# Driver Operator - Pumper

Skill Sheets



The following skills sheets are meant to be printed double-sided. This allows the candidate to view the instructions and description without viewing the steps. (REVISED 06/2024)

*Evaluators are the FST on-site representative for IFSAC skills exams and are responsible for evaluating a candidate’s ability to perform specific skills in a structured testing situation. In rare occasions where enough evaluators are not available, FST may approve an evaluator who participated in the training process, as long as they do not evaluate the subject(s) they taught. Evaluators will only notify candidates of pass/fail status of a skill station if the candidate asks. All discussions between evaluators and the candidate about skill evaluations and scoring must be conducted after the candidate has completed the skill testing station, and in a location that will provide privacy from other candidates to ensure confidentiality. Evaluators complete the testing station skills sheets for each candidate and include any comments concerning the testing of the candidate and sign the skill sheet to affirm passing or failing of the skill by the candidate. Evaluators refer any problems or questions that develop during the testing process to the Lead Evaluator.*

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## Driver Operator - **Pumper**

### Routine test, inspection and servicing functions

#### Skill Sheet 1

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 4.3.7, 5.1.2 | **Task (read aloud):** Given an apparatus appropriate to the level of certification, perform and document routine test, inspection, and servicing functions on specified systems and components.Perform the visual and operational checks on the systems and components specific to a pumping apparatus. |
| **Candidate directive (read aloud):** Perform the visual and operational checks on the systems and components specified in the following list in addition to those in 4.2.1, given a fire department pumper, its manufacturer’s specifications, and policies and procedures of the jurisdiction, so that the operational status of the pumper is verified: (1) Water tank and other extinguishing agent levels (if applicable) (2) Pumping systems (3) Foam systems **NFPA Requisite Skills (B):** The ability to use hand tools, recognize system problems, and correct any deficiency noted according to policies and procedures.  |
| **Required equipmen**t: Flashlight, pen, clipboard, check sheet either by FST or by jurisdiction (proctor must identify that all items from skill sheet 1 General Driver Operator are present), paper towel/rag, any other hand tools required to make access for checks. |
| **Required personnel: 0 assistants** |

## Driver Operator - **Pumper**

### Routine test, inspection and servicing functions

#### Skill Sheet 1

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 4.3.7, 5.1.2 | **Task:** Perform and document the readiness inspection of a fire department pumper. |
| **Performance outcome:** Given a fire department pumping apparatus, the necessary hand tools, and using the provided inspection checklist (DO2), the candidate shall conduct and document a readiness inspection, not to exceed 25 minutes: (Provide Flashlight, Pen, Clipboard, Paper Towel/Rag) |
|  |  | **FIRST TEST** | **RETEST** |
| **NO.** | **TASK STEPS** | Pass | Fail | Pass | Fail |
| 1. | Check water tank for level and leaks in the system |  |  |  |  |
| 2. | Check foam tank for level and leaks if applicable |  |  |  |  |
| 3. | Exercise pump valves |  |  |  |  |
| 4. | Check and clean intake strainer |  |  |  |  |
| 5. | Check pump gearbox for proper oil and traces of water |  |  |  |  |
| 6. | Chock wheels |  |  |  |  |
| 7. | Start apparatus and place apparatus in pump gear |  |  |  |  |
| 8. | Operate the pump primer with all pump valves closed. Note vacuum reading |  |  |  |  |
| 9. | Operate the changeover valve while operating from tank or other water source (if applicable) |  |  |  |  |
| 10. | Check packing glands for excessive leaks, if applicable |  |  |  |  |
| 11. | Operate the pump pressure control device(s) |  |  |  |  |
| 12. | Check and operate all fixed systems and equipment (if applicable) |  |  |  |  |
|  | a. Generator |  |  |  |  |
|  | b. Fixed lighting equipment |  |  |  |  |
|  | c. Rescue equipment |  |  |  |  |
|  | d. Gas-powered tools |  |  |  |  |
| 13. | e. Air compressor/cascade system |  |  |  |  |
| 14. | Document inspection and maintenance performed |  |  |  |  |
|  | Completed in 25 minutes or less. |  |  |  |  |

Evaluator/candidate comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 ⬜ I acknowledge NOT passing this skill station.

