



FIRE RESCUE

ALBEMARLE COUNTY

Driver Releasal Manual

- **In order to participate in the DPO program, the candidate must:**
 - Possess a valid Virginia Driver's License
 - Be 18 years of age
 - Be covered under the County insurance policy
 - Successfully complete training required for level of release

- This manual is designed as a tool for the company officer to guide the candidate through a standardized process in the quest to become a driver.

- Upon successful completion of the following manual, the candidate is eligible for promotion to the status of Rookie Driver, and qualifies to conduct emergency responses in the presence of an Officer. The ACFR Training Division will review the candidate's qualifications, and recommend (or not recommend) the promotion to Rookie Driver to the Operations Chief. Once a candidate is a Rookie Driver, they will embark in a period of on the job training.

- The length of OJT (on the job training) shall be determined by the company officer. Once the candidate demonstrates a working knowledge of his / her first due area (specifically, items such as target hazards, water sources, major subdivisions, and area familiarization), the company officer shall meet with the ACFR Training Division to determine eligibility for promotion to a fully released driver. If the candidate possesses sufficient KSA's (knowledge, skill, abilities), the Training Division will recommend promotion to the Operations Chief.

***for personnel obtaining clearance on Aerial Devices**



**REFERENCE LIST FOR THE
DRIVER/OPERATOR - PUMPER CURRICULUM**

International Fire Service Training Association. Fire Stream Practices, 7th Edition. Fire Protection Publications, Oklahoma State University. Stillwater, Oklahoma, 1989.

International Fire Service Training Association. Pumping Apparatus Driver/Operator Handbook, 1st Edition. Fire Protection Publications, Oklahoma State University. Stillwater, Oklahoma, 1999.

National Fire Protection Association. NFPA 1002: Fire Apparatus Driver/Operator Professional Qualifications, 1998 Edition. NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269.

National Fire Protection Association, NFPA 1500: Fire Department Occupational Safety and Health Program, 1997 Edition, NFPA Publications, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269.

**SUPPLEMENT TO THE
DRIVER/OPERATOR CURRICULUM**

| Objective | Reference | Page Number |
|-----------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 701-1.01 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 112-113 250, 257 |
| 701-1.02 | Pumping Apparatus Driver/Operator Handbook -1st Edition Fire Stream Practices – 7th Edition | 108-117 137 161-164 205, 250 260-262 296-301 384-385 34-37 |
| 701-1.03 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 235-238 247 256-257 393 |
| 701-1.04 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 204-209 |
| 701-1.05 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 208-213 |
| 701-1.06 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 208-213 |
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| 701-1.09 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 116-117 |
| 701-1.10 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 233-234 238 266-267 277-279 |
| 701-1.11 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 381-382 |
| 701-1.12 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 117, 130 224-225 261 279-280 |
| 701-1.13 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 239-240 |
| 701-1.14 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 84-88 252 260-269 300-301 386 |
| 701-1.15 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 126-137 162 375 |
| 702-1.01 | Fire Stream Practices – 7th Edition | 144 |
| 702-1.02 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 127, 137 142-143 |
| 702-1.03 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 127, 136 142-143 161-164 |
| 702-1.04 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 136-137 |

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|----------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| 702-1.05 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 114-115 126-136 142-164 180-181 194 271-273 148-149 |
| | Fire Stream Practices – 7th Edition | |
| 702-1.06 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 127 142-164 |
| 702-1.07 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 154-155 194 269-272 |
| 702-1.08 | Fire Stream Practices – 7th Edition | 350-352 |
| 703-1.01 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 27-40 |
| 703-1.02 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 40-42 |
| 704-1.01 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 73-74 |
| 704-1.02 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 60-66 |
| 704-1.03 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 50-53 |
| 704-1.04 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 58-59 71 |
| 704-1.05 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 72 |
| 704-1.06 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 72-73 |
| 704-1.07 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | |
| 704-1.08 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 55 63-64 101 AHJ |
| 704-1.09 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 21-74 |
| 704-1.10 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 76-90 97-102 255-256 259 |
| 705-1.01 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 221-240 |
| 705-1.02 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 242-246 |
| 705-1.03 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 210-214 247 256-257 266, 270 |
| 705-1.04 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 239-240 |
| 705-1.05 | Pumping Apparatus Driver/Operator Handbook -1st Edition Fire Stream Practices – 7th Edition | 88-89 208-221 |
| 705-2.01 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 82-89 |
| 705-2.02 | Pumping Apparatus Driver/Operator Handbook -1st Edition | 127-131 139-164 247, 250 |
| 705-2.03 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 127-131 139-164 257-269 295-309 311-323 329-354 |
| 705-2.04 | Pumping Apparatus Driver/Operator Handbook – 1st Edition | 355-377 |

PUMP THEORY REVIEW

1-1.00 The driver/operator - pumper trainee shall identify various types of fire apparatus pumps and pump components, and identify their function(s), theory (ies), and principle(s) of operation.

- **1-1.01** The driver/operator - pumper trainee shall identify the following types of fluid pressure encountered in the fire service:
 - 1-1.01a. Static pressure
 - 1-1.01b. Normal operating pressure
 - 1-1.01c. Residual pressure
 - 1-1.01d. Flow pressure (Velocity pressure)
 - 1-1.01e. Negative pressure

- **1-1.02** The driver/operator - pumper trainee shall identify the following terms relating to the basic principles of fire service hydraulics:
 - 1-1.02a. Atmospheric pressure
 - 1-1.02b. Capacity
 - 1-1.02c. Displacement
 - 1-1.02d. Flow (gpm)
 - 1-1.02e. Friction loss
 - 1-1.02f. Head pressure (gain of loss)
 - 1-1.02g. Hydrant pressure
 - 1-1.02h. Net Pump Discharge Pressure (NPDP)
 - 1-1.02i. Nozzle reaction
 - 1-1.02j. Pounds per square inch (psi)
 - 1-1.02k. Pump discharge pressure
 - 1-1.02l. Vacuum
 - 1-1.02m. Velocity
 - 1-1.02n. Water hammer

PUMP THEORY REVIEW

- **1-1.03** The driver/operator - pumper trainee, given a pumper or pump panel diagram, shall identify and describe the following pump gauges:
 - 1-1.03a. Master intake gauge
 - 1-1.03b. Master pump discharge pressure gauge
- **1-1.04** The driver/operator - pumper trainee shall identify advantages of a centrifugal fire pump as compared to other types of fire pumps (i.e. positive displacement, rotary vane).
- **1-1.05** The driver/operator - pumper trainee shall identify the operating principles of single- and multiple-stage centrifugal fire pumps.
- **1-1.06** The driver/operator - pumper trainee shall explain the difference between series and parallel operations of centrifugal fire pumps.
- **1-1.07** The driver/operator - pumper trainee, given pump models or diagrams, shall identify the major components and trace the flow of water through single- and multiple-stage centrifugal pumps.
- **1-1.08** The driver/operator - pumper trainee shall identify the theory and principles of pumper pressure relief systems and pressure control governors.

