Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet: 1

Standard 4.2.1, 4.2.2 NFPA 1002, 2014 Edition	**Task**: Perform and document routine test, inspection and servicing functions on specified systems and components.

Performance Outcome: Given a fire department pumping apparatus, the necessary hand tools, and using the provided vehicle inspection checklist (DO1), the candidate shall complete and document an inspection as outlined below, not to exceed 25 minutes: (Provide Flashlight, Pen, Clipboard, Paper Towel/Rag)

No.	Task Steps	First Test		Retest	
		Pass	Fail	Pass	Fail
1.	Candidate inspect apparatus as they approach looking for signs of damage or leaks				
2.	Check batteries for fluid level and corrosion				
3.	Check braking system fluid level or for air level and drain moisture from air tanks				
4.	Check coolant system for fluid levels, leaks, cleanliness				
5.	Check electrical system including: warning devices, headlights, running lights, turn signals, and warning lights				
6.	Check fuel level				
7.	Check hydraulic fluids for level and leaks (if applicable)				
8.	Check engine for leaks				
9.	Check tires for pressure and wear, (tread depth minimum : front 4/32", rear 2/32")				
10.	Check steering system for range of motion and excessive looseness				
11.	Check engine belts for tightness and wear				
12.	Check tools, appliances, equipment, lighting				
13.	Check windshield, wiper blades, and washer fluid				
14.	Start apparatus, monitor gauges and control devices				
15.	Document and correctly report any deficiencies				
16.	Completed in 25 minutes or less				
17.	Did the candidate perform the skill safely?				

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator
Vehicle Inspection Checklist – DO1

Standard 4.2.1, 4.2.2
NFPA 1002, 2014 Edition

Candidate's Name: _____ Date: _____

OK	Needs Service	
☐	☐	Battery
☐	☐	Braking system
☐	☐	Coolant system
☐	☐	Electrical system
☐	☐	Fuel
☐	☐	Hydraulic fluids
☐	☐	Oil
☐	☐	Tires
☐	☐	Steering system
☐	☐	Belts
☐	☐	Tools, appliances, and equipment
☐	☐	Windshield, wipers, fluid

☐ Vehicle is serviceable ☐ Vehicle is **not** serviceable

Comments about items needing service:

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Evaluator's Name: _____ Date: _____

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet: 2

Standard 4.3.7, 5.1.1 NFPA 1002, 2014 Edition	**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)

No.	Task Steps	First Test		Retest	
		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				
	e. Air compressor/cascade system				
13.	Document inspection and maintenance performed				
14.	Complete skill in allotted 25 minute time frame				
15.	Did the candidate perform the skill safely?				

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator
Routine Tests/Inspections Checklist – DO2

Standard 4.3.7, 5.1.1
NFPA 1002, 2014 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:

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Evaluator's Name: _____ Date: _____

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet: 3

Standard 4.3.6 NFPA 1002, 2014 Edition	**Task**: Operate a fire department pumper using defensive driving techniques so that control of the vehicle is maintained.
Note to Evaluators: It is recommended that this skill be conducted on a driving track or nonpublic roadway. The host department is responsible for defining the predetermined route to include the prescribed maneuvers listed below.	
Conditions: Given a fire department pumping apparatus and a predetermined routs and a given assignment, the candidate shall demonstrate defensive driving skills by operating the vehicle in a safe manner to accomplish the tasks listed below.	

No.	Task Steps	First Test		Retest	
		Pass	Fail	Pass	Fail
1.	Ensures vehicle is prepared for departure				
2.	Ensures all personnel are seated with safety belts fastened				
3.	Enters traffic in a safe manner				
	a. Maintains safe following distances				
	b. Maintains control of the vehicle while accelerating, decelerating, and turning, given road, weather, and traffic conditions				
	c. Operating under adverse environmental or driving surface conditions and maintains safe following distances				
	d. Use automotive gauges and controls appropriately				
4.	Brings apparatus to a safe stop				
5.	Did the candidate perform the skill safely?				