Candidate’s signature

## DRIVER OPERATOR – PUMPER – SKILL SHEET 1 (DO2)

### Standard 4.3.7, 5.1.2 NFPA 1002, 2017 Edition

Candidate’s name: Date:

#### OK Needs service

  Check water tank for level and leaks in the system

  Check foam tank for level and leaks if applicable

  Exercise pump valves

  Check and clean intake strainer

  Check pump gearbox for proper oil and traces of water

  Operate the pump primer with all pump valves closed and note vacuum reading

  Operate the changeover valve while operating from tank (if applicable)

  Check packing glands for excessive leaks, if applicable

  Operate the pump pressure control device(s)

  Operate all fixed systems and equipment

  Document inspection and maintenance preformed

####  Vehicle is serviceable  Vehicle is not serviceable

Comments about items needing service: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Evaluator’s name: Date:

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## Driver Operator – **Pumper**

### Practical Pumping Evolution - Water Supply

#### Skill Sheet 2

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.2, 5.2.3 | **Task (read aloud):** Given an apparatus appropriate to the level of certification, perform the practical pumping evolution as assigned by the evaluator and with the restrictions given. |
| **Candidate directive (read aloud):** Establish and operate in work areas at emergency and nonemergency scenes, given safety equipment, traffic and scene control devices, emergency and nonemergency scenes, traffic and other hazards, an assignment, and SOP’s so that procedures are followed, safety equipment is utilized, protected work areas are established as directed using traffic and scene control devices, and the driver/operator performs assigned tasks only in established, protected work areas.5.2.3 Connect a fire department pumper to a water supply as a member of a team, given supply or intake hose, hose tools, and a fire hydrant or static water source, so that connections are tight and water flow is unobstructed. |
| **NFPA Requisite skill 5.2.2 (B):** The ability to use safety equipment, deploy traffic and scene control devices, dismount apparatus, establish and operate in the protected work areas as directed.**NFPA Requisite skill 5.2.3 (B):** The ability to hand lay a supply hose, connect and place hard suction hose for drafting operations, deploy portable water tanks as well as the equipment necessary to transfer water between and draft from them, make hydrant to pumper hose connections for forward and reverse lays, connect supply hose to a hydrant, fully open and close the hydrant. |
| Required equipment: Pumping apparatus with appropriate hoses, appliances, and tools appropriate for water supply operations |
| Required personnel: 1 assistant |

## Driver Operator – **Pumper**

### Practical Pumping Evolution - Water Supply

#### Skill Sheet 2

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.2, 5.2.3 | **Task:** Establish and work is a protected area. Demonstrate the ability to utilize adiverse water source for pumping operations |
| **Performance Outcome:** Given a fire department pumping apparatus, the necessary hand tools, hoses, and appliances and with the assistance of 1 firefighter perform either drafting evolution or hydrant evolution as directed by proctor. |
|  | **Evaluator to assign drafting or hydrant** | **FIRST TEST** | **RETEST** |
| **NO.** | **TASK STEPS** | Pass | Fail | Pass | Fail |
| 1. | From the driver’s seat remove seatbelt and dismount apparatus safely. |  |  |  |  |
| 2. | Prior to or after exiting apparatus deploy traffic and scene control devices |  |  |  |  |
| 3. | Establish and operate in the protected work areas. |  |  |  |  |
| 4. | Chock wheels |  |  |  |  |
| 5. | Drafting: |  |  |  |  |
|  | A. Connect and place hard suction hose |  |  |  |  |
|  | B. Deploy portable water tanks and equipment necessary to transfer water between and draft from them. Or correctly deploy hard suction into static source of water keeping suction off the bottom and low enough to not whirlpool. |  |  |  |  |
|  | C. Continue to pumping evolution |  |  |  |  |
| 6. | Hydrant: |  |  |  |  |
|  | A. Make hydrant to pump hose connection. |  |  |  |  |
|  | B. Fully open the hydrant. |  |  |  |  |
|  | C. Continue to pumping evolution |  |  |  |  |
|  | Did the candidate perform the skill safely, swiftly, and with competence? |  |  |  |  |

Evaluator/candidate comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 ⬜ I acknowledge NOT passing this skill station.

