



# Fire Protection Training

Procedures Handbook 4300

PUMPING

**TOPIC:** HOW TO PUMP FROM TANK, CDF ENGINE MODEL #5

**TIME FRAME:** :30

**LEVEL OF INSTRUCTION:** Level II

**BEHAVIORAL OBJECTIVE:**

*Condition:* A parked Model #5 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, suction inlet valve closed, a pre-connected 100 foot length of 1 ½" / 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 20 seconds, according to job breakdown

**MATERIALS NEEDED:**

- One (1) CDF Model #5 engine with a full tank of water
- One (1) 100 feet of 1 ½" or 1 ¾" hose with a nozzle and shut off
- One (1) Stop watch

**REFERENCES:**

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

**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

- | OPERATIONS                     | KEY POINTS  |
|--------------------------------|---|
| 1. Start main engine           | 1a. Place foot on service brake<br>b. Allow engine to idle  |
| 2. Set chock blocks            | 2a. In accord with CDF policy<br>b. Use gloves<br>c. Failure to properly set chocks will be cause for failing the examination   |
| 3. Place foot on brake         | 3a. Firmly apply brake  |
| 4. Shift transfer case         | 4a. To neutral<br>b. If equipped with air shift, skip this step   |
| 5. Engage midship pump         | 5a. Use pump lever/switch   |
| 6. Shift transmission          | 6a. Into 4th or drive<br>b. If equipped with air shift, transmission must be put in reverse, to insure transfer case is disengaged, before shifting into 4th or Drive |
| 7. Adjust pump panel throttle  | 7a. Until transmission shifts into selected gear  |
| 8. Adjust pump panel throttle  | 8a. To indicate 150 P.S.I. on midship pump pressure gauge<br>b. $\pm 20$ PSI  |
| 9. State "Water coming"        | 9a. Loudly  |
| 10. Open discharge valve       | 10a. Slowly<br>b. Completely  |
| 11. Adjust pump panel throttle | 11a. To indicate 150 PSI on midship pump pressure gauge<br>b. $\pm 20$ PSI  |



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## OPERATIONS

## KEY POINTS

### TIME STOPS

12. State "Shut down"

13. Close discharge valve

14. Adjust pump panel throttle

15. Return to cab

16. Shift transmission

17. Disengage midship pump

18. Shift transfer case

19. Shift transmission

20. Shift transmission

21. Shut off main engine

22. Return chock blocks

Student raises hands to indicate completion of timed portion of examination

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

12a. Loudly

13a. Slowly

b. Completely

14a. Slowly

b. Until main engine returns to idle

15a. Place foot on service brake

16a. To neutral

17a. Using pump lever/switch

b. Acceptable to put transmission into reverse then back into neutral for ease in disengaging pump.

18a. To high range

b. If equipped with air shift, skip this step

19a. Into a road gear

b. With foot on brake

c. Until lurch is felt

20a. To neutral

22a. To proper place

***APPLICATION:***

Student to practice until proficient.

***EVALUATION:***

A performance examination.

***ASSIGNMENT:***

To be determined by instructor(s).