CDC 10023W

Driver/Operator - Pumper Performance Test

Extension Course Program (A4L)
Air University
Air Education and Training Command

Acknowledgement

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Performance Test Instructions

This performance test provides detailed performance checklist items for candidate testing. Performance tests should not be conducted until the candidate has successfully completed the academic portion of the CDC. However, it is strongly encouraged that this supplement and the checklist it contains be used during the normal course of study. Candidates may practice the performance tests at anytime during study and up until testing is conducted. Practice is highly encouraged.

This particular course uses three workstations. Within each workstation there are several tasks and objectives (NFPA line items). A "Performance Summary Sheet" precedes each workstation or group of evaluated tasks. This sheet lists the NFPA line items evaluated and the specific tasks that must be accomplished. Each performance test lists the setting and tools/equipment required for the listed tasks.

Remember, official performance test notifications must be made ten days prior to the actual performance test or the candidate's performance test results will not be accepted by the DoD Administrative Center. For specific program guidance see DoD Manual 6055.6. Your performance test notifications must be made using the following web site. http://www.dodffcert.com/performance/notify.cfm

It is important also to understand the grading process used during the evaluation. For a full overview of the CDC process and performance testing please view the *Department of Defense Fire Fighter Certification Program Video* P/N # 612288. Additional information on grading criteria is provided on the next page.

Grading Criteria

The following criteria will be used to evaluate and determine the pass/fail status of a candidate. Each item in the Performance Test Checklist is given a rating.

Critical (C) – This rating has been assigned to items which, if omitted or performed incorrectly, would result in severe injury to, or death of an individual. Should a fire fighter fail to perform any one item rated as Critical **(C)**, the fire fighter would be unsuccessful in attaining the required proficiency level for that performance test.

Major (M) – This rating has been given to any item which is very important to the general safety of personnel and the successful completion of the evolution. Should a fire fighter fail to perform any three items rated as Major **(M)**, the fire fighter would be unsuccessful in attaining the required proficiency level for that performance test.

General – This rating although there is not symbol, has been given to all remaining items that in combination are relevant to the successful completion of the evolution. Should a fire fighter fail to perform any **four** items rated as General, the fire fighter would be unsuccessful in attaining the required proficiency level for that performance test.

Should a fire fighter fail to perform any combination of Major or General rated items resulting in a sum total of **four**, the fire fighter would be unsuccessful in attaining the required proficiency level for that performance test.

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SKILLS TEST 1 – Pre-Operations Station

Performance Test Summary Sheet

Objectives: **NFPA Standard 1002, Chapter 4, Paragraphs 4.2.1 and 4.2.2**
NFPA Standard 1002, Chapter 5, Paragraph 5.1.1

Tasks: 1. Conduct and document routine tests, inspections, and servicing functions.

2. Conduct pump service tests (if applicable) to include:

a. Vacuum test
b. Priming test
c. Pumping test
d. Pressure control test
e. Gauge and flow meter test
f. Tank to pump flow rate test

1. Pre-Operations

Performance Test Item – Inspections

Personnel Classification:	**Driver/Operator - Pumper**
Objectives:	**NFPA Standard 1002, Chapter 4, Paragraph 4.2.1** **NFPA Standard 1002, Chapter 5, Paragraph 5.1.1**
Task:	Conduct and document routine tests, inspections, and servicing functions.
Setting:	Fire department vehicle stalls, ramps or training areas.
Tools Equipment:	Fire department pumper apparatus, local service records, forms and apparatus history card.
Attainment Standard:	Successfully complete all elements/steps within 60 minutes.

1. Pre-Operations

Elements/Steps	Standards	Yes	No
1. Identify and explain the use of the fire apparatus record (if applicable)	1. In accordance with (IAW) IFSTA Pumping Apparatus Driver/Operator Handbook and local policies and procedures A. Tracked vital information such as pump, engine, and capacities	_____	_____
2. Identify and explain the use of the history record (if applicable)	2. IAW IFSTA Pumping Apparatus Driver/Operator Handbook and local policies and procedures A. Recorded basic service information including condition of body, pump, engine hours, road mileage, etc.	_____	_____
3. Identify and explain the use of the fire apparatus maintenance and inspection forms (In addition to the following, checklists and inspections in the applicable technical order must be accomplished)	3. IAW IFSTA Pumping Apparatus Driver/Operator Handbook and local policies and procedures A. Identified and explained the use of fire apparatus maintenance and inspection forms	_____	_____
4. Demonstrate the procedure for inspecting all apparatus components. **A. Inside driver compartment** B. Outside the apparatus C. Engine compartment D. Fire pump E. Water tank F. Foam tank/system G. Tools and Equipment	4. IAW IFSTA Pumping Apparatus Driver/Operator Handbook and local policies and procedures, inspected: **A. Inside driver compartment** 1. Checked all apparatus controls and gauges 2. Checked fuel levels and filled as needed 3. Checked all interior lights 4. Checked horn 5. Checked mirrors 6. Checked public address system and radio 7. Checked audible and visual warning devices 8. Tested brake pressure by operating foot pedal	_____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____