Candidate’s signature

## Driver Operator – **Pumper**

### Practical Pumping Evolution – Hand Line or Master Stream

#### Skill Sheet 2A

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.4 | **Task (read aloud):** Given an apparatus appropriate to the level of certification, perform the practical pumping evolution as assigned by the evaluator and with the restrictions given. |
| **Candidate directive (read aloud):** Produce effective hand line or master streams (determined by FST), given the sources specified in the following list, so that the pump is engaged, all pressure control and vehicle safety devices are set, the rated flow of the nozzle is achieved and maintained, and the apparatus is monitored for potential problems.1. Internal tank. 2. Pressurized source or Static source (As assigned by the evaluator) 3. Transfer from internal tank to external source. |
| **NFPA Requisite Skill 5.2.4 (B):** The ability to position a fire department pumper to operate at a fire hydrant and at a static water source, power transfer from vehicle engine to pump, draft, operate pumper pressure control systems, operate the volume/pressure transfer valve (multistage pumps only), operate auxiliary cooling systems, make the transition between internal and external water sources, assemble hose lines, nozzles, valves and appliances. |
| **Required equipment:** Pumping apparatus with appropriate hoses, nozzles, appliances, and tools appropriate for pumping operations. |
| **Required personnel:** 1 assistant |

## Driver Operator – **Pumper**

### Practical Pumping Evolution – Hand Line or Master Stream

#### Skill Sheet 2A

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.4 | **Task:** Using a fire department pumping apparatus, produce an effectivehand or master stream given a water source. |
| **Performance outcome:** Given a fire department pumping apparatus, supply hose, attack hose, appropriate fittings, tools, nozzles, firefighters to assist, the candidate shall produce and effective hand or master stream given a specified water source so that the pump is engaged, all pressure control and vehicle safety devices are set, the rated flow of the nozzle is achieved and maintained, and the apparatus is continuously monitored for potential problems. The correct discharge pressure must be within 5 psi, using the algebraic formula: **DP = (CLQ2) + NP + ALP ± ELV**. C = Coefficient; L= Length/100; Q = GPM/100; NP = nozzle pressure; APL = appliance loss; and ELV = elevation gain or loss. Evaluator shall specify the GPM flowing and type of nozzle and fire stream, plus any other variable normally encountered by a driver/operator. |
|  | **Evaluator to assign scenario A, B, or C, and Draft or Hydrant** | **FIRST TEST** | **RETEST** |
| **NO.** | **TASK STEPS** | Pass | Fail | Pass | Fail |
| 1. | Candidate calculates appropriate discharge pressure, ± 5 psi **(Evaluator chooses fire stream scenario)**1. Hand line (minimum 100’ of 1 ½” or larger hoses)
2. Wyed pair of hand lines (minimum 100’ of 2 ½” hoses wyed to a pair of attack lines a minimum 100’ of 1 ½” or 1 ¾” hose)
3. Master stream (minimum 100’ of 2 ½” or larger attack line)
 |  |  |  |  |
| 2. | Assemble and direct assembly of hose lines, nozzles, valves and appliances |  |  |  |  |
| 3. | Makes appropriate connections |  |  |  |  |
| 4. | Operates power transfer from vehicle engine to engage pump |  |  |  |  |
| 5. | Draft (static source evolution) |  |  |  |  |
|  | A. Prime pump |  |  |  |  |
|  | B. Obtain draft |  |  |  |  |
|  | C. Operates pump pressure control system(s) |  |  |  |  |
| 6. | Hydrant |  |  |  |  |
|  | A. Opens tank to pump valve |  |  |  |  |
|  | B. Transitions from tank water to pressurized source (pressurized source evolution) |  |  |  |  |
|  | C. Operates the volume/pressure transfer valve (multistage pumps only) |  |  |  |  |
| 7. | Monitors discharge pressure and refills water tank (if possible) |  |  |  |  |
| 8. | Operates auxiliary cooling systems |  |  |  |  |
| 9. | Completes skill without creating a water hammer or pump cavitation |  |  |  |  |
|  | Did the candidate perform the skill safely, swiftly, and with competence? |  |  |  |  |