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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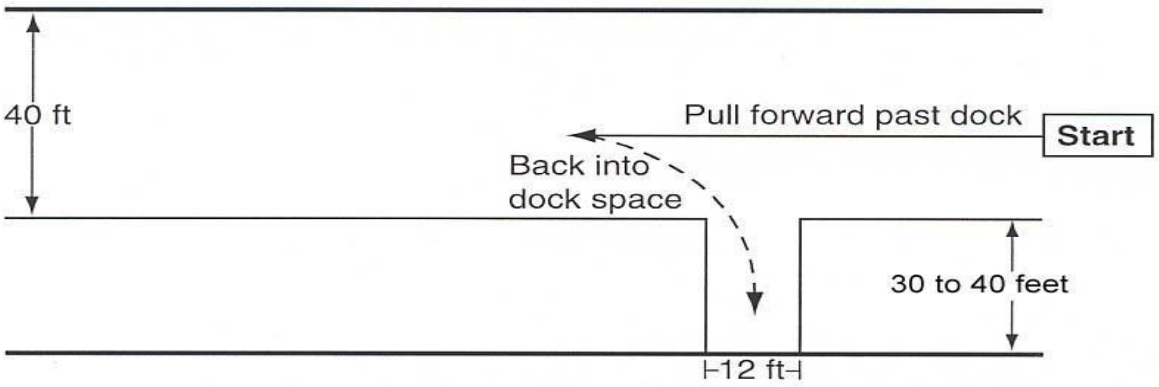
Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet: 4

Standard 4.3.2 NFPA 1002, 2014 Edition	**Task**: Back a vehicle from a roadway into a restricted space on both the right and let sides of the vehicle. (Alley Dock)

Performance Outcome: Given a fire department pumping apparatus, back the vehicle from a roadway into a restricted space on both the right and left sides of the vehicle into a restricted space 12ft in width, requiring 90-degree right-hand or left-hand turns from the roadway, so that the vehicle is parked within the restricted area without having to stop and pull forward and without striking obstructions. A spotter will be used only for the purpose of preventing the striking of an object.



No.	Task Steps	First Test		Retest	
		Pass	Fail	Pass	Fail
1.	Adjust and use mirrors for backing				
2.	Driver and passenger(s) wearing seatbelts				
3.	Complete skill correctly without crossing over or striking cones				
4.	Complete skill without having to stop and pull forward				
5.	Driver spots apparatus completely within restricted space				
6.	Did the candidate perform the skill safely?				

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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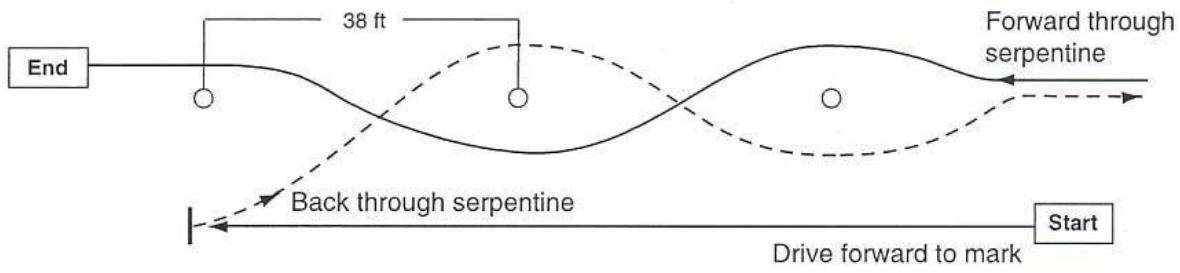
Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet: 5

Standard 4.3.3 NFPA 1002, 2014 Edition	**Task**: Maneuver fire department pumper around obstructions on a roadway while moving forward and in reverse. (Serpentine)

Performance Outcome: Given a fire department pumping apparatus, cones and a roadway with obstructions, the candidate shall maneuver the apparatus through the obstructions first in reverse and then in forward without stopping to change the direction of motion and without crossing over or striking cones. A spotter will be used only for the purpose of preventing the striking of an object.