1. Pre-Operations

Elements/Steps	Standards	Yes	No
	9. Checked windshield wipers	_____	_____
	10. Checked map case	_____	_____
	11. Inspected seats for tears and adjustability	_____	_____
	12. Checked seatbelts for operation and wear	_____	_____
	13. Checked emergency and parking brakes	_____	_____
	14. Checked circuit breakers and/or fuses (if applicable)	_____	_____
	15. Checked steering wheel adjustment and reaction	_____	_____
	16. Checked heater/air conditioner operation	_____	_____
	17. Checked clutch pedal (if applicable)		
	18. Checked turrets	_____	_____
	19. **(M)** Checked communication systems	_____	_____
A. Inside driver compartment	**B. Outside the apparatus**		
B. Outside the apparatus			
C. Engine compartment	1. Checked body panel for rust, dents, or exposed areas needing touch-up paint	_____	_____
D. Fire pump			
E. Water tank			
F. Foam tank/system	2. Checked tires for proper inflation	_____	_____
G. Tools and Equipment	3. Checked wheel lugs for tightness	_____	_____
	4. Checked all exterior lights for operation and damage	_____	_____
	5. Checked circuit breakers and/or fuses	_____	_____
	6. Checked weather seals around cab and compartment doors for looseness, damage and deterioration	_____	_____
	7. Inspected windows for cracks or discoloration	_____	_____
	8. Checked battery terminals and cleaned as needed	_____	_____
	9. Checked battery cables for loose connections	_____	_____
	10. Checked electrolyte level and added water as needed	_____	_____
	11. Checked for fuel or oil leaks	_____	_____

Elements/Steps	Standards	Yes	No
A. Inside driver compartment B. Outside the apparatus **C. Engine compartment** D. Fire pump E. Water tank F. Foam tank/system G. Tools and Equipment	**C. Engine compartment** 1. Checked all drive belts for wear or defects; adjusted as needed 2. Checked coolant overflow reservoir for leaks and filled as needed 3. Checked cooling fan, cooling system hoses, and the radiator 4. Checked coolant level, color and cleanliness and filled, if necessary 5. Checked all oil levels; checked for leaks on engine and drive train 6. Checked all hydraulic fluid levels; checked for leaks 7. Checked brake/master cylinder fluid level and filled it as needed (if applicable) 8. Checked power steering reservoir and filled it as needed (if applicable) 9. Checked the automatic transmission fluid level, both cold and hot 10. Checked the air filter restriction gauge 11. Checked the windshield washer fluid level 12. Checked any exposed wiring for breaks, loose connections, and insulation frays 13. Checked the emergency shutdown for proper operation 14. Checked the exhaust system for leaks and damage 15. Checked the air system for leaks with the air system and the engine shut off 16. Checked the fuel filter for fuel/water separation and leaks/damage	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
A. Inside driver compartment B. Outside the apparatus C. Engine compartment **D. Fire pump** E. Water tank F. Foam tank/system	**D. Fire pump** 1. Opened all pump drains and flushed sediment 2. Checked and cleaned intake strainers	_____ _____	_____ _____

1. Pre-Operations

Elements/Steps	Standards	Yes	No
G. Tools and Equipment	3. Checked pump gear box for proper oil level and traces of water	_____	_____
	4. Operated pump primer with all pump valves closed	_____	_____
	5. Operated changeover valve while pumping from booster tank (applies to two-stage pumps only)	_____	_____
	6. Operated all valves, including the relief valve	_____	_____
	7. Checked all other pump panel instruments for proper operation	_____	_____
	8. Operated valves in auxiliary cooling system	_____	_____
A. Inside driver compartment B. Outside the apparatus C. Engine compartment D. Fire pump **E. Water tank** F. Foam tank/system G. Tools and Equipment	**E. Water tank** 1. Filled water tank to capacity	_____	_____
	2. Checked inside surface for corrosion and cleanliness	_____	_____
	3. Checked water tanks for leaks	_____	_____
A. Inside driver compartment B. Outside the apparatus C. Engine compartment D. Fire pump E. Water tank **F. Foam tank/system** G. Tools and Equipment	**F. Foam tank/system** 1. Filled foam tank to capacity	_____	_____
	2. Checked foam tank for leaks	_____	_____
	3. Tested the accuracy of the foam proportioning system per manufacturer's guidance	_____	_____
A. Inside driver compartment B. Outside the apparatus C. Engine compartment D. Fire pump E. Water tank F. Foam tank/system **G. Tools and Equipment**	**G. Tools and equipment** 1. Checked portable extinguishers-weighed and checked gauge	_____	_____
	2. Checked hose loads for correct finishes	_____	_____
	3. Inventoried all nozzles and appliances	_____	_____
	4. Checked pressure in all SCBA cylinders	_____	_____
	5. Inspected SCBA regulators and face pieces	_____	_____
	6. Checked all hand lights	_____	_____
	7. Checked and operated all power tools	_____	_____
	8. Checked all hand tools	_____	_____

1. Pre-Operations

Elements/Steps	Standards	Yes	No

1. Pre-Operations

Performance Test Item – Fire Pump Service Tests

Personnel Classification:	**Driver/Operator - Pumper**
Objectives:	**NFPA Standard 1002, Chapter 4, Paragraph 4.2.1** **NFPA Standard 1002, Chapter 5, Paragraph 5.1.1**
Task:	Conduct pumping apparatus pump service tests (if applicable) 1. Vacuum test 2. Prepare for remaining tests 3. Priming test 4. Pumping test 5. Pressure Control test 6. Gauge and Flow Meter test 7. Tank-to-Pump Flow Rate test **Note:** This performance test is not required if your department's mobile water supply apparatus does not have a fire pump. Follow all manufacturer recommendations for your department's apparatus.
Setting:	Fire Department training ground or drafting site.
Tools Equipment:	1. Pumping Apparatus 2. Deluge gun 3. Intake pressure gauge in inches Hg from 0 to 30 4. Discharge pressure gauge from 0 to 400 psi 5. Pitot tube with knife edge and air chamber 6. Smoothbore tips of the sizes to match the volume pumped for different tests 7. Rope, chains for securing test nozzles, and test stand 8. Flow tables 9. NFPA 1911 or localized test record forms
Attainment Standard:	Successfully complete all elements/steps within 60 minutes. **Note:** This performance task sheet is an evaluation tool only. Follow pump test procedures listed in the NFPA 1911 as well as the IFSTA Pumping Apparatus Driver/Operator Handbook.