PUMP THEORY REVIEW

- **1-1.09** The driver/operator - pumper trainee shall identify causes of excessive pressure development in fire hose.
- **1-1.10** The driver/operator - pumper trainee shall identify the theory and principles of pumper priming systems.
 - 1-1.10a. Rotary vane
 - 1-1.10b. Exhaust systems
- **1-1.11** The driver/operator - pumper trainee shall identify the percentages of rated capacity, rated pressures, and the capacity in gallons per minute (gpm) at the rated pressures a fire department pumper is designed to deliver for pump certification, according to NFPA 1901.
- **1-1.12** The driver/operator - pumper trainee shall identify the following conditions that may result in possible pumper apparatus damage or unsafe operation, and identify corrective measures:
 - 1-1.12a. Cavitation
 - 1-1.12b. Water hammer
 - 1-1.12c. Pump Overheating
- **1-1.13** The driver/operator - pumper trainee shall identify the auxiliary cooling systems and explain their function.
 - 1-1.13a. Marine
 - 1-1.13b. Immersion
 - 1-1.13c. Radiator fill valve
- **1-1.14** The driver/operator - pumper trainee shall identify the characteristics and limitations of pumper supply hose.
 - 1-1.14a. Hard suction
 - 1-1.14b. Soft suction
- **1-1.15** The driver/operator - pumper trainee, given a selection of nozzles and tips, shall identify the type, design, operation, nozzle pressure, and flow in gpm for proper operation of each.
 - 1-1.15a. Fog stream nozzles
 - 1-1.15b. Constant flow nozzles
 - 1-1.15c. Automatic nozzles
 - 1-1.15d. Solid stream nozzles

FIRE SERVICE HYDRAULICS

2-1.00 The driver/operator - pumper trainee shall demonstrate the use of mathematical calculations to solve fire department pumper hydraulic problems.

- **2-1.01** The driver/operator - pumper trainee shall identify and demonstrate mathematical components required to solve fire department pumper hydraulic problems.
 - 2-1.01a. Fractions
 - 2-1.01b. Percentages
 - 2-1.01c. Square roots
 - 2-1.01d. Decimal fractions

- **2-1.02** The driver/operator - pumper trainee shall demonstrate the use of algebraic formulas to solve fire department pumper hydraulic problems.

- **2-1.03** The driver/operator - pumper trainee, given a series of fireground situations, shall calculate the following:

- 2-1.03a. Pump discharge pressure
- 2-1.03b. Gpm

$$\text{GPM} = 29.7 \times D_2 \times \text{sqrt}(P)$$

- 2-1.03c. Friction loss
- 2-1.03d. Nozzle pressure

- **2-1.04** The driver/operator - pumper trainee, given a series of fireground situations involving various operating pressures, shall calculate nozzle reaction.

One firefighter - 266N (60 lbf)

Two firefighters - 333N (75 lbf)

Three firefighters - 422N (95 lbf)

NR (lbf) = 1.57 x d squared x NP (US Smooth-bore), or;

NR (lbf) = 0.0505 x gpm x square root of NP (US Combination fog/straight or automatic Nozzles)

<http://www.firetactics.com/NOZZLE-REACTION.htm>

- 2-1.04a. Hand lines
- 2-1.04b. Master streams

- **2-1.05** The driver/operator - pumper trainee shall identify the effect of friction loss as it relates to:
 - 2-1.05a. Internal diameter of hose

- 2-1.05b. Length of hose
- 2-1.05c. Physical condition of hose
- 2-1.05d. Pressure
- 2-1.05e. Use of appliances
- 2-1.05f. Use of multiple hose lines
- 2-1.05g. Use of various nozzles
- 2-1.05h. Velocity of flow
- 2-1.05i. Standpipe and sprinkler systems
- 2-1.05j. Elevation loss and gains

- **2-1.06** The driver/operator - pumper trainee, given a series of fireground situations, shall calculate:
 - 2-1.06a. Nozzle or pump discharge pressures when the length and size of hose and size of nozzle and gpm are given.
 - 2-1.06b. Water flow in gallons per minute (gpm) when the diameter of the orifice and pressure at the orifice are given.
 - 2-1.06c. Friction loss in the supply and attack lines, specified, when the gpm flow is given.
 - 2-1.06c1. Increased elevation
 - 2-1.06c2. Decreased elevation
 - 2-1.06c3. No change in elevation
 - 2-1.06d. Friction loss in siamesed lines when size and gpm flow are given.
 - 2-1.06e. Friction loss in wyed lines when size of hose and gpm flow are given.
 - 2-1.06f. Friction loss in multiple lines when the size of hose and gpm flow are given.

- **2-1.07** The driver/operator - pumper trainee shall demonstrate pumping procedures for supplying fire protection systems.
 - 2-1.07a. Sprinkler
 - 2-1.07b. Standpipe

- **2-1.08** The driver/operator - pumper trainee shall identify the rate of water flow necessary to control fire in a given room of specified volume.
 - 2-1.08a. Iowa State formula: cubic feet involved / 100 = gpm flow required
 - 2-1.08b. National Fire Academy formula: length x width / 3 = fire flow required

EQUIPMENT AND MATERIAL NEEDED:

1. Pumper with standard equipment

APPARATUS INSPECTION

3-1.00 The driver/operator - pumper trainee shall demonstrate the ability to perform an apparatus readiness inspection.

- **3-1.01** The driver/operator - pumper trainee, given a fire department pumper, pump model, or diagram, shall demonstrate the performance of routine tests, inspections, and servicing functions required to assure the operational status and readiness of fire department pumpers, including:
 - 3-1.01a. Batteries
 - 3-1.01b. Braking system
 - 3-1.01c. Coolant system
 - 3-1.01d. Electrical system
 - 3-1.01e. Fuel
 - 3-1.01f. Hydraulic fluids
 - 3-1.01g. Lubrication
 - 3-1.01h. Oil
 - 3-1.01i. Tires
 - 3-1.01j. Steering system
 - 3-1.01k. Belts
 - 3-1.01l. Tools, appliances, and equipment
 - 3-1.01m. Foam systems

- **3-1.02** The driver/operator - pumper trainee shall demonstrate documentation of routine tests, inspections, and servicing functions.

EQUIPMENT AND MATERIAL NEEDED:

1. Pumper with standard equipment
2. Fire fighting foam
3. Foam-producing equipment

DRIVING PRACTICES

4-1.00 The driver/operator - pumper trainee shall demonstrate safe road operation of a fire department vehicle.