No.	Task Steps	First Test		Retest	
		Pass	Fail	Pass	Fail
1.	Adjust and use mirrors for backing				
2.	Driver and passenger(s) wearing seatbelts				
3.	Complete skill correctly without crossing over or striking cones				
4.	Complete skill without having to stop and pull forward				
5.	Did the candidate perform the skill safely?				

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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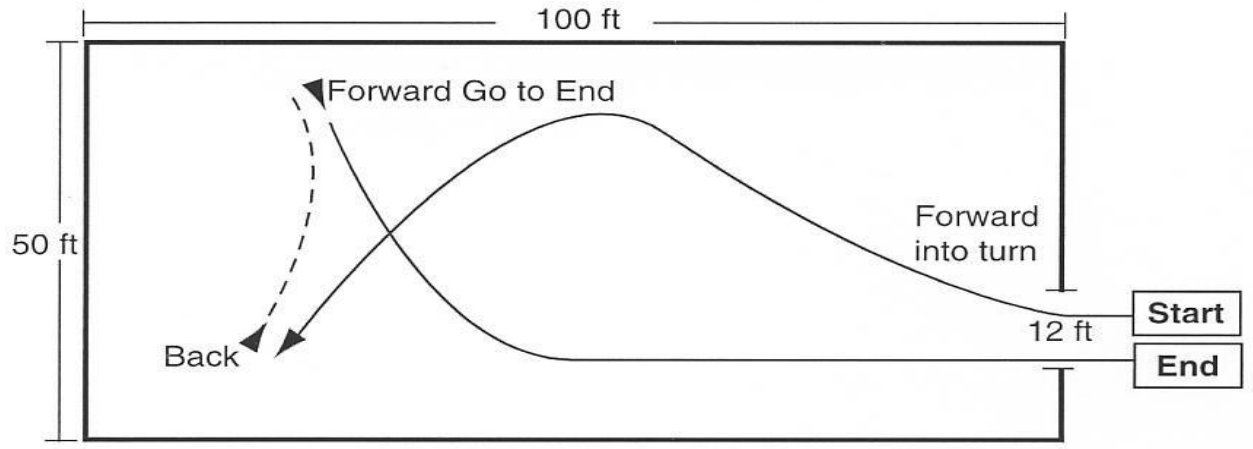
Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet: 6

Standard 4.3.4 NFPA 1002, 2014 Edition	**Task**: Turn a fire department pumping apparatus around 180 degrees within a confined space.

Performance Outcome: Given a fire department pumping apparatus, cones, and a confined area where the vehicle cannot perform a U-turn without stopping and backing up, the candidate shall maneuver the apparatus so that the vehicle is turned 180 degrees without passing over striking obstructions within the given space. A spotter will be used only for the purpose of preventing the striking of an object.



		Pass	Fail	Pass	Fail
1.	Adjust and use mirrors for backing				
2.	Driver and passenger(s) wearing seatbelts				
3.	Complete skill correctly without crossing over or striking cones				
4.	Did the candidate perform the skill safely?				

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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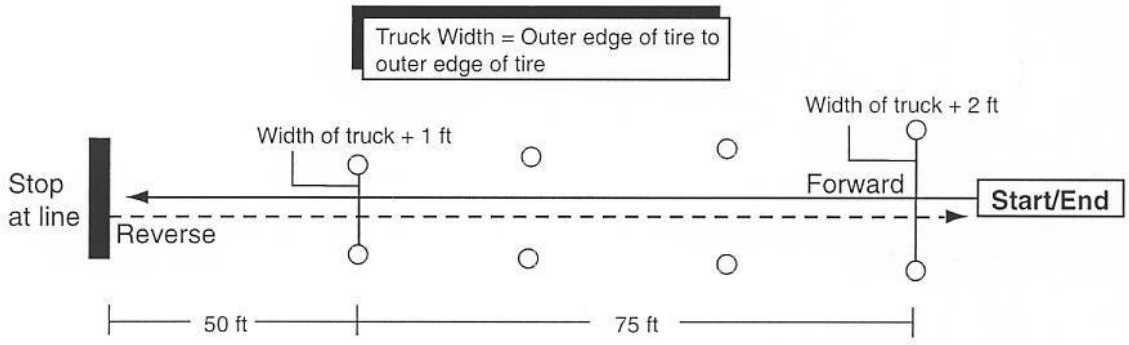
Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet: 7