Evaluator/candidate comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 ⬜ I acknowledge NOT passing this skill station.

Candidate’s signature

## Driver Operator – **Pumper**

### Practical Pumping Evolution - Relay Pumping

#### Skill Sheet 2B

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.5 | **Task (read aloud):** Given an apparatus appropriate to the level of certification, perform the practical pumping evolution as describe and with the restrictions given. |
| 5.2.5 Pump a supply line of 2 ½” or larger, given a relay pumping evolution the length and size of the line and the desired flow and intake pressure, so that the correct pressure and flow are provided to the next pumper in the relay  |
| NFPA Requisite Skill 5.2.5 (B) The ability to position a fire department pumper to operate at a fire hydrant and at a static water source, Power transfer from vehicle engine to pump, draft, operate pumper pressure control systems, operate the volume/pressure transfer valve (multistage pumps only), Operate auxiliary cooling systems, make the transition between internal and external water sources, assemble hose lines, nozzles, valves and appliances. |
| Required equipment: Pumping apparatus with appropriate hoses, nozzles, appliances, and tools appropriate for pumping operations.Required personnel: 1 assistant. |

## Driver Operator - **Pumper**

### Practical Pumping Evolution - Relay Pumping

#### Skill Sheet 2B

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.5 | **Task:** Using a fire department pumping apparatus, produce an effective hand or master stream given a water source. |
| **Performance Outcome**: Given a fire department pumping apparatus, supply hose, and the length and size of a pre-laid relay line (2 ½” or larger), appropriate fittings, tools, firefighters to assist, and the desired flow and intake pressure, the candidate shall produce and maintain an effective water supply relay to an attack pumper, given a specified water source so that the pump is engaged, all pressure control and vehicle safety devices are set, the correct pressure and flow is maintained, and the apparatus is continuously monitored for potential problems. The correct discharge pressure must be within 5 psi, using the algebraic formula: DP = (CLQ2) + NP + ALP ± ELV. C = Coefficient; L= Length/100; Q = GPM/100; NP = nozzle pressure; APL = appliance loss; and ELV = elevation gain or loss. Evaluator shall specify the GPM, length of relay line, attack pumper intake pressure, plus any other variable normally encountered by a driver/operator. |
| **NO.** | **TASK STEPS** | **FIRST TEST** | **RETEST** |
|  |  | Pass | Fail | Pass | Fail |
| 1. | Candidate calculates appropriate discharge pressure, ± 5 psi **(Evaluator chooses Line size and distance to next pumper)** |  |  |  |  |
| 2. | Assemble and direct assembly of hose lines, nozzles, valves and appliances |  |  |  |  |
| 3. | Makes appropriate connections |  |  |  |  |
| 4. | Operates power transfer from vehicle engine to engage pump |  |  |  |  |
| 5. | Drafts (static source evolution) |  |  |  |  |
|  | A. Prime pump |  |  |  |  |
|  | B. Obtain draft |  |  |  |  |
|  | C. Operates pump pressure control system(s) |  |  |  |  |
| 6. | Hydrant |  |  |  |  |
|  | A. Opens tank to pump valve |  |  |  |  |
|  | B. Transitions from tank water to pressurized source (pressurized source evolution) |  |  |  |  |
|  | C. Operates the volume/pressure transfer valve (multistage pumps only) |  |  |  |  |
|  | D. Monitors discharge pressure and refills water tank (if possible) |  |  |  |  |
| 7. | Operates auxiliary cooling systems |  |  |  |  |
| 8. | Completes skill without creating a water hammer or pump cavitation |  |  |  |  |
| 9. | Did the candidate perform the skill safely? |  |  |  |  |