- **4-1.01** The driver/operator - pumper trainee shall operate a fire department vehicle incorporating various maneuvers.
 - 4-1.01a. Four left and four right turns
 - 4-1.01b. A straight section of roadway at least one mile in length
 - 4-1.01c. One through intersection and two intersections where a stop has to be made
 - 4-1.01d. One railroad crossing
 - 4-1.01e. One curve
 - 4-1.01f. A section of limited-access highway that includes a conventional ramp entrance and exit and a section of road long enough for two lane changes
 - 4-1.01g. One underpass or low clearance or bridge
- **4-1.02** The driver/operator - pumper trainee shall identify effects on vehicle control and demonstrate safe vehicle operation.
 - 4-1.02a. Braking and reaction time
 - 4-1.02b. Load factors
 - 4-1.02c. General steering reactions
 - 4-1.02d. Speed
 - 4-1.02e. Centrifugal force
- **4-1.03** The driver/operator - pumper trainee shall identify automotive gauges and controls and demonstrate the operation of automotive gauges and proper operation limits.
- **4-1.04** The driver/operator - pumper trainee shall demonstrate vehicle dimension knowledge and turning characteristics while using mirrors for backing.
 - 4-1.04a. Back from a roadway into restricted space, requiring 90-degree right and left hand turns from the roadway, so that the vehicle is parked within the restricted areas without having to stop and pull forward and without striking obstructions.
- **4-1.05** The driver/operator - pumper trainee shall demonstrate maneuvering a vehicle around an obstruction.
 - 4-1.05a. Maneuver a vehicle around obstructions while moving forward and in reverse, so that the vehicle is maneuvered through the obstructions without stopping to change the direction of travel and without striking the obstruction.

- **4-1.06** The driver/operator - pumper trainee shall demonstrate backing a vehicle within a confined space.
 - 4-1.06a. Turn a vehicle 180 degrees within a confined space in an area in which the vehicle cannot perform a U-turn without stopping and backing up, so that the vehicle is turned 180 degrees without striking obstructions within the given space.
- **4-1.07** The driver/operator - pumper trainee shall maneuver a vehicle in areas with restricted horizontal and vertical clearances.
- **4-1.08** The driver/operator - pumper trainee shall identify principles of defensive driving and operate a vehicle using defensive driving techniques under both emergency and nonemergency conditions in nonadverse and adverse driving conditions.
 - 4-1.08a. Skid avoidance
 - 4-1.08b. Night driving
 - 4-1.08c. Negotiating railroad crossings
 - 4-1.08d. Weight and height limitations for roads and bridges
- **4-1.09** The driver/operator - pumper trainee shall demonstrate the operation of all systems and equipment on a fire department pumper.
- **4-1.10** The driver/operator - pumper trainee shall demonstrate proper positioning of a pumper.
 - 4-1.10a. Operating a fire hydrant
 - 4-1.10b. Operating at a static supply source utilizing pumper intake connections and a length of intake hose, so that the intake hose can be connected, without kinks, to the pump connection without repositioning the vehicle.
 - 4-1.10c. Scene positioning
 - 4-1.10c1. For fire attack
 - 4-1.10c2. Support of aerial apparatus
 - 4-1.10c3. Support of fire department connections
 - 4-1.10c4. Water source supply pumps
 - 4-1.10c5. Dual pumping operations
 - 4-1.10c6. Protecting exposures
 - 4-1.10d. Special positioning situations
 - 4-1.10d1. Staging
 - 4-1.10d2. Operations on highways
 - 4-1.10d3. Haz-mat incidents
 - 4-1.10d4. Near railroads
 - 4-1.10d5. Emergency medical incidents

EQUIPMENT AND MATERIAL NEEDED:

1. Pumper with standard equipment

PUMP OPERATIONS

5-1.00 The driver/operator - pumper shall identify terms and demonstrate methods and procedures of pumping operations.

- **5-1.01** The driver/operator - pumper trainee, given a model or diagram, shall identify the gauges and describe the purpose of each gauge.
- **5-1.02** The driver/operator - pumper trainee shall demonstrate method(s) of power transfer from the engine to both the wheels and the fire pump.
- **5-1.03** The driver/operator - pumper trainee shall be able to identify the operation of the volume/pressure transfer valve.
- **5-1.04** The driver/operator - pumper trainee shall be able to describe the function of the auxiliary cooling system.
- **5-1.05** The driver/operator - pumper trainee shall demonstrate the following operations so that proper pressure and flow are provided to the next pumper:
 - 5-1.05a. Relay pumping operations
 - 5-1.05b. Tandem pumping operations
 - 5-1.05c. Dual pumping operations

5-2.00 The driver/operator - pumper trainee, given a fire department pumper, shall demonstrate methods and procedures for pump operations.

- **5-2.01** The driver/operator - pumper trainee, given a fire department pumper, shall demonstrate the proper technique of connecting hoselines to the pump.
 - 5-2.01a. Intake
 - 5-2.01b. Discharge
- **5-2.02** The driver/operator - pumper trainee, given a fire department pumper, shall demonstrate proper procedures for producing effective hand and master streams utilizing the sources specified below, so that the pump is safely engaged, all pressure control and vehicle safety devices are set, the rated flow of the nozzle is achieved, and the apparatus is continuously monitored for potential problems.
 - 5-2.02a. The booster tank
 - 5-2.02b. A pressurized source

- **5-2.03** The driver/operator - pumper trainee shall ascertain the expected fire flow, given a specific location, a water source, and water supply information for that location, so that the amount of water available for fire fighting at the location is estimated and alternative sources of water are identified.
- **5-2.04** The driver/operator - pumper trainee shall produce a foam stream, given foam-producing equipment, so that properly proportioned foam is provided.

EQUIPMENT AND MATERIAL NEEDED:

1. Pumper with standard equipment
2. Fire fighting foam
3. Foam-producing equipment

Aerial Operations

6-1.00 The driver/aerial operator shall identify terms and demonstrate methods and procedures of aerial operations.

- **6-1.01** The driver/operator - aerial trainee, given a model or diagram, shall identify the gauges and describe the purpose of each gauge.
 - 5-1.01a. Level indicators
 - 5-1.01b. Height
 - 5-1.01c. Angle
 - 5-1.01d. Breathing Air Pressure
 - 5-1.01e. Overload
 - 5-1.01f. Hydraulic Pressure
 - 5-1.01g. Stabilizers

- **6-1.02** The driver/operator - aerial trainee shall demonstrate method(s) of power transfer from the engine to hydraulic pump.

- **6-1.03** The driver/operator – aerial trainee shall be able to determine load capacities and ratings.

- **6-1.04** The driver/operator – aerial trainee shall be able to identify major components and specific features of apparatus.
 - 5-1.04a. Stabilizers
 - 5-1.04b. Jack Plates
 - 5-1.04c. Stabilizer Controls
 - 5-1.04d. Emergency Controls
 - 5-1.04e. Ladder Pipe Drain
 - 5-1.04f. Pedestal Controls
 - 5-1.04f1. Joysticks
 - 5-1.04f2. Lighting
 - 5-1.04f3. Communications
 - 5-1.04f4. Nozzle Controls
 - 5-1.04g. Ladder Construction
 - 5-1.04g1. Hoisting Cylinders
 - 5-1.04g2. Trunnion
 - 5-1.04g3. Piston
 - 5-1.04g4. Extension Cables / Pullies
 - 5-1.04h. Bucket Controls
 - 5-1.04h1. Joystick Controls
 - 5-1.04h2. Nozzle Controls
 - 5-1.04h3. Shower Nozzle
 - 5-1.04h4. Elevated Stand Pipe

- **6-1.05** The driver/operator – aerial shall be able to identify and demonstrate the use of selected equipment carried on aerial apparatus.
 - 5-1.05a. Parapet Ladder
 - 5-1.05b. Stokes Litter Bracket

