



# Fire Protection Training

Procedures Handbook 4300

PUMPING

**TOPIC:** HOW TO PUMP FROM TANK, CDF ENGINE MODEL #10 OR #12

**TIME FRAME:** :30

**LEVEL OF INSTRUCTION:** Level II

**BEHAVIORAL OBJECTIVE:**

*Condition:* A CDF Model #10 or #12 engine with spring brake set, transmission in neutral, a full tank of water, a predetermined engine pressure of 150 PSI and the following items and conditions: Tank suction valve open, tank fill valve closed, a pre-connected 100 foot length of 1 ½" or 1 ¾" hose with nozzle attached laying on the ground

*Behavior:* The student will: Start and chock the engine in accord with CDF policy, engage the main pump, charge an 1 ½" or 1 ¾" line, and deliver an uninterrupted stream of water to a simulated fire using the tank as a water source. The student will then return the apparatus to its original condition.

*Standard:* With a minimum of 70% accuracy, within 1 minute and 15 seconds, according to the job breakdown

**MATERIALS NEEDED:**

- One (1) CDF Model #10 and/or #12 engine with a full tank of water
- One (1) 100' length of 1 ½" or 1 ¾" hose with a nozzle and shut-off
- One (1) Stop watch
- One (1) Performance examination per student
- Two (2) Red pens for scoring
- One (1) Clipboard
- One (1) Tally sheet

**REFERENCES:**

- Vehicle Operation and Maintenance Guide, (CDF Handbook 6804)



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***PREPARATION:***

It is standard operating procedure in most fire departments to establish initial fire streams using tank water. The ability to expeditiously initiate a fire stream with tank water is a basic engine operator skill



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## OPERATIONS

## KEY POINTS

1. Place foot on service brake
2. Start main engine

### TIME START

3. Set engine idle
4. Set chock blocks
5. Start pump
6. Adjust pump panel throttle
7. State "Water coming"
8. Open discharge valve
9. Adjust pump panel throttle

### TIME STOP

10. State "Shut down"
11. Close discharge valve

- 3a. At 1200 RPM ( $\pm$  200 RPM)
- 4a. In accord with CDF policy
  - b. Failure to properly set chocks will be cause for failing the examination
  - c. Use gloves
- 5a. At pump panel
- 6a. To indicate 100 PSI on the pump pressure gauge
  - b.  $\pm$  20 PSI
- 7a. Loudly
- 8a. Slowly
  - b. Completely
- 9a. To indicate 150 PSI on the pump pressure gauge
  - b.  $\pm$  20 PSI

Student raises hands to indicate completion of timed portion of the examination

Failure to produce an effective fire stream will be cause for failing the examination

- 10a. Loudly
- 11a. Slowly
  - b. Completely



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## OPERATIONS

## KEY POINTS

12. Adjust pump panel throttle

12a. Slowly

b. Until pump engine returns to idle

c. For approximately 30 seconds

13. Shut off pump engine

14. Return to cab

14a. Place foot on service brake

15. Reduce main engine RPM

15a. Slowly

b. To idle

16. Shut off main engine

17. Return chock blocks

17a. To proper place



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## ***APPLICATION:***

The student to practice until proficient.

## ***EVALUATION:***

A performance examination.

## ***ASSIGNMENT:***

To be determined by instructor(s).



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