1. Pre-Operations

Elements/Steps	Standards	Yes	No
1. Vacuum test	1. In accordance with IFSTA Pumping Apparatus Driver/Operator Handbook, NFPA 1911 Service Tests of Pumps on Fire Department Apparatus, and local policies/procedures		
	A. Drained the pump	_____	_____
	B. Inspected the gaskets	_____	_____
	C. Cleaned foreign matter from hose as necessary	_____	_____
	D. Connected hard suction hose to pump intake connection	_____	_____
	E. Checked that all intake valves were opened and capped the hard suction hose	_____	_____
	F. Closed all discharge valves	_____	_____
	G. Connected vacuum gauge	_____	_____
	H. Made the pump packing glands accessible for checking (by raising the floorboards or opening the compartment doors)	_____	_____
	I. Checked and filled priming pump reservoir as needed	_____	_____
	J. Operated primer to develop 22 inches of mercury	_____	_____
	K. Compared compound and test gauge and recorded the differences	_____	_____
	L. Listened for air leaks. (Vacuum loss should be no more than 10 inches in 10 minutes)	_____	_____
2. Prepare pumper for remaining tests	2. In accordance with IFSTA Pumping Apparatus Driver/Operator Handbook, NFPA 1911 Service Tests of Pumps on Fire Department Apparatus, and local policies/procedures.		
	A. Opened a discharge valve to relieve vacuum in pump	_____	_____
	B. Removed a suction cap and replaced it with strainer	_____	_____
	C. Attached a rope to the strainer	_____	_____
	D. Lowered hard suction hose into the water and tied off the rope	_____	_____

1. Pre-Operations

Elements/Steps	Standards	Yes	No
	E. Connected test gauge to test the fitting on pump panel	_____	_____
	F. Connected hoselines to discharge side of pump and deluge gun	_____	_____
	G. **(M)** Secured deluge gun	_____	_____
	H. Connected test gauges and flow meter (if used)	_____	_____
3. Conduct a priming test	3. In accordance with IFSTA Pumping Apparatus Driver/Operator Handbook, NFPA 1911 Service Tests of Pumps on Fire Department Apparatus, and local policies/procedures		
	A. Timed test from the start of priming until water flowed from priming device		
	1. Closed all drains, valves, and petcocks	_____	_____
	2. Placed transfer valve in VOLUME position (if applicable)	_____	_____
	3. Placed pump in gear	_____	_____
	4. Activated primer and timer	_____	_____
	5. Stopped time when the water discharged onto the ground	_____	_____
	6. Increased engine rpm to develop pump pressure	_____	_____
	7. Slowly opened discharge valves	_____	_____
	8. Operated the pump at moderate capacity and pressure	_____	_____
4. Conduct a pumping test	4. In accordance with IFSTA Pumping Apparatus Driver/Operator Handbook, NFPA 1911 Service Tests of Pumps on Fire Department Apparatus, and local policies/procedures		
	A. Gradually sped up the pump until the net pump discharge pressure was 150 psi (100% capacity), adjusted for altitude and hose friction loss	_____	_____
	B. Checked the flow at the nozzle, using a pitot gauge or a flowmeter (if applicable)	_____	_____

Elements/Steps	Standards	Yes	No
	C. Verified both the pump discharge pressure and the volume flowing were satisfactory (test now began)	_____	_____
	D. Noted the following readings at the beginning and at 5-minute intervals until 20 minute test was completed.	_____	_____
	1. Pump discharge pressure	_____	_____
	2. Nozzle pressure (or flow)	_____	_____
	3. Engine rpm (tachometer or a portable rpm counter)	_____	_____
	4. Rpm	_____	_____
	5. Engine coolant temperature (optional)	_____	_____
	6. Oil pressure (optional)	_____	_____
	7. Automatic transmission fluid temperature (optional)	_____	_____
	E. Upon completion of the 20 minute capacity test increased net pump discharge pressure to 200 psi (70% of capacity)	_____	_____
	F. Conducted 200 psi test for 10 minutes and recorded applicable readings (see item D)	_____	_____
	G. Upon completion of the 10 minute 200 psi test increased net pump discharge pressure to 250 psi (50% of capacity).	_____	_____
	H. Conducted the 250 psi test for 10 minutes and recorded applicable readings (see item D).	_____	_____
5. Conduct a pressure control test	5. In accordance with IFSTA Pumping Apparatus Driver/Operator Handbook, NFPA 1911 Service Tests of Pumps on Fire Department Apparatus, and local policies/procedures		
	A. Continued to pump at capacity	_____	_____
	B. Set pressure control device to maintain discharge at 150 psi	_____	_____
	C. Slowly closed all discharge valves	_____	_____