- **6-1.06** The driver/operator- aerial shall be able to identify the principles of stabilizing aerial apparatus.
 - 5-1.06a. Jack Plates \ Cribbing
 - 5-1.06b. Even Terrain
 - 5-1.06c. Uneven Terrain
 - 5-1.06d. Short-Jacking

- **6-1.06** The driver/operator – aerial shall be able to identify the basics of aerial device hydraulic system.
 - 5-1.06a. Aerial Master
 - 5-1.06b. Aerial PTO
 - 5-1.06c. Front Air Brake
 - 5-1.06d. Aerial Diverter
 - 5-1.06e. High Idle Switch

- **6-1.08** The driver/operator – aerial shall be able to identify special considerations and demonstrate proper apparatus positioning.
 - 5-1.08a. Staging
 - 5-1.08b. Rescue
 - 5-1.08c. Elevated Master Stream
 - 5-1.08d. Roof Work

- **6-1.09** The driver/operator- aerial shall be able to identify and demonstrate general operating practices, limitations, and safety measures.
 - 5-1.09a. Raise, Rotate, Extend, Lower
 - 5-1.09b. 100' @ -5 degrees
 - 5-1.09c. Jack pins inserted from outside closest hole
 - 5-1.09d. Front wheel chocks deployed
 - 5-1.09e. Ladder rungs properly aligned
 - 5-1.10f. Jack plate handles inside

- **6-1.10** The driver/operator- aerial shall be able to identify the principles of safe operations during power failure, demonstrate the use of power systems overrides, and emergency operating procedures.

Station Orientation checklists



Apparatus Orientation checksheets



DRIVER/OPERATOR #1
Apparatus Inspection

OBJECTIVE

- a) The driver/operator trainee shall perform routine tests, inspections, and servicing functions required to assure the operational status of fire department pumpers and shall properly document his/her actions on the provided form.

INSTRUCTIONS – procedures for achieving the objective

- b) You shall perform routine tests, inspections, and servicing functions required to assure the operational status of fire department pumpers and shall properly document your actions on the provided form. The skill will end when you state to me that you have completed the required steps. Do you understand these instructions?

EXAMINERS NOTE

- c) The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- 1. Fire department pumper
- 2. Inspection form

REFERENCE SOURCE

IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp.35-42

DRIVER/OPERATOR #1
Apparatus Inspection

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- a) checks the batteries _____
- b) checks coolant system by checking level in radiator and hoses _____
- c) checks power steering fluid level _____
- d) checks hydraulic fluids (if applicable) _____
- e) checks belts to ensure tightness and good physical condition _____
- f) checks oil levels of engine, transmission, and differential to assure they are at the proper level _____
- g) checks tires for cuts, breaks, and proper inflation _____
- h) starts engine _____
- i) checks to assure fuel tank is full _____
- j) checks electrical system by checking all visible and audible warning signal _____
- k) tests braking system by operating foot pedal _____
- l) ensures all equipment stored in apparatus is in working order _____
- m) for pumping apparatus _____
 - a. visually checks water tank level (if applicable) _____
 - b. engages pump _____
 - c. operates priming system, pump valves and drains, and changeover valves (on two-stage pumps) _____
 - d. checks pressure control device _____
 - e. disengages pump _____
 - f. shuts engine off _____
 - g. visually inspects foam systems for readiness (if applicable) _____
- n) bleeds condensation off air brake tanks (if applicable to manufacturer's recommendations or practice) _____
- o) properly documents items checked _____

DRIVER/OPERATOR #1
Apparatus Inspection

Total points possible: 23
Total points needed to pass: 17
Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest



Driving checkSheets



DRIVER/OPERATOR #1
Driving on Public Roadway

OBJECTIVE

- The driver/operator trainee, given apparatus and a predetermined route on a public way that incorporates the maneuvers and features as specified, shall demonstrate safe and lawful driving procedures.

INSTRUCTIONS – procedures for achieving the objective

- You shall, given apparatus and a predetermined route on a public way, demonstrate safe and lawful driving procedures as specified. The skill will and when you have completed the predetermined route. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Apparatus

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 73-74

DRIVER/OPERATOR #1
Driving on Public Roadway

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- performs the following safety procedures:
 1. Makes a 360 degree visual inspection around the apparatus
 2. Uses hand rails to enter and exit the apparatus
 3. Wears seat belts
 4. Insures no personnel are in a standing position anywhere on the apparatus
 5. Checks mirror position before moving 5.0
- performs four (4) left turns and four (4) right turns
 1. Signals well in advance
 2. Turns from the proper lane
 3. Looks all around before turning
 4. Turns into proper lane
 5. Yields right-of-way 8.0
- drives a straight section of urban business street or a 2-lane rural road at least one (1) mile in length, while obeying traffic laws, anticipating any traffic problems, and shifting gears (if applicable) properly and smoothly 2.0
- navigates one through-intersection and 2 intersections where a stop has to be made, obeying all traffic laws, slowing to a speed that allows for a smooth and safe stop, and accounting for all lanes. *The trainee shall verbalize that it is safe to proceed.* 2.0
- navigates one railroad crossing, obeying all traffic laws, slowing to a speed that allows for a stop, and comes to a complete stop if there are any obstructions. *The trainee shall verbalize that it is safe to proceed* 2.0

DRIVER/OPERATOR #1
Driving on Public Roadway

- drives away from one curve, either to the left or to the right, obeying all traffic laws and anticipating any traffic problems. The trainee shall signal properly, use mirrors, and control the speed of the apparatus. 2.0
- navigates a section of limited-access highway that includes a conventional ramp entrance and exit and a section of road long enough to allow two lane changes. The trainee shall obey all traffic laws, control the speed of the apparatus, anticipate any traffic problems, use mirrors, and signal properly 2.0
- navigates an upgrade steep enough and long enough to require gear changing to maintain speed. The trainee shall shift gears properly, control the speed of the apparatus, and anticipate any traffic problems 2.0
- navigates one underpass or low clearance or bridge. The trainee shall know the height of the vehicle, obey all traffic laws, and control the speed of the apparatus. 2.0

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Total points possible: 27
 Total points needed to pass: 19

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest



DRIVER/OPERATOR #2
Alley Dock

OBJECTIVE

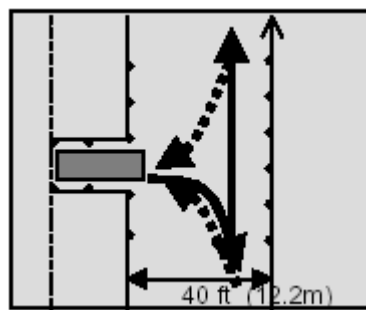
- The driver/operator trainee, given apparatus and a spotter, shall demonstrate a safe alley dock, including both a left hand and right hand maneuver.

INSTRUCTIONS – procedures for achieving the objective

- Given apparatus and a spotter, you shall demonstrate a safe alley dock to include both a left hand and right hand maneuver. In this skill, you will be required to move the apparatus backward within a restricted area and into a simulated alley without striking the barriers and bring the apparatus to a smooth stop close to the rear barrier. The skill will end when you state to me that you have completed the required maneuvers. Do you understand these instructions?