Evaluator/candidate comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 ⬜ I acknowledge NOT passing this skill station.

Candidate’s signature

## Driver Operator – **Pumper**

### Practical Pumping Evolution Pumping Foam

#### Skill Sheet 2C

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.6 | **Task (read aloud):** Given an apparatus appropriate to the level of certification, perform the practical pumping evolution as describe and with the restrictions given. |
| 5.2.6 Produce a foam fire stream, given foam-producing equipment, so that properly proportioned foam is provided |
| NFPA Requisite Skill 5.2.6 (B) The ability to operate foam proportioning equipment. Connect foam stream equipment. |
| Required equipment: Pumping apparatus with appropriate hoses, nozzles, appliances, and tools appropriate for pumping operations.Required personnel: 1 assistant. |

## Driver Operator - **Pumper**

### Practical Pumping Evolution Pumping Foam

#### Skill Sheet 2C

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.6 | **Task:** Produce a foam fire stream so that properly proportioned foam isdelivered. |
| **Performance Outcome:** Given a fire department pumping apparatus, foam concentrate, foam eductor or apparatus mounted foam system, foam nozzle and other related equipment, hose line, and a hose team, the candidate will assemble a foam layout appropriate for the type of concentrate being used. The candidate will deliver properly proportioned foam and clean the system at the completion of the evolution. |
| **NO.** | **TASK STEPS** | **FIRST TEST** | **RETEST** |
|  |  | Pass | Fail | Pass | Fail |
| 1. | Verify correct educator (or proportioner) and nozzle gallonage |  |  |  |  |
| 2. | Set concentrate percentage |  |  |  |  |
| 3. | Assemble a foam layout appropriate for the type of concentrate being used |  |  |  |  |
| 4. | Set appropriate pump pressure for foam layout |  |  |  |  |
| 5. | Deliver properly proportioned foam |  |  |  |  |
| 6. | Clean or flush system when complete |  |  |  |  |
| 7. | Complete skill without creating a water hammer or pump cavitation |  |  |  |  |
| 8. | Did the candidate perform the skill safely? |  |  |  |  |

Evaluator/candidate comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Candidate’s signature

## Driver Operator – **Pumper**

### Practical Pumping Evolution Pumping to Sprinkler or Standpipe

#### Skill Sheet 2D

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.7 | **Task (read aloud):** Given an apparatus appropriate to the level of certification, perform the practical pumping evolution as describe and with the restrictions given. |
| 5.2.7 Supply water to fire sprinkler and standpipe systems, given specific system information and a fire department pumper, so that water is supplied to the system at the correct volume and pressure. |
| NFPA Requisite Skill 5.2.7 (B) The ability to position a fire department pumper to operate at a fire hydrant and at a static water source. Power transfer from vehicle engine to pump. Draft. Operate pumper pressure control systems, Operate the volume/pressure transfer valve (multistage pumps only). Operate auxiliary cooling systems. Make the transition between internal and external water sources. Assemble hose line, nozzles, valves and appliances. |
| Required equipment: Pumping apparatus with appropriate hoses, nozzles, appliances, and tools appropriate for pumping operations.Required personnel: 1 assistant. |