1. Pre-Operations

Elements/Steps	Standards	Yes	No
	D. Rise in discharge pressure did not exceed 30 psi	_____	_____
	E. Slowly reopened all discharge valves to discharge at 150 psi	_____	_____
	F. Reduced the pumping engine throttle	_____	_____
	G. Set pressure control device to maintain discharge pressure at 90 psi	_____	_____
	H. Closed all discharge valves slowly	_____	_____
	I. Rise in discharge pressure did not exceed 30 psi	_____	_____
	J. Slowly reopened all discharge valves to discharge at 150 psi	_____	_____
	K. Reduced the pumping engine throttle	_____	_____
	L. Set pressure control device to maintain discharge at 250 psi	_____	_____
	M. Closed all discharge valves slowly	_____	_____
	N. Rise in discharge pressure did not exceed 30 psi	_____	_____
6. Discharge pressure gauge test	6. In accordance with IFSTA Pumping Apparatus Driver/Operator Handbook, NFPA 1911 Service Tests of Pumps on Fire Department Apparatus, and local policies/procedures		
	A. Disconnected preconnects and capped all the discharges	_____	_____
	B. Opened each discharge valve slightly	_____	_____
	C. Increased the throttle until the discharge pressure gauge reached 150 psi	_____	_____
	D. Checked test gauge, master discharge gauge, and discharge gauge	_____	_____
	E. Performed check at 200 psi and 250 psi	_____	_____
7. Tank-to-pump flow rate	7. In accordance with IFSTA Pumping Apparatus Driver/Operator Handbook, NFPA 1911 Service Tests of Pumps on Fire Department Apparatus, and local policies/procedures		
	A. Filled water tank-overflowing	_____	_____
	B. Closed all pump intakes	_____	_____
	C. Closed tank fill and bypass cooling lines	_____	_____

Elements/Steps	Standards	Yes	No
	D. Connected nozzles & hoselines for anticipated flow rate	_____	_____
	E. Opened tank-to-pump and discharge valve for connected hoselines fully	_____	_____
	F. Throttled engine to maximum consistent pressure reading is obtained on the discharge pressure gauge (left in this position during item "g")	_____	_____
	G. Closed discharge valve, without changing throttle setting, and refilled water tank	_____	_____
	H. Reopened discharge valve and checked flow through the nozzle utilizing a pitot tube or flowmeter (if applicable). Adjust engine throttle if the pressure needs to be brought back to the amount determine in step "F"	_____	_____
	I. Compared flow rate to the rate designated by manufacturer when apparatus was new or as established in previous testing	_____	_____

2. Driving

SKILLS TEST 2 - Driving Station

Performance Test Summary Sheet

Objectives: **NFPA Standard 1002, Chapter 4, Paragraphs 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6 and 4.3.7**
NFPA Standard 1002, Chapter 5, Paragraph 5.1.2

Tasks:
1. Drive a Fire Department Pumper Apparatus.
   a. Predetermined route on public roadway
   b. Restricted space backing (alley dock exercise)
   c. Maneuver around obstacles (serpentine exercise)
   d. 180 degree turn-around (confined space turn-around)
   e. Diminishing clearance
   f. Defensive driving (lane change)
   g. Operate vehicle fixed systems and equipment

Performance Test Item – Pre-Determined Driving Course

Personnel Classification:	**Driver/Operator - Pumper**
Objectives:	**NFPA Standard 1002, Chapter 4, Paragraphs, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6 and 4.3.7** **NFPA Standard 1002, Chapter 5, Paragraph 5.1.2**
Task:	Drive a Fire Department Pumper Apparatus.
Setting:	Predetermined driving course, fire department training ground or other suitable area for driving course set up.
Tools Equipment:	Pumper apparatus, cones, ruler, and scorecard.
Attainment Standard:	Completion of all elements/steps within 30 minutes.

2. Driving

Elements/Steps	Standards	Yes	No
1. Drive a predetermined course	1. In accordance with NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications and IFSTA Pumping Apparatus Driver/Operator Handbook.		
	A. Made 4 left turns		
	1. Activated left signal turn	_____	_____
	2. Checked the side and rear view mirrors	_____	_____
	3. Moved vehicle to left lane when necessary	_____	_____
	4. Checked for oncoming traffic	_____	_____
	5. Checked to see if side street or road is clear	_____	_____
	6. Made safe left turns	_____	_____
	B. Made 4 right turns		
	1. Activated the right turn signal	_____	_____
	2. Checked side and rear view mirrors	_____	_____
	3. Moved to the right lane, if necessary	_____	_____
	4. Checked for oncoming traffic	_____	_____
	5. Checked to see if side street or road was clear	_____	_____
	6. Safely made the right turns	_____	_____
	C. Drove straight section of road or highway		
	1. Maintained vehicle speed	_____	_____
	2. Checked for oncoming traffic	_____	_____
	3. Checked side and rear view mirrors	_____	_____
	4. Checked side streets or roads	_____	_____
	D. Passed through one intersection		
	1. Approached the intersection with caution	_____	_____
	2. Brought the apparatus to a complete stop, if necessary	_____	_____
	3. Checked for traffic on the left, right, and left again	_____	_____
	4. Safely proceeded through the intersection	_____	_____

Elements/Steps	Standards	Yes	No
	E. Passed through two intersections with stop		
	1. Approached intersection with caution	_____	_____
	2. Brought the vehicle to a complete stop	_____	_____
	3. Checked traffic – left, right, and left again	_____	_____
	4. Safely proceeded through the intersection	_____	_____
	F. Railroad crossing		
	1. Approached crossing with caution	_____	_____
	2. Checked tracks – left and right	_____	_____
	3. Stopped when necessary	_____	_____
	4. Proceeded across tracks when safe to do so	_____	_____
	G. Curve in highway – right or left		
	1. Slowed vehicle before entering curve	_____	_____
	2. Adjusted speed as required	_____	_____
	3. Maintained safe control of vehicle	_____	_____
	H. Entered limited access highway		
	1. Checked traffic while on entrance ramp	_____	_____
	2. Adjusted speed of vehicle to match flow of traffic	_____	_____
	3. Activated turn signal	_____	_____
	4. Checked side and rear view mirrors	_____	_____
	5. Moved vehicle from acceleration lane to highway safely	_____	_____
	I. Changed lanes on limited access Highway		
	1. Activated turn signal	_____	_____
	2. Checked side and rear view mirrors	_____	_____
	3. Safely completed lane change	_____	_____