Standard 4.3.5 NFPA 1002, 2014 Edition	**Task**: Maneuver a fire department pumping apparatus in restricted horizontal and vertical clearances (Diminishing Clearance)

Performance Outcome: Given a fire department pumping apparatus, cones, and a course with an area of restricted horizontal clearance, the candidate shall maneuver an apparatus thought the area with restricted horizontal space, so that the candidate accurately judges the ability of the vehicle to pass through the openings and that no cones are struck. The candidate shall provide the height of the vehicle within 6 inches but not less than the actual height when asked. The candidate shall also identify the location of the highest point on the apparatus.



No.	Task Steps	First Test		Retest	
		Pass	Fail	Pass	Fail
1.	Adjust and use mirrors for backing				
2.	Driver and passenger(s) wearing seatbelts				
3.	Complete skill correctly without crossing over or striking cones				
4.	When asked, the candidate correctly provided the height of and location of the highest point of the apparatus. Answer shall be within 6 inches, but NOT less than the actual height				
5.	Did the candidate perform the skill safely?				

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet: 8

Standard 4.3.1 NFPA 1002, 2014 Edition	**Task**: Drive a fire department pumping apparatus safely over a predetermined route on a public way.
Note to evaluator: The host department is responsible for defining the predetermined route to include the prescribed maneuvers listed below. Any situations in the list below that do not exist in the host department's jurisdiction may be omitted.	
Conditions: Given a predetermined route on a public way that incorporates the maneuvers and features that the driver/operator is expected to encounter during normal operations, so that the apparatus is operated in compliance with all applicable state and local laws and department rules and regulations.	

No.	Task Steps	First Test		Retest	
		Pass	Fail	Pass	Fail
1.	Ensures vehicle is prepared for departure				
2.	Ensures all personnel are seated with safety belts fastened				
3.	Enters traffic in a safe manner				
4.	Four left turns and four right turns				
5.	A straight section of urban street or rural two-lane road at least a mile in length				
6.	One through-intersection and two intersections where a stop has to be made				
7.	One railroad crossing				
8.	One curve, either left or right				
9.	A section of limited-access highway that includes a conventional ramp entrance and exit and a section of road long enough to allow lane changes				
10.	A downgrade or up-grade requiring gear changing to maintain speed				
11.	One underpass or low clearance bridge or obstacle				
	a. Maintains safe following distances				
	b. Maintains control of the vehicle while accelerating, decelerating, and turning, given road, weather, and traffic conditions				
	c. Operating under adverse environmental or driving surface conditions and maintains safe following distances				
	d. Use automotive gauges and controls appropriately				
12.	Did the candidate perform the skill safely?				

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet 9

Standard 5.2.1 NFPA 1002, 2014 Edition	**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, 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: **$DP = (CLQ^2) + NP + ALP \pm ELV$**. 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.

