



Performance Examination

4100 Sub JAC Handbook

PUMPING FROM DRAFT

TOPIC: JAC PERFORMANCE EXAM

CATEGORY: Pumping from Draft

POINTS POSSIBLE: 100

TIME ALLOWED: 1 minute, 30 seconds

BEHAVIORAL OBJECTIVE:

Condition: An engine, with empty water tank, hard suction hose attached and in a water source, and the following items and conditions: tank suction valve open, tank fill valve closed, suction inlet valve closed,

Behavior: The apprentice will prime the pump, obtain a draft, engage the main pump, and deliver an uninterrupted stream of water.

Standard: Perform the following steps and procedures, in proper sequence according to the attached score sheet

MATERIALS NEEDED:

- One (1) engine with empty water tank
- One (1) 25' length of 1 ½" or 1 ¾" hose with nozzle and shut-off
- One (1) 15' length rope
- One (1) shovel if necessary
- One (1) suction hose strainer
- Three (3) sections of hard suction hose
- Full wildland or structure PPE



Performance Examination

4100 Sub JAC Handbook

PUMPING FROM DRAFT

PROCEDURES:

The examination will begin when the apprentice either verbally or by conduct performs any step of the examination. The examination will end when the apprentice either verbally or by conduct indicates the examination has been completed. 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 are assigned for each step completed correctly. For each step missing or performed incorrectly, the points will be deducted. If any step is Pass/Fail, it must be completed correctly to receive a passing score. If the step is scored as Fail, it will result in failure of the performance test not just that step.

If there are no "Fail" steps, any missed points are deducted from the 100 points and the final score is determined. If there are any "Fail" steps, that will constitute a failure of the exam and a score of zero.

A score of "zero" will be given if during the examination the FAE performs any step or procedure that would jeopardize the safety of personnel or damage the equipment (i.e. relief valve not set, no fire stream produced, etc.

SPECIAL NOTES:

Before the examination begins the apprentice will be allowed to ask any clarifying questions and inspect 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 apprentice will be in full PPE.



Performance Examination

4100 Sub JAC Handbook

PUMPING FROM DRAFT

DATE ____ / ____ / ____ NAME _____

PROCTOR'S NAME: _____ YEAR: - 1ST - 3RD

STEPS AND PROCEDURES:

TIME STARTS WHEN THE APPRENTICE STARTS THE ENGINE

1. With spring brake set and transmission in neutral, Start engine _____ 10
 - a. **For a model #9 & #11:** Set main engine idle at 1200 rpm (\pm 200 rpm) _____ 5

2. Place valves in appropriate position _____ 10
 - a. Close tank suction valve completely _____ 5

 - b. Open suction inlet valve completely, if required _____ 5
 - **For a model #1 & #5:** Turn primer selector to midship position _____ 5

3. Engage primer selector for no longer than 30 seconds _____ 5
 - **For a model #1 & #5:** Turn primer selector to OFF position _____ 5

4. Engage the pump engine, if you need to return to the cab, place foot on the service brake
 - a. **For a model #1:**
 - Engage midship pump lever/switch, transmission in 2-4 _____ 5

 - Adjust pump panel throttle until transmission shifts into 4th gear _____ 5

 - Adjust pump panel throttle to indicate 150 psi (\pm 20 psi) on pump pressure gauge _____ 5



Performance Examination

4100 Sub JAC Handbook

PUMPING FROM DRAFT

b. For a model #5:

- Shift transfer case to neutral (if equipped with air shift, skip this step) 5
- Engage midship pump lever/switch, transmission in 3rd 5
- Adjust pump panel throttle until transmission shifts into selected gear 5
- Adjust pump panel throttle to indicate 150 psi (\pm 20 psi) on pump pressure gauge 5

c. For a model #5, #14 & #15 - hydrostat engine:

- Set transfer valve in the proper position 5
- Adjust throttle to indicate 2000 rpm (\pm 200 rpm) on tachometer 5
- Engage midship pump lever until 100 psi (\pm 20 psi) is registered on pump pressure gauge 5

d. For a model #9 & #11:

- Start skid-mount pump engine 5
- Adjust pump panel throttle to indicate 100 psi (\pm 20 psi) on pump pressure gauge 5

5. Loudly state “water coming” and slowly open discharge valve 5

6. Adjust pump panel throttle or pump lever to indicate 150 psi (\pm 20 psi) 10

7. If equipped, set pressure relief valve Pass/Fail

a. Turn pressure relief valve to the ON position



Performance Examination

4100 Sub JAC Handbook

PUMPING FROM DRAFT

- b. Set relief valve to the determined hydraulics pressure (± 20 psi)
8. Apprentice will indicate when draft is successful prior to continuing 5
9. Shut down pumping operation by loudly state “shut down” 5
10. Slowly close discharge valve and nozzle completely 5
- a. For a model #1 & #5:**
- Adjust pump panel throttle until main engine returns to idle 5
 - Return to cab and place foot on service brake 5
 - Shift transmission to neutral 5
 - Disengage midship pump (acceptable to put transmission into reverse then back into neutral for ease in disengaging pump) 5
 - **For model #5:** – shift transfer case to high range (if equipped with air shift, skip this step) 5
 - With foot still on service brake, shift transmission into a road gear to be sure pump is disengaged 5
 - Shift transmission to neutral 5
- b. For a model #5, #14 & #15 – hydrostat engine**
- Return to cab and place foot on service brake 5
 - Disengage pump 5
 - Return main engine to idle and idle for 1 minute 5



Performance Examination

4100 Sub JAC Handbook

PUMPING FROM DRAFT

c. For model #9 & # 11:

- Idle pump engine for approximately 30 seconds 5
- Turn off pump engine 5

11. If equipped with a pressure relief valve, turn valve to the OFF position Pass / Fail

- a. If necessary, return main engine to idle prior to shutting down the main engine

EXAMINATION ENDS

ENTER TOTAL TIME: :

TOTAL POINTS POSSIBLE: 100

POINTS DEDUCTED:

ENTER THE FINAL SCORE:

LESS THAN 80 POINTS, OVER TIME OR ANY STEP MARKED AS FAIL: Fail

COMMENTS: _____