2. Driving

Elements/Steps	Standards	Yes	No
	J. Exited limited access highway		
	1. Activated turn signal	_____	_____
	2. Checked side and rear view mirrors	_____	_____
	3. Safely completed lane change	_____	_____
	4. Activated turn signal when exit was in sight	_____	_____
	5. Moved vehicle into deceleration lane	_____	_____
	6. Slowed vehicle and exited safely	_____	_____
	K. Downgrade		
	1. Downshifted before entering grade	_____	_____
	2. Made sure vehicle remained in gear	_____	_____
	3. Used brakes and lower gears	_____	_____
	4. Limited engine rpm – below redline	_____	_____
	L. Upgrade		
	1. Did not allow engine rpm to drop below minimum	_____	_____
	2. Automatic transmission downshifted automatically	_____	_____
	3. Downshifted standard transmission to maintain engine rpm and speed	_____	_____
	M. Underpass or low clearance		
	1. Approached with caution	_____	_____
	2. Checked to see if underpass height is marked	_____	_____
	3. Stopped and looked if height was not marked	_____	_____
	4. Proceeded only when sure it was safe to do so	_____	_____
2. Back vehicle into a restricted space (alley dock exercise)	2. In accordance with NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications and IFSTA Pumping Apparatus Driver/Operator Handbook.		
	A. Passed the "barricades" marking the loading dock on the left.	_____	_____
	B. Backed apparatus by a left turn into the marked loading dock	_____	_____

Elements/Steps	Standards	Yes	No
	C. Came to a complete stop in a smooth and safe manner	_____	_____
	D. Stopped where and when directed	_____	_____
	E. Used spotters when backing	_____	_____
	F. Completed exercise without pulling forward	_____	_____
	G. Completed exercise without striking obstructions	_____	_____
	H. Repeated steps A through G with the dock on the right	_____	_____
3. Maneuver around obstacles (serpentine exercise)	3. In accordance with NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications and IFSTA Pumping Apparatus Driver/Operator Handbook.		
	A. Drove apparatus along the left side of the markers in a straight line and stopped just beyond the last barrel/cone	_____	_____
	B. Backed the apparatus between the markers by passing to the left of #1, to the right of #2, and to the left of #3 and stop beyond the last barrel/cone using spotters	_____	_____
	C. Drove vehicle forward and to the right of #3, left of #2, and right of #1	_____	_____
4. Turn vehicle 180 degrees (confined space turn-around)	4. In accordance with NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications and IFSTA Pumping Apparatus Driver/Operator Handbook.		
	A. Pulled into a designated area through opening	_____	_____
	B. Made a U-turn by maneuvering vehicle	_____	_____
	C. Backed up at least once using spotters	_____	_____
	D. Exited area through same opening	_____	_____
5. Diminishing clearance horizontal and vertical clearances	5. In accordance with NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications and IFSTA Pumping Apparatus Driver/Operator Handbook.		
	A. Proceeded from wide to narrow end	_____	_____

2. Driving

Elements/Steps	Standards	Yes	No
	B. Did not touch markers	_____	_____
	C. Stopped with front bumper on the finish line (Rear bumper for driving in reverse)	_____	_____
	D. Came to a complete stop in a smooth and safe manner	_____	_____
	E. Stopped when and where directed	_____	_____
	F. Stopped vehicle before striking crossbar	_____	_____
	G. Repeated steps A through F in reverse with spotters	_____	_____
6. Defensive driving techniques	6. In accordance with NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications and IFSTA Pumping Apparatus Driver/Operator Handbook.		
A. Adhered to all traffic regulations	**A. Adhered to all traffic regulations**		
B. Fasten seat belts	1) **(C)** Used all applicable warning devices	_____	_____
C. Operate vehicle safely	2) **(M)** Ensured safety at intersections	_____	_____
D. Lane changes	3) Properly followed the right of way laws	_____	_____
E. Straight line vehicle positioning			
A. Adhered to all traffic regulations	**B. (C) Fastened seat belt** upon entering vehicle	_____	_____
B. Fasten seat belts			
C. Operate vehicle safely			
D. Lane changes			
E. Straight line vehicle positioning			
A. Adhered to all traffic regulations	**C. Operate vehicle safely**		
B. Fasten seat belts	1. Demonstrated responsibility and concern for safety of apparatus and personnel while driving apparatus	_____	_____
C. Operate vehicle safely	2. **(M)** Adjusted speed for weather conditions	_____	_____
D. Lane changes	3. **(M)** Adjusted stopping distances	_____	_____
E. Straight line vehicle positioning	4. Slowed gradually by pumping brakes	_____	_____
	5. Ensured all personnel wear seatbelts	_____	_____

