



# Fire Protection Training

Procedures Handbook 4300

PUMPING

**TOPIC/EQUIPMENT:** PUMP FROM HYDRANT, CDF ENGINE MODEL #9 OR #11 EQUIPPED WITH A CHECK VALVE IN THE TANK SUCTION

**CATEGORY:** Performance Examination

**POINTS POSSIBLE:** 100

**TIME ALLOWED:** 3 minutes and 30 seconds (without relief valve)  
3 minutes and 45 seconds (with relief valve)

**BEHAVIORAL OBJECTIVE:**

- Condition:* A CDF Model #9 or #11 engine with 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, 100 foot length of 1 ½" or 1 ¾" hose with nozzle attached laying on the ground, a 20 foot section of 2 ½" soft suction hose, a spanner wrench, and a hydrant wrench.
- Behavior:* The student will: Spot the engine at the hydrant, set the spring brake, chock the engine in accord with CDF policy, start the pump, connect the discharge hose to an 1 ½" discharge outlet, apply an uninterrupted stream of water to a simulated fire and change over from using the tank as a water source to using the hydrant as a water source. After completing this evolution, the student will then return the apparatus to its original condition.
- Standard:* Following steps and procedures, in proper sequence according to the attached score sheet, with a minimum 70% accuracy within 3 minutes and 30 seconds without relief valve, 3 minutes and 45 seconds with relief valve.

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## **MATERIALS NEEDED:**

- One (1) CDF Model #9 or #11 engine with a full tank of water
- One (1) 100' length of 1 ½" or 1 ¾" hose
- One (1) 1 ½" nozzle with shut off
- One (1) 20' length of 2 ½" soft suction hos
- One (1) Hydrant wrench
- One (1) Spanner wrench
- One (1) Stop watch
- One (1) Score sheet per student
- One (1) Performance examination test cover page
- Two (2) Red pens for scoring
- One (1) Clipboard
- One (1) Tally sheet

## **PROCEDURES:**

The examination will begin when the student either verbally or by conduct performs any step of the examination. The examination will end when the student either verbally or by conduct indicates the examination has been completed. At this time the evaluator will check to see that the engine pressure is properly set and that valves and controls are in the proper position.

## **SCORING:**

Points will be deducted for each step omitted, performed improperly or performed out of sequence. Lettered procedures may be performed in any sequence within the numbered step without a loss of points. Steps designated by an asterisk (\*) must be performed or the student fails the examination. A score of zero (0) will be given if during the examination the student performs any step or procedure that would jeopardize the safety of personnel or the equipment (i.e. pump engaged before chocks are set, no fire stream produced, tank suction valve closed before hydrant is turned on and/or suction inlet valve opened, transmission left in gear, etc.

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## ***SPECIAL NOTES:***

Before the examination begins the student will be allowed to ask any clarifying questions and inspect the equipment. Once the examination begins the evaluator shall not answer any questions or intercede in any way unless safety violations occur that would injure personnel or damage equipment. The engine will be equipped with a 20' length of 2 1/2" soft suction hose and a hydrant wrench. A length of 1 1/2" or 1 3/4" discharge hose shall be in place near the hydrant. The examination will begin with the student, in full structure fire safety clothing, with the cab door closed and seat belt on, spots the engine at the hydrant and sets the spring brake.

# Score Sheet

PUMP FROM HYDRANT, CDF ENGINE  
MODEL #9 OR #11 EQUIPPED WITH A  
CHECK VALVE IN THE TANK SUCTION

DATE \_\_\_\_ / \_\_\_\_ / \_\_\_\_ TEST # \_\_\_\_ RETEST # \_\_\_\_ UNIT # \_\_\_\_

STUDENT'S NAME \_\_\_\_\_

EVALUATOR'S NAME \_\_\_\_\_

## **STEPS AND PROCEDURES**

## **POINTS**

1. Spot engine at hydrant

\_\_\_\_\_  
\*

2. Shift transmission to neutral

\_\_\_\_\_  
\*

3. Set spring brake

\_\_\_\_\_  
\*

### TIME START

4. Set main engine idle at 1200 RPM ( $\pm$  200 RPM)

\_\_\_\_\_  
10

5. Set chock blocks in accord with CDF policy

\_\_\_\_\_  
\*

6. Start the pump engine

\_\_\_\_\_  
\*

7. If equipped with pressure relief valve, turn 4-way valve "ON"

\_\_\_\_\_  
\*

8. Adjust pump panel throttle to indicate 100 PSI (+/- 20 PSI) on the pump pressure gauge

\_\_\_\_\_  
\*

9. Connect discharge hose

\_\_\_\_\_  
\*

10. Loudly state "water coming"

\_\_\_\_\_  
5

11. Slowly open discharge valve

\_\_\_\_\_  
5

12. Adjust pump panel throttle to indicate 150 PSI (+/- 20 PSI) on pump pressure gauge

\_\_\_\_\_  
10

13. If equipped with pressure relief valve, set relief valve at 150 PSI (+/- 20 PSI)

\_\_\_\_\_  
\*

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# Score Sheet

PUMP FROM HYDRANT, CDF ENGINE  
MODEL #9 OR #11 EQUIPPED WITH A  
CHECK VALVE IN THE TANK SUCTION

## STEPS AND PROCEDURES

## POINTS

14. Remove appliances and flush hydrant

a. Remove soft suction hose, hydrant wrench, and spanner wrench from engine

\*

b. Uncap and flush the hydrant

\*

c. Unroll soft suction hose, then connect it to the hydrant and to the suction inlet

\*

15. Slowly open hydrant completely

\*

16. If necessary, remove kinks from the soft suction hose so that an effective fire stream can be maintained

\*

17. Slowly open suction inlet valve completely, and adjust pump throttle simultaneously to maintain 150 PSI (+/- 20 PSI). (Suction drain or primer may be used to exhaust air from the system.)

\*

18. Close tank suction valve completely and adjust pump throttle to maintain 150 PSI

\*

Student raises hands to indicate completion of timed portion of exam. If student has not produced an effective fire stream, a score of "0" will be given.

TIME STOP

ENTER TIME: \_\_\_\_\_

EXAMINATION CONTINUES BUT IS NOT TIMED

19. Loudly state "shut down"

5

20. Slowly close discharge valve completely

5

21. Adjust pump panel throttle until pump engine returns to idle

10

22. Idle pump engine for approximately 30 seconds

5

23. If equipped with a pressure relief valve, turn 4-way valve "OFF"

\*

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# Score Sheet

PUMP FROM HYDRANT, CDF ENGINE  
MODEL #9 OR #11 EQUIPPED WITH A  
CHECK VALVE IN THE TANK SUCTION

## STEPS AND PROCEDURES

## POINTS

24. Shut off pump engine	<u>10</u>
25. Open tank fill valve, refill tank, then close tank fill valve completely	<u>5</u>
26. Close the hydrant completely and slowly to prevent water hammer	<u>*</u>
27. Open the tank suction valve completely	<u>5</u>
28. Close the suction inlet valve completely	<u>5</u>
29. Disconnect soft suction hose from the hydrant and from the suction inlet	<u>5</u>
30. Replace suction inlet cap	<u>5</u>
31. Return chock blocks to holders	<u>10</u>

## EXAMINATION COMPLETED

Student will drain, roll and replace all hose, return all equipment to the engine, and return the engine to the starting point.

**ENTER TOTAL TIME:** \_\_\_\_\_

**POINTS POSSIBLE:** 100

**POINTS DEDUCTED:** \_\_\_\_\_

**FINAL SCORE** \_\_\_\_\_

## COMMENTS:

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