## Driver Operator - **Pumper**

### Practical Pumping Evolution Pumping to Sprinkler or Standpipe

#### Skill Sheet 2D

|  |  |
| --- | --- |
| **Standard:** NFPA 1002, 2017 Edition**Objective:** 5.2.7 | **Task:** Supply water to fire sprinkler and standpipe systems given a water source. |
| **Performance Outcome**: Given a fire department pumping apparatus, specific system information, a minimum of 100 feet of supply hose (2 ½" or larger), the candidate shall produce and maintain an effective water supply to a sprinkler or standpipe system, given a specified water source so that the pump is engaged, all pressure control and vehicle safety devices are set, the correct pressure and flow is maintained, and the apparatus is continuously monitored for potential problems so that water is supplied to the system at the correct volume and pressure.. The correct discharge pressure must be within 5 psi, using the algebraic formula: **DP = (CLQ2) + S for sprinkler systems or DP = (CLQ2) + NP + ALP + S ± ELV for standpipes**. C = Coefficient; L= Length/100; Q = GPM/100; NP = nozzle pressure; APL = appliance loss; S = sprinkler connection pressure or S = standpipe; and ELV = elevation gain or loss. Evaluator shall specify hose lay, the GPM flowing, type of nozzle and fire stream plus any other variable normally encountered by a driver/operator. |
| **NO.** | **TASK STEPS** | **FIRST TEST** | **RETEST** |
|  |  | Pass | Fail | Pass | Fail |
| 1. | Candidate calculates appropriate discharge pressure, ± 5 psi (**Evaluator specifies type of system**)A. Sprinkler systemB. Standpipe system |  |  |  |  |
| 2. | Assemble and direct assembly of hose lines, nozzles, valves and appliances |  |  |  |  |
| 3. | Makes appropriate connections |  |  |  |  |
| 4. | Operates power transfer from vehicle engine to engage pump |  |  |  |  |
| 5. | Drafts (static source evolution) |  |  |  |  |
|  | A. Prime pump |  |  |  |  |
|  | B. Obtain draft Establishes water supply |  |  |  |  |
|  | C. Operates pump pressure control system(s) |  |  |  |  |
| 6. | Hydrant |  |  |  |  |
|  | A Opens tank to pump valve |  |  |  |  |
|  | B. Transitions from tank water to pressurized source (pressurized source evolution) |  |  |  |  |
|  | C. |  |  |  |  |
| 7. | Operates auxiliary cooling systems |  |  |  |  |
| 8. | Monitors discharge pressure and refills water tank (if possible) |  |  |  |  |
| 9. | Completes skill without creating a water hammer or pump cavitation |  |  |  |  |
| 10. | Did the candidate perform the skill safely? |  |  |  |  |

Evaluator/candidate comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Candidate’s signature

Fire Apparatus Driver Operator-PUMPER

skills test flow chart

DEMOSTRATED AND DOCUMENTED WITH THE LOCAL AHJ

MANIPULATED SKILLS TEST PASSED WITH 100% COMPENTENCY OF CRITICAL FAIL POINTS IDENTIFIED ON THE SKILL SHEET AT AN IDAHO DESIGNATED IFSAC TESTING SITE

DEMOSTRATED AND DOCUMENTED WITH THE LOCAL AHJ

**sKILL SHEET 1:** rOUTINE TEST, INSPECTION AND SERVICING FUNCTIONS

* VEHICLE INSPECTION CHECKLIST – DO2 PROVIDED AT TEST SITE

STANDARD 5.1.2 NFPA 1002, 2017 EDITION

**SKILL SHEET 2:** PRACTICAL PUMPING EVOLUTION – WATER SUPPLY

**SKILL SHEET CHOSEN BY FST AT RANDOM** – sKILL SHEET 2A, 2B, 2c, 2d

* Before completing SKILL SHEET 2A, 2B, 2C, or 2D, the testing candidate **must pass** the corresponding HYDRAULIC QUESTION HANDOUT for Task Step #1.

An fst issued caculator will be provided

A copy of all skill sheets can be found on the FST website. [Testing | Idaho Division of Career Technical Education](https://cte.idaho.gov/programs-2/fire-service-training-2/testing/)