Elements/Steps	Standards	Yes	No
	6. Braking – stopped smoothly		
	a. Avoided skidding situations	_____	_____
	b. Compensated for vehicle weight shifting	_____	_____
	7. Spotted apparatus at curb and out of traffic lane	_____	_____
	8. Maintained vehicle control while backing	_____	_____
	a. Used spotters	_____	_____
A. Adhered to all traffic regulations B. Fasten seat belts C. Operate vehicle safely **D. Lane changes** E. Straight line vehicle positioning	**D. Lane changes**		
	1. Approached the first lane at a safe speed	_____	_____
	2. Followed flash card directions	_____	_____
	3. Drove in the designated lane	_____	_____
A. Adhered to all traffic regulations B. Fasten seat belts C. Operate vehicle safely D. Lane changes **E. Straight line vehicle positioning**	**E. Straight line vehicle positioning**		
	1. Traveled in a forward direction without weaving	_____	_____
	2. Accelerated through gears without stopping	_____	_____
	3. Did not touch markers	_____	_____
	4. Came to a complete stop in a smooth and safe manner	_____	_____
	5. Stopped with the front bumper on the finish line (Rear bumper for driving in reverse)	_____	_____
	6. Stopped when and where directed	_____	_____
	7. Repeated steps 1 through 6 in reverse with spotters	_____	_____
7. Operate vehicle equipment	7. IAW manufactures data, checklist, or other applicable information.		
	A. Donned appropriate safety gear	_____	_____
	B. Checked all components of the equipment	_____	_____
	C. Started equipment (if applicable)	_____	_____

2. Driving

Elements/Steps	Standards	Yes	No
	D. Operated equipment within manufactures specifications	_____	_____
	E. Shut equipment down (if applicable)	_____	_____
	F. Stored equipment using proper procedures	_____	_____

Driving Course Specifications

Utilize this sheet to design your driving course in relation to the vehicles you have assigned. Please set up your course per calculations outlined below.

Key
VW = Vehicle Width
VL = Vehicle Length
ft = feet

Exercise	Dimensions
Alley Dock	Depth of Dock: VL plus **3** ft Width of Dock: VW plus **2** ft Wall distance from Dock entrance: VL multiplied by **1.48** ft
Serpentine	Distance between cones: VL multiplied by **1.25** ft
Confined Space Turnaround	Entrance Width: VW plus **4** ft Width of Space: VL multiplied by **1.85** ft Length of Space: VL multiplied by **3.7** ft
Diminishing Clearance	Wide Entrance: VW plus **1.5** ft Narrow Point: VW plus **2** inches
Lane Change	Width of Lanes: VW plus **2** ft Length of Lanes: VL multiplied by **1.85** ft Distance between lanes: VL multiplied by **1.11** ft
Straight Line Positioning	Width of Lane: VW plus **4** ft Length of Lane: VL multiplied by **7.4** ft (e.g. VL is 47 ft; 47 X 7.4 = 348 ft)

2. Driving

Driving Course Points

Type of Vehicle	Total Possible Points	Minimum Passing Score
Pumpers	450	360
Aerials/Tillers	450	360
ARFF Apparatus	450	360
Mobile Water Supply	450	360

Driving Course Scorecard

OBSTACLE	PENALTY POINTS	PENALTY POINTS	PENALTY POINTS	PENALTY POINTS	PENALTY POINTS	PENALTY POINTS
Candidates Name:						
Alley Dock						
Serpentine						
180º Turnaround						
Diminishing Clearance						
Lane Change						
Straight Line						
Total Possible Points	**450**	**450**	**450**	**450**	**450**	**450**
Total Penalty Points						
Score						
Minimum Passing Score						
Pass/Fail						

PENALTY POINT CHART

DESCRIPTION	ERROR	PENALTY POINTS
Alley dock (100 pts)	Distance from rear bumper to finish line	
	0 - 6 inches	0
	6 - 9 inches	5
	9 - 12 inches	10
	12 - 15 inches	15
	15 - 18 inches	20
	18 or more inches	50
	Each marker brushed, moved or overturned	5
Serpentine (50 pts)	Each marker brushed, moved or overturned	5
	Passing course marker on the wrong side	5
	Each time vehicle stops during the exercise	5
180º Turnaround (50 pts)	Each marker brushed, moved or overturned	5
	Failure to maintain constant motion or if vehicle stops	5
Diminishing clearance (100 pts)	Distance from front/rear bumper to finish line (Use the following criteria for both forward and reverse movement)	
	0 - 6 inches	0
	6 - 9 inches	5
	9 - 12 inches	10
	12 - 15 inches	15
	15 - 18 inches	20
	18 or more inches	50
	Each marker brushed, moved or overturned	5
	Vertical bar struck	25
Lane change (50 pts)	Failure to maintain a safe operating speed	10
	Each marker brushed, moved or overturned	5
	Each time the apparatus stops during the exercise	25
	Failure to take the lane marked by judges	25
	Failure to maintain control of apparatus	50
Straight line (100 pts)	Failure to maintain constant motion or if apparatus stops	25
	Each marker brushed, moved or overturned	5
	Forward/Reverse – Distance from rear/front bumper to finish line	
	0 - 6 inches	0
	6 - 9 inches	5
	9 - 12 inches	10
	12 - 15 inches	15
	15 - 18 inches	20
	18 or more inches	50
	Each marker brushed, moved or overturned	5

3. Operations

SKILLS TEST 3 - Operations Station

Performance Test Summary Sheet

Objectives: **NFPA Standard 1002, Chapter 5, Paragraphs 5.2.1, 5.2.2, 5.2.3 and 5.2.4**

Tasks:

1. Pump from apparatus water tank, pump from hydrant, pump from draft, and transfer from the internal water tank to an external source.

   a. Operate a relief valve or pressure control governor.
   b. Produce an effective hand line stream and an effective master stream.

2. Pump a supply line in relay pumper evolution.

3. Pump a supply line to an ARFF apparatus.

4. Produce a foam fire stream.

5. Position pumper apparatus, establish water supply source, connect to and support a sprinkler or standpipe system, transfer power to pump, operate transfer valve.