EXAMINERS NOTE

- Cones shall be placed at least one every ten feet. The boundary lines for the restricted area should be 40 feet (12.2m). Along one side and perpendicular is another simulated area 12 feet wide and 20 feet deep.



- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

DRIVER/OPERATOR #3
Alley Dock

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- demonstrates the following safety procedures:
 1. makes a 360 degree visual inspection around the apparatus
 2. uses hand rails to enter and exit apparatus
 3. wears seat belts
 4. insures no personnel are in a standing position anywhere on the apparatus
 5. checks mirror position before moving. 5.0
- moves the vehicle forward beyond the simulated dock, then backward within a restricted area and into a simulated alley without striking the walls, bringing the vehicle to a smooth stop close to the rear barrier (left hand alley dock maneuver) 7.0
- moves the vehicle forward to the original starting position, then moves the vehicle backward within a restricted area and into a simulated alley without striking the walls, bringing the vehicle to a smooth stop close to the rear barrier (right hand alley dock maneuver) 7.0

Total points possible: 19
Total points needed to pass: 14

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR #3
Serpentine Maneuver

OBJECTIVE

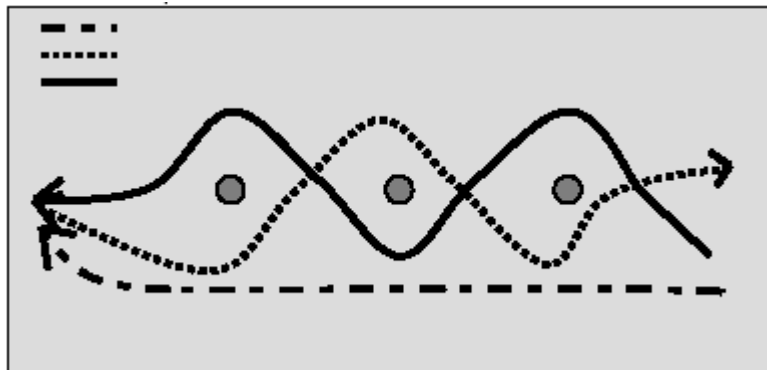
- The driver/operator trainee, given apparatus and a spotter, shall demonstrate a serpentine maneuver.

INSTRUCTIONS – procedures for achieving the objective

- Given apparatus, you shall demonstrate a serpentine maneuver. In this skill, you will maneuver around markers (simulated parked and stopped vehicles and tight corners). Three markers will be positioned approximately 30-38 feet apart. First, you will maneuver the vehicle in a straight line to the left of the markers, then back the apparatus between the markers by passing to the left of the first marker, to the right of the second marker, then to the left of the third marker. Finally, you will stop the vehicle and then drive forward through the course by passing to the right of the third marker, to the left of the second marker, and to the right of the third marker. This maneuver shall be done without stopping during the course except to change forward/backward direction. The skill will end when you have completed the required maneuvers. Do you understand these instructions?

EXAMINERS NOTE

- The markers should be placed between 30 and 38 feet (9m and 12m) apart, depending on the length of the apparatus. Adequate space must be provided on each side of the markers to allow for free movement of the apparatus.



- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

DRIVER/OPERATOR #3
Serpentine Maneuver

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- demonstrates the following safety procedures:
 1. makes a 360 degree visual inspection around the apparatus
 2. uses hand rails to enter and exit apparatus
 3. wears seat belts
 4. ensures no personnel are in a standing position anywhere on the apparatus
 5. checks mirror position before moving 5.0
- moves the vehicle forward along the left of the markers, then drives backward threading the markers, then drives forward threading the markers 7.0
- drives forward, threading the markers 7.0

Total points possible: 19

Total points needed to pass: 14

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR #4
Confined Space Turnaround

OBJECTIVE

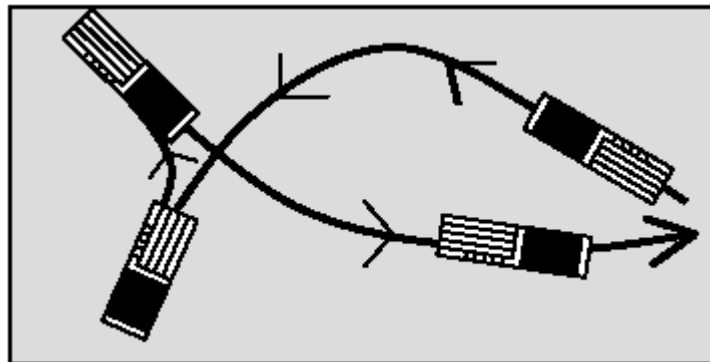
- The driver/operator trainee, given apparatus and a spotter, shall demonstrate a confined space turnaround.

INSTRUCTIONS – procedures for achieving the objective

- Given apparatus, you shall demonstrate a confined space turnaround. In this skill, you will maneuver a vehicle 180 degrees within a space 50 feet (15.25 m) wide and 100 feet (30.5 m) long. The skill will end when you have completed the required maneuvers. Do you understand these instructions?

EXAMINERS NOTE

- A lane approximately 50 feet (15.25m) by 100 feet (30.5m) should be marked, depending on the length of the apparatus. If the apparatus is small enough so that it can complete a u-turn without stopping and backing, the course should be adjusted so that backing is required.



- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

DRIVER/OPERATOR #4
Confined Space Turnaround

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- demonstrates the following safety procedures:
 1. makes a 360 degree visual inspection around the apparatus
 2. uses hand rails to enter and exit apparatus
 3. wears seat belts
 4. insures no fire fighters are in a standing position anywhere on the apparatus
 5. checks mirror position before moving 5.0
- begins in the center of one end of the test area, then pulls forward, moves toward one side of the area, backs the vehicle, and completes a 180 degree turn 15.0

Total points possible: 20
Total points needed to pass: 15

Total points scored by this candidate: _____
(No partial points awarded)

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR #5
Diminishing Clearance

OBJECTIVE

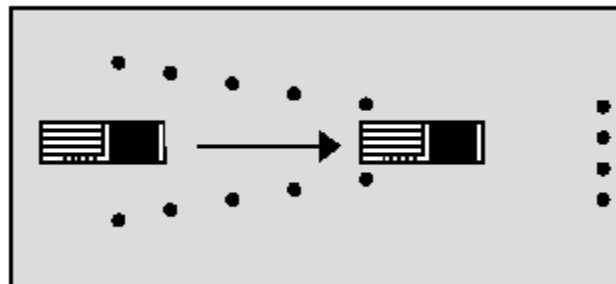
- The driver/operator trainee, given apparatus and a spotter, shall demonstrate a diminishing clearance exercise.

INSTRUCTIONS – procedures for achieving the objective

- Given apparatus, you shall demonstrate a diminishing clearance exercise. In this skill, you will maneuver a vehicle through two rows of markers, without touching the markers. You will come to a stop no less than 6 inches and no more than 24 inches from the finish line. The skill will end when you have completed the required maneuvers. Do you understand these instructions?

EXAMINERS NOTE

- Two rows of markers that form a lane 75 feet long are arranged with a diminishing clearance. The lane narrows from a width of 9 feet 6 inches (2.9m) to a width of 8 feet 2 inches (2.5m). A finish line will be indicated 50 feet (15m) beyond the last marker.



- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

DRIVER/OPERATOR #5
Diminishing Clearance

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- demonstrates the following safety procedures:
 1. makes a 360 degree visual inspection around the apparatus
 2. uses hand rails to enter and exit apparatus
 3. wears seat belts
 4. insures no fire fighters are in a standing position anywhere on the apparatus
 5. checks mirror position before moving 5.0
- maneuvers the apparatus through the lane and stops with the front bumper between 6 inches and 24 inches from the finish line 15.0

DEDUCT

If the driver/operator trainee:

- Touches a marker(s) - 5.0 deduction for each marker touched
- Stops vehicle during the run - 5.0 deduction

Total points possible: 20
Total points needed to pass: 14

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

Pumping check sheets



DRIVER/OPERATOR - PUMPER #1
Engaging Pump

OBJECTIVE

- The driver/operator trainee shall demonstrate the transfer of power from the vehicle engine to the pump.

INSTRUCTIONS – procedures for achieving the objective

- You shall transfer power from the vehicle engine to the pump. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 242-248

DRIVER/OPERATOR - PUMPER #1
Engaging Pump

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- stops the vehicle, engages the parking brake, and disengages the clutch or places the transmission in neutral 2.0
- engages the power transfer device 2.0
- places the transmission in proper gear 2.0
- locks the transmission or shift lever in proper gear for pumping 2.0
- checks for pump engagement (green light or speedometer slightly above zero) 2.0
- depresses accelerator to ensure the shift is complete and apparatus 2.0
- will not "drive away" 2.0

Total points possible: 12

Total points needed to pass: 9

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #2
Transfer Valve Operation

OBJECTIVE

- The driver/operator trainee, given a fire department pumper with a multi-stage pump, shall demonstrate the operation of the volume/pressure transfer valve under actual pumping conditions.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department pumper with a multi-stage pump, you shall demonstrate the operation of the volume/pressure transfer valve under actual pumping conditions. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will be given a condition that requires him/her to start in the series or pressure position and then change over to the parallel or volume position.
- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper with a multi-stage pump, if available.

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, p. 247

DRIVER/OPERATOR - PUMPER #2
Transfer Valve Operation

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- operates the transfer valve in the parallel (volume) position if more than half of the rated capacity of the pump is in use 2.0
- operates the transfer valve in the series (pressure) position if less than half of the rated capacity of the pump is in use 2.0
- operates the transfer valve manually or electrically at a net pressure of not more than 50 psi when the situation dictates a change in position 2.0

Total points possible: 6
Total points needed to pass: 4

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #3
Pressure Control Device

OBJECTIVE

- The driver/operator trainee, given a fire department pumper, shall demonstrate the operation of the pump pressure control device: relief valve or pressure control governor.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department pumper, you shall demonstrate the operation of the relief valve or pressure control governor (as required by the field examiner). The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper with pressure control device.

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 228-233

DRIVER/OPERATOR - PUMPER #3
Pressure Control Device

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

Relief Valve:

- checks that all lines are flowing at the desired rate P/F
- turns on relief valve P/F
- turns the relief valve control hand wheel counterclockwise until the valve opens (or the amber light on the pump panel comes on) P/F
- turns the relief valve control hand wheel clockwise until the valve closes (or the amber light on the pump panel goes off) P/F

Pressure Governor:

- checks that all lines are flowing at the desired rate P/F
- places the governor knob to the set position P/F
- turns the throttle control to the designated operating pressure P/F
- places the governor knob in the run position P/F

All mandatory steps successfully passed: Yes No (circle one)

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #4
Auxiliary Cooling System

OBJECTIVE

- The driver/operator trainee, given a fire department pumper, shall demonstrate the operation of the auxiliary cooling system.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department pumper, you shall demonstrate the operation of the auxiliary cooling system. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper with auxiliary cooling system

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 239-240

DRIVER/OPERATOR - PUMPER #4
Auxiliary Cooling System

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- demonstrates use of the auxiliary cooling system by opening and closing shut-off valve or switch located on pump panel

P / F

All mandatory steps successfully passed: Yes No (circle one)

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #5
Tank to Pump Operation

OBJECTIVE

- The driver/operator trainee, given a fire department pumper, shall properly position the apparatus, deploy hoselines, engage the pump, and pump water from the apparatus water tank.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department pumper, you shall properly position the apparatus, deploy hoselines, engage the pump, and pump water from the apparatus water tank. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 247-248

DRIVER/OPERATOR - PUMPER #5
Tank to Pump Operation

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- successfully places the pump into pump gear for pumping 1.0
- chocks the apparatus wheels 1.0
- **opens the tank-to-pump valve** **P/F**
- places pump in series (pressure) or parallel (volume) if the pump will be required to furnish more than 50% of rated capacity (if applicable) 1.0
- selects discharge, opens discharge valve slowly, and locks into place 1.0
- increases engine rpm using the hand throttle to the desired pressure for the attack line(s), while observing the pressure gauge 1.0
- shuts down the operation slowly 1.0

Total points possible: 6

Total points needed to pass: 4

Total points scored by this candidate: _____

All mandatory steps successfully passed: Yes No (circle one)

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #6
Handline and Master Streams

OBJECTIVE

- The driver/operator trainee, given a fire department pumper, shall produce effective handline and master streams while pumping from a pressurized source (hydrant).

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department pumper, you shall produce effective handline and master streams while pumping from a pressurized source (hydrant). The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper, hose, nozzles
- Hydrant

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 250-259

DRIVER/OPERATOR - PUMPER #6
Handline and Master Streams

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

HANDLINE

If the driver/operator trainee:

- engages pump 1.0
- exits the vehicle safely 1.0
- chocks the apparatus wheels 1.0
- connects the supply line from the hydrant to the pumper intake and establishes water supply to the pumper 1.0
- opens the intake valve and verbalizes the static pressure reading 1.0
- slowly opens discharge valves for preconnected handline nozzle 1.0
- increases engine rpm to the proper pressure for the handline nozzle then verbalizes compound and pressure gauge readings 1.0
- sets the pressure control device 1.0
- decreases engine speed to idle slowly 1.0
- closes the discharge valves slowly 1.0
- disengages pump 1.0

DRIVER/OPERATOR - PUMPER #6
Handline and Master Streams

MASTER STREAMS

If the driver/operator trainee:

- engages pump 1.0
- exits the vehicle safely 1.0
- chocks the apparatus wheels 1.0
- connects the supply line from the hydrant to the pumper intake and establishes water supply to the pumper 1.0
- opens the intake valve and verbalizes the static pressure reading 1.0
- slowly opens discharge valves for preconnected master stream appliance 1.0
- increases engine rpm to the proper pressure for the master stream appliance, then verbalizes compound and pressure gauge readings 1.0
- sets the pressure control device 1.0
- decreases engine speed to idle slowly 1.0
- closes the discharge valves slowly 1.0
- disengages pump 1.0