No.	**Task Steps**	**First Test**		**Retest**	
		Pass	**Fail**	**Pass**	**Fail**
1.	Candidate calculates appropriate discharge pressure, ± 5 psi **(Evaluator chooses fire stream)** A. Hand line (minimum 100' of 1 ½" or larger hoses) B. 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) C. Master stream (minimum 100' of 2 ½" or larger attack line)				
2.	Driver and passengers wearing seat belts				
3.	Stops apparatus and sets parking brake				
4.	Positions apparatus to operate at a fire hydrant or at a static water source **(Evaluator specifies water source)** A. Pressurized Source (minimum of 100' of 2 ½" or larger supply hose) B. Static Source (minimum of two 10' sections of draft hose)				
5.	Chocks wheels				
6.	Assembles hose lines, nozzles, valves and appliances				
7.	Makes appropriate connections				
8.	Operates power transfer from vehicle engine to engage pump				
9.	Opens tank to pump valve (pressurized source evolution)				
10.	Drafts (static source evolution)				
11.	Prime pump				
12.	Operates pump pressure control system(s)				
13.	Operates the volume/pressure transfer valve (multistage pumps only)				
14.	Operates auxiliary cooling systems				
15.	Transitions from tank water to pressurized source (pressurized source evolution)				
16.	Monitors discharge pressure and refills water tank (if possible)				
17.	Completes skill without creating a water hammer or pump cavitation				
18.	Did the candidate perform the skill safely?				

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet 10

Standard 5.2.2 NFPA 1002, 2014 Edition	**Task**: Establish a relay pumping evolution and produce an effective water supply 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: **$DP = (CLQ^2) + NP + ALP \pm ELV$**. 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				
2.	Driver and passengers wearing seat belts				
3.	Stops apparatus and sets parking brake				
4.	Positions apparatus to operate at a fire hydrant or at a static water source **(Evaluator specifies water source)** A. Pressurized Source B. Static Source				
5.	Chocks wheels				
6.	Makes appropriate connections				
7.	Operates power transfer from vehicle engine to engage pump				
8.	Opens tank to pump valve (pressurized source evolution)				
9.	Drafts (static source evolution)				
10.	Prime pump				
11.	Establishes water supply				
12.	Operates pump pressure control system(s)				
13.	Operates the volume/pressure transfer valve (multistage pumps only)				
14.	Operates auxiliary cooling systems				
15.	Transitions from tank water to pressurized source (pressurized source evolution)				
16.	Monitors discharge pressure and refills water tank (if possible)				
17.	Completes skill without creating a water hammer or pump cavitation				
18.	Did the candidate perform the skill safely?				

Evaluator/Candidate Comments:

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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet 11

Standard 5.2.3 NFPA 1002, 2014 Edition	**Task**: Produce a foam fire stream so that properly proportioned foam is delivered.

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 eductor (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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Evaluator Signature

I acknowledge not passing this skill station.

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Re-Test Evaluator Signature

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Candidate Signature

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Skill Sheet 12

Standard 5.2.4 NFPA 1002, 2014 Edition	**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: **$DP = (CLQ^2) + S$ for sprinkler systems or $DP = (CLQ^2) + NP + ALP + S \pm ELV$ 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 system B. Standpipe system				
2.	Driver and passengers wearing seat belts				
3.	Stops apparatus and sets parking brake				
4.	Positions apparatus to operate at a fire hydrant or at a static water source **(Evaluator specifies water source)** A. Pressurized Source B. Static Source				
5.	Chocks wheels				
6.	Makes appropriate connections				
7.	Operates power transfer from vehicle engine to engage pump				
8.	Opens tank to pump valve (pressurized source evolution)				
9.	Drafts (static source evolution)				
10.	Prime pump				
11.	Establishes water supply				
12.	Operates pump pressure control system(s)				
13.	Operates the volume/pressure transfer valve (multistage pumps only)				
14.	Operates auxiliary cooling systems				
15.	Transitions from tank water to pressurized source (pressurized source evolution)				
16.	Monitors discharge pressure and refills water tank (if possible)				
17.	Completes skill without creating a water hammer or pump cavitation				
18.	Did the candidate perform the skill safely?				

Idaho Fire Service Technology
Pumping Apparatus Driver/Operator

Evaluator/Candidate Comments:

Evaluator Signature

I acknowledge not passing this skill station.

Re-Test Evaluator Signature

Candidate Signature