Performance Test Item – Pump from Various Water Sources

Personnel Classification:	**Driver/Operator - Pumper**
Objective:	**NFPA Standard 1002, Chapter 5, Paragraph 5.2.1**
Task:	Position, set up pumper apparatus, and perform the following operations: 1. Pump from the apparatus' internal tank. 2. Pump from a pressurized source (hydrant). 3. Pump from a static water source. 4. Transfer from the internal tank to an external source.
Setting:	Fire department training ground with drafting source and fire hydrant.
Tools Equipment:	Fire department pumper apparatus and associated tools and equipment.
Attainment Standard:	Successful completion of all elements/steps within 30 minutes.

3. Operations

Elements/Steps	Standards	Yes	No
1. Pump from the apparatus' internal tank	1. IAW NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, IFSTA Pumping Apparatus Driver/Operator Handbook, and local policies/procedures.		
	A. Maneuvered/positioned apparatus	_____	_____
	B. Ensured supply line was fully deployed	_____	_____
	C. Engaged fire pump	_____	_____
	D. Opened tank-to-pump valve	_____	_____
	E. Primed the pump, if necessary	_____	_____
	F. Opened discharge valve slowly	_____	_____
	G. Set throttle for required engine pressure	_____	_____
	H. **(M)** Set relief valve or governor	_____	_____
	I. Monitored and shut down operation	_____	_____
2. Pump from a pressurized source (hydrant)	2. IAW NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, IFSTA Pumping Apparatus Driver/Operator Handbook, and local policies/procedures.		
	A. Selected the best hydrant considering location and the water main size	_____	_____
	B. Properly maneuvered/positioned apparatus		
	1. Maneuvered to hydrant location	_____	_____
	2. Considered intake hose connections to hydrant	_____	_____
	3. Allowed sufficient access for other apparatuses	_____	_____
	C. Connected to hydrant	_____	_____
	D. Engaged fire pump	_____	_____
	E. Opened intake valve	_____	_____
	F. Opened the discharge valve	_____	_____
	G. Set throttle for desired output pressure	_____	_____
	H. **(M)** Set relief valve or governor	_____	_____
	I. Monitored and shut down operation	_____	_____
3. Pump from a static water source	3. IAW NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, IFSTA Pumping		

Elements/Steps	Standards	Yes	No
	Apparatus Driver/Operator Handbook, and local policies/procedures.		
	A. Selected the best drafting location based on accessibility, safety, and quantity of water	_____	_____
	B. Properly maneuvered/positioned apparatus considering intake hose limitations	_____	_____
	C. Connected suction hose to the apparatus and secured the strainer in the water	_____	_____
	D. Engaged the pump	_____	_____
	E. Engaged the priming device	_____	_____
	F. Increased the throttle to required engine pressure	_____	_____
	G. **(M)** Set relief valve or governor	_____	_____
	H. Monitored and shut down operation	_____	_____
4. Transfer from the internal tank to an external source	4. IAW NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, IFSTA Pumping Apparatus Driver/Operator Handbook, and local policies/procedures.		
	A. Selected a water source (hydrant)	_____	_____
	B. Positioned the apparatus near the water source	_____	_____
	C. Deployed supply line and connected to attack apparatus	_____	_____
	D. Engaged the pump	_____	_____
	E. Opened tank-to-pump valve	_____	_____
	F. Opened the discharge valve slowly	_____	_____
	G. Set throttle for desired output pressure	_____	_____
	H. **(M)** Set relief valve or governor	_____	_____
	I. **(M)** Connected the apparatus to the external water source (hydrant)	_____	_____
	J. **(M)** Opened the intake valve	_____	_____
	K. **(M)** Closed the tank-to-pump valve	_____	_____
	L. **(M)** Pumped the supply line using the external water source	_____	_____
	M. Refilled internal water tank by opening the tank fill line	_____	_____
	N. Monitored and shut down operation	_____	_____

3. Operations

Performance Test Item – Produce a Master Stream

Personnel Classification:	**Driver/Operator - Pumper**
Objective:	**NFPA Standard 1002, Chapter 5, Paragraph 5.2.1**
Task:	Demonstrate how to produce an effective master stream.
Setting:	Fire department training area and water source.
Tools Equipment:	Fire department pumper apparatus, 200 feet of 1 ½- or 1 ¾-inch hoseline, a 1 ½-inch adjustable spray nozzle, a master stream device equipped with 500 gpm adjustable spray nozzle.
Attainment Standard:	Successfully complete all elements/steps within 15 minutes.

Elements/Steps	Standards	Yes	No
1. Demonstrate how to produce an effective hand line or master stream with a nozzle pressure of 100 psi	1. IAW NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, IFSTA Pumping Apparatus Driver/Operator Handbook, and local policies/procedures.		
	A. Connected 200 feet of 1 ½-inch or larger hose or to a discharge outlet	_____	_____
	B. When pump was in gear, fully opened tank-to-pump valve	_____	_____
	C. If locking arrangement has been supplied, placed in open position	_____	_____
	D. Placed pump in a SERIES/PRESSURE or PARALLEL/VOLUME position (if applicable)	_____	_____
	E. Set throttle for desired discharge pressure	_____	_____
	F. (M) Opened discharge valve slowly and locked into place	_____	_____
	G. (M) Set the automatic pressure regulating device for desired discharge pressure	_____	_____
	H. Monitored and shut down operation	_____	_____

3. Operations

Performance Test Item – Pump a Supply Line in a Relay Evolution

Personnel Classification:	**Driver/Operator - Pumper**
Objective:	**NFPA Standard 1002, Chapter 5, Paragraph 5.2.2**
Task:	Pump a supply line in a relay pumping evolution.
Setting:	Fire department training area and water source.
Tools Equipment:	Fire department pumper apparatus, attack fire apparatus, source apparatus, 400 feet of 2 ½-inch or larger supply line, water source.
Attainment Standard:	Successful completion of all elements/steps within 15 minutes.