Total points possible: 22

Total points needed to pass: 16

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #7
Changing Water Supply

OBJECTIVE

- The driver/operator trainee, given a fire department pumper, shall change the water supply from the apparatus water tank to an external source while operating a fire attack line of 1 ½ or larger so that the flow is not interrupted and the proper pressure is maintained.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department pumper, you shall change the water supply from the apparatus water tank to an external source while operating a fire attack line of 1 ½ or larger so that the flow is not interrupted and the proper pressure is maintained. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper
- External source of water (hydrant)

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 248-249

DRIVER/OPERATOR - PUMPER #7
Changing Water Supply

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- Successfully places the pump into pump gear for pumping 1.0
- chocks the apparatus wheels 1.0
- opens the tank-to-pump valve 1.0
- opens handline discharge valve slowly, and locks into place 1.0
- increases engine rpm to the proper pressure for the attack line, and verbalizes the discharge pressure 1.0
- connects the supply line from the hydrant to the pumper intake and ensures water supply to the pumper (bleeds off air from LDH supply line) 1.0
- opens the intake valve and closes the tank-to-pump valve 1.0
- verbalizes residual pressure, then throttles rpms to proper setting for pumping handline 1.0
- closes discharge valves slowly 1.0
- disengages pump 1.0
-

Total points possible: 10

Total points needed to pass: 6

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #8
Drafting

OBJECTIVE

- The driver/operator trainee, given a fire department pumper, shall properly position, connect, and perform a pumping operation from draft.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department pumper, you shall properly position, connect, and perform a pumping operation from draft. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper
- Drafting tank or suitable static water source

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 265-269

DRIVER/OPERATOR - PUMPER #8
Drafting

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

Positioning and connecting the pumper:

- selects draft site ensuring the lift is less than 20 feet 1.0
- connects the hard suction hose or suction with a strainer to the intake, ensuring an airtight seal 1.0
- places the suction hose in the proper position for drafting 1.0

Priming and pumping

- engages the pump 2.0
- operates the primer and develops discharge pressure in less than 45 seconds 2.0
- opens discharge slowly, and locks it into place 2.0
- increases the engine rpm to the desired pressure for the discharge then verbalizes the pressure gauge reading 2.0

Shutting down operations

- decreases the engine rpm to idle slowly 2.0
- disengages pump 2.0
- verbalizes that pump will be flushed with clean water after use 2.0

Total points possible: 17

Total points needed to pass: 12

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #9
Relay Pumping

OBJECTIVE

- The driver/operator trainee, given a fire department pumper, shall properly position and set up the apparatus to pump in relay operation.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department pumper as the source pumper, you shall properly position and set up the apparatus to pump in relay to a designated relay apparatus. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumpers (2)
- Hydrant

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 311-323

DRIVER/OPERATOR - PUMPER #9
Relay Pumping

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

Pump in relay:

- establishes a water supply (hydrant or draft) with the largest capacity pumper (source pumper) 1.0
- positions the relay pumper a minimum distance of 100' from the source pumper 1.0
- connects a hoseline from the source pumper to the relay pumper
- utilizing 2 ½ inch or greater gated discharge outlets 1.0
- ensures that the source pumper communicates with the pumps in relay to establish flow 1.0
- engages the pump 1.0
- sets the flow rate based on need (keeping 20psi residual) 1.0
- ensures that relay pumper opens its bleeder valve on the gated intake before receiving water 1.0
- decreases the engine speed to idle slowly 1.0
- takes the pump out of gear 1.0

Total points possible: 9

Total points needed to pass: 7

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #10
Foam Stream

OBJECTIVE

- The driver/operator trainee, given a fire department pumper and foam-producing equipment, shall produce a foam fire stream so that properly proportioned foam is provided.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department pumper and foam-producing equipment, you shall produce a foam fire stream so that properly proportioned foam is provided. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper
- Foam eductor
- Foam (may be practice foam)

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 377-378

DRIVER/OPERATOR - PUMPER #10
Foam Stream

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- checks the eductor and nozzle to make sure they are rated for the same flow 1.0
- sets the proportioner to the proper percentage rating 1.0
- attaches the eductor to a hose capable of flowing the rated capacity of the eductor and nozzle, or to a discharge outlet 1.0
- attaches the attack line and desired nozzle to the discharge end of the eductor 1.0
- places the eductor suction hose into the concentrate 1.0
- opens the discharge valve and increases to the desired discharge pressure 1.0
- turns handle on eductor to foam from water (if applicable) 1.0
- produces foam stream P/F
- shuts down the operation slowly 1.0
- states that the foam hose lines and foam equipment will be flushed with clean water 1.0

Total points possible: 9

Total points needed to pass: 7

Total points scored by this candidate: _____

All mandatory steps successfully passed: Yes No (circle one)
Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR - PUMPER #11
Supplying a Sprinkler System

OBJECTIVE

- The driver/operator trainee, given a fire department pumper and a fireground situation, shall supply water to a fire sprinkler (standpipe) system.

INSTRUCTIONS – procedures for achieving the objective

- Given a prestaged fire department pumper and a building with a fire department connection, you shall supply water to the fire sprinkler (standpipe) system. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department pumper
- Sprinkler/standpipe system

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 269-272

DRIVER/OPERATOR - PUMPER #11
Supplying a Sprinkler System

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator trainee:

- engages the pump and then exits the apparatus safely 1.0
- connects two supply lines from the pumper to the fire department connection (if hose lay exceeds 100 feet, driver may have assistance from others) 1.0
- establishes pumper to hydrant connection 1.0
- opens discharges slowly to prevent water hammer 1.0
- operates the throttle, raising the discharge pressure to 150 psi at the fire department connection for a sprinkler system 1.0
- sets the pressure regulating device 1.0
- verbalizes residual pressure reading 1.0
- monitors all gauges throughout the process 1.0
- shuts down the operation slowly 1.0

Total points possible: 9
Total points needed to pass: 7

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

Aerial check sheets



DRIVER/OPERATOR – Aerial #1
Identify Gauges/Levels/indicators

OBJECTIVE

- The driver/operator – aerial trainee shall identify the gauges and describe the purpose of each gauge

INSTRUCTIONS – procedures for achieving the objective

- You shall identify all gauges and levels relevant to the operation of the ladder. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator – aerial trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department aerial

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 242-248
Pierce 100' *Aerial Platform* Operators Manual. Revised 02-98

DRIVER/OPERATOR – AERIAL #1
Identify Gauges/Levels/indicators

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- Level indicators
- Height
- Angle
- Breathing Air Pressure
- Over Load
- Hydraulic Pressure
- Stabilizers

Total points possible:

Total points needed to pass:

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #2
Parapet Ladder

OBJECTIVE

- The driver/operator – aerial trainee, given a fire department aerial with a parapet ladder, shall demonstrate how to attach it to the bucket.

INSTRUCTIONS – procedures for achieving the objective

- The driver/operator – aerial trainee, given a fire department aerial with a parapet ladder, shall demonstrate how to attach it to the bucket. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator – aerial trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department aerial with a parapet ladder.

