



# Fire Protection Training

Procedures Handbook 4300

PUMPING

**TOPIC/EQUIPMENT:** PUMP FROM HYDRANT, CDF HYDROSTAT ENGINE  
MODEL #5, #14, OR #15

**CATEGORY:** Performance Examination

**POINTS POSSIBLE:** 100

**TIME ALLOWED:** 3 minute and 45 seconds

**BEHAVIORAL OBJECTIVE:**

*Condition:* A CDF Hydrostat engine Model #5, #14 or #15 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, suction inlet valve closed, 100 feet 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, engage the pump, connect the discharge hose to a 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 45 seconds.



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## **MATERIALS NEEDED:**

- One (1) Model #5, #14 or #15 Hydrostat engine
- One (1) Length 1 ½" hose or;
- Two (2) lengths 1 ¾" hose
- One (1) 1 ½" combination nozzle with shut-off
- One (1) Section 2 ½" soft suction hose
- One (1) Hydrant wrench
- One (1) Spanner wrench
- One (1) Stopwatch
- One (1) Performance exam per student
- Two (2) Red pens for scoring
- One (1) Clipboard

## **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, relief valve not set, etc.)

## **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 ½" soft suction hose, a hydrant wrench and a spanner wrench. The examination will begin when the student, in full structure fire safety clothing, with the door closed and seat belt on, spots the engine at the hydrant and sets the spring brake.

# Score Sheet

PUMP FROM HYDRANT – CDF  
HYDROSTAT ENGINE  
MODEL #5, #14, OR #15

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 chock blocks in accord with CDF policy	*
5. Put tank suction valve switch in OPEN position	*
6. Return to cab and place foot on service brake	5
7. Set transfer valve in proper position	10
8. Adjust throttle to indicate 2000 RPM (+/- 200 RPM) on tachometer	*
9. Engage midship pump lever until 100 PSI (+/- 20 PSI) is registered on pump pressure gauge	*
10. Return to pump panel and connect discharge hose	*
11. Loudly state "Water Coming"	5
12. Slowly open discharge valve	5
13. Return to cab and place foot on service brake	5
14. Adjust pump lever indicate 150 PSI (+/- 20 PSI) on pump pressure gauge	10
15. Turn 4-way valve switch to the "ON" position	*

4314.25.1

# Score Sheet

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16. Set relief valve at 150 PSI (+/- 20 PSI)	*
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17. Remove appliances and flush hydrant	
a. Remove soft suction hose, hydrant wrench and spanner wrench from engine	*
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b. Uncap and flush hydrant	*
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c. Unroll soft suction hose	*
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18. Connect soft suction hose to the hydrant and to the suction inlet	*
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19. Slowly open the hydrant completely	*
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20. If necessary, remove kinks from soft suction hose so that an effective fire stream can be maintained.	*
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21. Slowly open suction inlet valve completely. (Suction drain or primer may be used to exhaust air from the system.)	*
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22. Close tank suction valve completely	*
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23. Return to cab and place foot on service brake	5
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24. Adjust pump pressure until relief valve closes and pressure gauge indicates 150 PSI (+/- 20 PSI)	*
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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
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EXAMINATION CONTINUES BUT IS NOT TIMED	
25. Return to pump panel, loudly state "Shut Down"	5
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26. Slowly close discharge valve	5
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27. Return to cab and place foot on service brake	5
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28. Disengage pump	10
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# Score Sheet

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29. Adjust throttle until engine returns to idle	<u>10</u>
30. Turn 4-way valve off	<u>*</u>
31. Return to pump panel and slowly open tank fill valve, fill tank, then close tank fill valve	<u>5</u>
32. Close hydrant slowly and completely	<u>*</u>
33. Open the tank suction valve	<u>5</u>
34. Close the suction inlet valve	<u>5</u>
35. Disconnect soft suction hose from hydrant and suction inlet	<u>5</u>

## EXAMINATION COMPLETED

Student will drain, roll and replace all hose, return all equipment to the engine, replace all caps, pick up chock blocks and return the engine to the starting point.

<b>ENTER TOTAL TIME:</b>	<u>                    </u>
<b>POINTS POSSIBLE:</b>	<u>100</u>
<b>POINTS DEDUCTED:</b>	<u>                    </u>
<b>FINAL SCORE</b>	<u>                    </u>

## COMMENTS:

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