Elements/Steps	Standards	Yes	No
1. Pump a supply line in a relay pumping evolution	1. IAW NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, IFSTA Pumping Apparatus Driver/Operator Handbook, and local policies/procedures.		
	A. Positioned/Maneuvered next to attack apparatus	_____	_____
	B. Connected pumper apparatus to attack apparatus	_____	_____
	C. Connected pumper apparatus to source apparatus	_____	_____
	D. Engaged pump while source apparatus connected to water source	_____	_____
	E. When connections were complete, and source apparatus was pumping at capacity	_____	_____
	1. Opened supply line from source apparatus	_____	_____
	2. Pumped at maximum capacity	_____	_____
	3. Opened discharge	_____	_____
	F. Monitored and shut down operation once attack operation complete	_____	_____

3. Operations

Performance Test Item – Pump a Supply Line to an ARFF Apparatus

Personnel Classification:	**Driver/Operator - Pumper**
Objective:	**NFPA Standard 1002, Chapter 5, Paragraph 5.2.2**
Task:	Pump a supply line in a relay pumper evolution.
Setting:	Fire department training area and water source.
Tools Equipment:	Fire department pumper apparatus, attack fire apparatus, source apparatus, 400 feet of 2 ½-inch or larger supply line and a water source.
Attainment Standard:	Successful completion of all elements/steps within 15 minutes.

Elements/Steps	Standards	Yes	No
1. Pump a supply line to an ARFF apparatus	1. IAW NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, IFSTA Pumping Apparatus Driver/Operator Handbook, and local policies/procedures.		
	A. Coordinated positioning with ARFF apparatus driver/operator	_____	_____
	B. Chocked the wheels on the pumper apparatus	_____	_____
	C. Connected supply lines from pumper apparatus to ARFF apparatus	_____	_____
	D. When connections are complete, pumper apparatus	_____	_____
	1. Engaged the pump	_____	_____
	2. Set throttle for desired discharge pressure	_____	_____
	3. Opened ARFF apparatus tank lid	_____	_____
	4. Supplied water at maximum capacity (but did not exceed the maximum intake pressure of the ARFF apparatus)	_____	_____
	E. Monitored and shut down operation once attack operation complete	_____	_____

3. Operations

Performance Test Item – Produce a Foam Fire Stream

Personnel Classification:	**Driver/Operator - Pumper**
Objective:	**NFPA Standard 1002, Chapter 5, Paragraph 5.2.3**
Task:	Produce a foam fire stream.
Setting:	Fire department training area.
Tools Equipment:	Fire department pumper apparatus, foam eductor, nozzle, 100 feet of 1 ½-inch or 1 ¾-inch hoseline and foam concentrate.
Attainment Standard:	Successful completion of all elements/steps within 10 minutes.

Elements/Steps	Standards	Yes	No
1. Produce a foam fire stream.	1. IAW NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, IFSTA Pumping Apparatus Driver/Operator Handbook, and local policies/procedures.		
	A. Assembled foam producing equipment including foam concentrate	_____	_____
	B. Connected foam eductor to discharge valve of pumper apparatus	_____	_____
	C. Connected hoseline and nozzle to discharge side of eductor	_____	_____
	D. Engaged the pump	_____	_____
	E. Opened throttle to adjust discharge pressure	_____	_____
	F. Opened discharge valve to the eductor	_____	_____

3. Operations

Performance Test Item – Support a Sprinkler or Standpipe System

Personnel Classification:	**Driver/Operator - Pumper**
Objective:	**NFPA Standard 1002, Chapter 5, Paragraph 5.2.4**
Task:	Position pumper apparatus, establish water supply source, and connect to and support a sprinkler or standpipe system, if applicable.
Setting:	Fire department training area.
Tools Equipment:	Fire department pumper apparatus, fire hose, adapters, spanner wrenches, and hydrant.
Attainment Standard:	Successfully complete all elements/steps within 5 minutes of stopping the pumper apparatus.

Elements/Steps	Standards	Yes	No
1. Position the pumper and supply sprinkler or standpipe, if applicable	1. IAW NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, IFSTA Pumping Apparatus Driver/Operator Handbook, and local policies/procedures.		
	A. Located the fire department connection	_____	_____
	B. Located a water supply source	_____	_____
	C. Positioned pumper apparatus	_____	_____
	D. Connected a supply line from the water source to the pumper	_____	_____
	1. No kinks in soft intake hose	_____	_____
	E. Charged the supply line	_____	_____
	F. Connected a hoseline from the pumper to the fire department connection	_____	_____
	G. Developed and maintained 150 psi at the pump and maintain	_____	_____
	H. Operated the auxiliary cooling system, if applicable	_____	_____

Performance Test Record

Driver/Operator - Pumper

INSTRUCTIONS: This form must be completed and kept on file. A copy of this form is also required to be submitted with the candidate's certification package.

Date of Evaluation _____

Candidate Rank/Name_____ SSN _____

Evaluators Rank/Name_____ SSN _____

The candidate has PASSED/FAILED the Driver/Operator - Pumper Performance Tests for the stations marked below:

Performance Test Station	Passed	Failed
Pre-Operations		
Driving		
Operations		

If candidate has failed the performance evaluation, provide the following information:
(Use additional sheets, if necessary)

Objective(s):

Reason(s) for failure:

Candidate Signature _____

Evaluator Signature _____