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, p. 247
- Pierce 100' *Aerial Platform* Operators Manual. Revised 02-98

DRIVER/OPERATOR – AERIAL #2
Parapet Ladder

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- Lower bucket 1
- Retrieve brackets 1
- Pin in place 1
- Retrieve roof ladder 1
- Secure to brackets and rung hook 1

Total points possible: 5
Total points needed to pass: 5

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #3
Stokes Litter Ops

OBJECTIVE

- The driver/operator – aerial trainee, given a fire department aerial, shall demonstrate attaching the stokes litter brackets to the bucket.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department aerial, you shall demonstrate attaching the stokes litter brackets to the bucket. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator – aerial trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department aerial with Stokes Litter brackets.

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 228-233
- Pierce 100' *Aerial Platform* Operators Manual. Revised 02-98

DRIVER/OPERATOR – AERIAL #3
Stokes Litter

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

Stokes Litter:

- Retrieves brackets from bin
- Properly attaches brackets to front of bucket
- Secures litter to brackets

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest



DRIVER/OPERATOR – AERIAL #4
Aerial Hydraulic System

OBJECTIVE

- The driver/operator – aerial trainee, given a fire department aerial, shall demonstrate the operation of the aerial hydraulic system.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department aerial, you shall demonstrate the operation of the aerial hydraulic system. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator – aerial trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department aerial.

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 239-240
- Pierce 100' *Aerial Platform* Operators Manual. Revised 02-98

DRIVER/OPERATOR – AERIAL #4
Aerial Hydraulic System

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- demonstrates use of the aerial hydraulic system by engaging aerial master and aerial PTO
- switches hydraulic diverter to stabilizers
- Deploys stabilizers
- Switches diverter to aerial at low idle
- Deploys ladder
- Beds ladder to 2500psi
- Switches diverter at low idle
- Beds stabilizers

All mandatory steps successfully passed: Yes No (circle one)

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #5
Stabilizing Aerial Apparatus – Even Terrain

OBJECTIVE

- The driver/operator – aerial trainee, given a fire department aerial, shall be able to demonstrate the techniques of stabilizing aerial apparatus under various conditions.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department aerial, you shall properly position the apparatus, set front brake and parking brake, engage aerial master and aerial PTO, deploy wheel chocks, deploys jack plates, checks area and deploys stabilizers. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator – aerial trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department aerial

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 247-248
- IFSTA , Fire Department Aerial Apparatus, 1st Edition, pp. 89-94
- Pierce 100' *Aerial Platform* Operators Manual. Revised 02-98

DRIVER/OPERATOR – AERIAL #5
Stabilization - Even Terrain

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- Positions apparatus for function 1.0
- Sets both air brakes 1.0
- Engages aerial master and aerial PTO 1.0
- chocks the apparatus front wheels, front and back 1.0
- sets jack plates at appropriate distance 1.0
- Selects stabilizers on diverter / activates high idle 1.0
- extends jacks completely 1.0
- Lowers one side then the other alternating until aerial is at working height. (bulge is out of tires) 1.0
- Places pins on outside of outrigger 1.0

Total points possible: 9

Total points needed to pass: 6

Total points scored by this candidate: _____

All mandatory steps successfully passed: Yes No (circle one)

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #5
Stabilization -Uneven Terrain

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- Positions apparatus for function 1.0
- Sets both air brakes 1.0
- Engages aerial master and aerial PTO 1.0
- Chocks the apparatus front wheels, front and back 1.0
- Sets jack plates at appropriate distance 1.0
- Selects stabilizers on diverter / activates high idle 1.0
- Extends jacks completely 1.0
- Lowers high side then the low side until they raise the low side to level. 1.0
- Places pins on outside of outrigger 1.0

Total points possible: 9

Total points needed to pass: 6

Total points scored by this candidate: _____

All mandatory steps successfully passed: Yes No (circle one)

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #6
Apparatus Positioning

OBJECTIVE

- The driver/operator – aerial trainee, given a fire department aerial, shall identify special considerations and demonstrate proper apparatus positioning and staging for victim rescue, victim movement, and elevated master stream.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department aerial, identify special considerations and demonstrate proper apparatus positioning and staging for victim rescue, victim movement, and elevated master stream.

EXAMINERS NOTE

- The examiner will pick five structures and choose a task for each structure
- The driver/operator – aerial trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department aerial
- Five structures of different sizes and shapes

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 248-249
- IFSTA , Fire Department Aerial Apparatus, 1st Edition
- Pierce 100' *Aerial Platform* Operators Manual. Revised 02-98

DRIVER/OPERATOR – AERIAL #6
Apparatus Positioning
Rescue

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- Positions apparatus correctly for task 1.0
- Checks for overhead obstructions 1.0
- Stabilizes apparatus properly 1.0
- Reaches intended target first attempt 1.0

Total points possible: 4

Total points needed to pass:

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #6
Apparatus Positioning
Elevated Master Stream

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- Positions apparatus correctly for task 1.0
- Checks for overhead obstructions 1.0
- Stabilizes apparatus properly 1.0
- Reaches intended target first attempt 1.0

Total points possible: 4

Total points needed to pass:

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #6
Apparatus Positioning
Roof Work

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- Positions apparatus correctly for task 1.0
- Checks for overhead obstructions 1.0
- Stabilizes apparatus properly 1.0
- Reaches intended target first attempt 1.0

Total points possible: 4

Total points needed to pass:

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #6
Apparatus Positioning
Staging

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- Positions apparatus correctly for task 1.0
- Checks for overhead obstructions 1.0
- Stabilizes apparatus properly 1.0
- Reaches intended target first attempt 1.0

Total points possible: 4

Total points needed to pass:

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #6
Apparatus Positioning

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

- Positions apparatus correctly for task 1.0
- Checks for overhead obstructions 1.0
- Stabilizes apparatus properly 1.0
- Reaches intended target first attempt 1.0

Total points possible: 4

Total points needed to pass:

Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest

DRIVER/OPERATOR – AERIAL #7
Power Failure / Emergency Ops

OBJECTIVE

- The driver/operator – aerial trainee, given a fire department aerial, shall be able to identify the principles of safe operations during power failure, demonstrate the use of power systems overrides, and emergency operating procedures.

INSTRUCTIONS – procedures for achieving the objective

- Given a fire department aerial, you shall demonstrate the use of power systems overrides, and emergency operating procedures. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINERS NOTE

- The driver/operator – aerial trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Fire department aerial

REFERENCE SOURCE

- IFSTA, Pumping Apparatus Driver/Operator Handbook, 1st Edition, pp. 265-269
- IFSTA, Fire Department Aerial Apparatus, 1st Edition, pp.326-327
- Pierce 100' *Aerial Platform Operators Manual*. Revised 02-98

DRIVER/OPERATOR – AERIAL #7
Emergency Operations

Trainee: _____
Notes: _____
Station: _____
Test Site: _____
Evaluator: _____

If the driver/operator – aerial trainee:

Positioning and connecting the aerial:

- Engages hydraulic valve 1.0
- Pushes emergency pump switch and hold it (max 7 min)
Until the hydraulic functions are completed. 1.0
- Releases hydraulic valve 1.0
- Verbalize candidate will wait 30 min for system to cool down
Before any further movement 1.0

Total points possible: _____
Total points needed to pass: _____
Total points scored by this candidate: _____

Performance rating of trainee on this standard: PASS _____ FAIL _____

Circle one: First Attempt Retest