valve set appropriately, suction inlet valve closed, a pre-connected 1-½" or 1-¾" hoseline, Two (2) spanner wrenches, a hydrant wrench and a section of 2-½ or 3" soft suction filler hose.

Behavior: The student, with assistant, will be dispatched Code 3 (no siren) to an incident at a predetermined location. When the engine arrives, the student will spot the engine at the hydrant, direct an assistant to pull a 1-½" or 1-¾" pre-connected hoseline, and supply an uninterrupted stream of water, at 150 PSI (± 20). The student will change over from using the tank as a water source to using the hydrant as the water source. After completing this evolution the student will return the apparatus to its original condition.

Standard: Completing all operations according to the job breakdown

MATERIALS NEEDED:

- One (1) CAL FIRE Model 34 or 35 engine
- One (1) pre-connected 1-1/2" or 1-3/4" hoseline with nozzle and shut off
- One (1) 2-1/2" or 3" soft suction intake hose
- One (1) assistant in appropriate PPE per CAL FIRE policy
- One (1) hydrant wrench
- Two (2) spanner wrenches

REFERENCES:

- Vehicle Operation and Maintenance Guide
CAL FIRE Handbook 6804
- IFSTA Essentials 5th Edition, Chapter 12

PREPARATION:

It is standard operating procedure in most fire departments to establish adequate water supplies by using a hydrant

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system when available. The ability to initiate a fire stream with tank water and switch over to the hydrant system, without interrupting the fire stream is a basic engine operator skill.



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PUMPING FROM
HYDRANT – MODEL 34

PRESENTATION

OPERATIONS	KEY POINTS
1. Spot engine at designated hydrant	1a. All occupants wearing seat belts b. Windows and doors closed for safety c. Within reach of chosen hydrant discharge outlet
2. Shift transmission to neutral	
3. Set spring brake	
4. Engage midship pump switch	
5. Exit engine and set chock blocks	5a. In accordance with CAL FIRE policy <ul style="list-style-type: none">Gloves may be removed after chock blocks are set in order to operate the pump, but must be donned when working with equipment such as hoses, appliances and the hydrant
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">Assistant shall deploy the hose only after being instructed to do so by the student
7. Engage the engine to pump	7a. Engage transfer valve switch on pump panel to the "PRESSURE" position b. Press "PRESET" on pump control (preset to 100 PSI engine pressure)
8. Confirm assistant is ready for water by loudly stating " Water coming "	8a. Do not charge hoseline without assistant confirmation that they are ready for water



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PRESENTATION

OPERATIONS	KEY POINTS
9. Charge hoseline	9a. Open discharge valve slowly and completely b. Allow assistant to check for adequate nozzle pattern and water flow • Do not increase pump pressure until assistant has checked nozzle pattern and flow
10. Increase pump pressure to 150 PSI (± 20 PSI)	10a. Turn pump control knob to indicate 150 PSI (±20 PSI) on the read out and pump discharge gauge
11. Remove engine suction inlet cap	11a. Wearing gloves b. Store in brass box if not attached to engine
12. Remove equipment from engine	12a. Soft suction hose b. Hydrant adapter c. Hydrant wrench d. Spanner wrench
13. Uncap hydrant	13a. Using hydrant wrench
14. Open hydrant	14a. Using hydrant wrench b. Slowly c. Completely d. Until water stream is clear



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PRESENTATION

OPERATIONS	KEY POINTS
15. Close hydrant	15a. Slowly b. Prevent water hammer c. Completely
16. Unroll soft suction hose	16a. At hydrant
17. Connect hydrant adapter	17a. Hand tight b. Gasket in place c. Do not flush hydrant with adapter connected
18. Open hydrant	18a. Completely and slowly b. Do not allow hydrant wrench to spin freely or fall to ground c. Do not allow the hydrant wrench to hit any part of your body
19. Remove any kinks from soft suction intake hose	19a. Ensure an effective water supply
20. Open suction inlet valve	20a. Slowly and completely b. Do not close tank to pump valve <ul style="list-style-type: none">• Ensure you have an uninterrupted water supply to pump, in case of a hydrant failure c. Suction drain may be used to exhaust air from system
21. Close tank suction valve	21a. Completely



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PRESENTATION

OPERATIONS	KEY POINTS
22. Readjust pump pressure to 150 PSI (±20 PSI)	
23. Preparing to shut down	23a. Notifying assistant that you are shutting down hoseline b. State loudly " Shutting Down "
24. Close discharge valve	24a. Slowly and completely b. NO WATER HAMMERS
25. Return engine pump to idle	25a. Press "IDLE" button on pump control
26. Shut down main engine pump	26a. Enter cab and placing foot on service brake b. Move the pump switch to the "ROAD" position c. Shift transmission to road gear ensuring the main pump is disengaged d. Return transmission to neutral



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PRESENTATION

OPERATIONS	KEY POINTS
27. Return engine to response ready condition	27a. Fill engine water tank if not full b. Open tank fill valve and fill tank prior to shutting down the hydrant c. Close hydrant slowly and completely d. NO WATER HAMMERS <ul style="list-style-type: none">• After shutting hydrant down, crack tank fill valve e. Close the suction inlet valve f. Replace tools, hose, and appliances in proper engine compartments



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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. Study for our next session.