Maryland Voluntary Fire Service Certification System

Maryland Fire Service Personnel Qualifications Board, Incorporated

Option 2, Breakdown Correlation Sheet

Fire Apparatus Driver Operator – Pump, NFPA 1002, 2014 edition

5.1 General.
Prior to operating fire department vehicles, the fire apparatus driver/operator shall meet the job performance requirements defined in Sections 5.1 and 5.2.

5.1.1
Perform routine tests, inspections, and servicing functions on the systems and components specified in the following list in addition to those in 4.2.1, given a fire department pumper, its manufacturer's specifications, and policies and procedures of the jurisdiction, so that the operational status of the pumper is verified:

(1) Water tank and other extinguishing agent levels (if applicable)
(2) Pumping systems
(3) Foam systems

Requisite Knowledge. Manufacturer specifications and requirements, and policies, and procedures of the jurisdiction.

Requisite Skills. The ability to use hand tools, recognize system problems, and correct and deficiency noted according to policies and procedures.

5.2.1
Produce effective hand or master streams, given the sources specified in the following list, so that the pump is engaged, all pressure control and vehicle safety devices are set, the rated flow of the nozzle is achieved and maintained, and the apparatus is continuously monitored for potential problems:

(1) Internal tank
(2) Pressurized source
(3) Static source
(4) Transfer from internal tank to external source

Requisite Knowledge. Hydraulic calculations for friction loss and flow using both written formulas and estimation methods, safe operation of the pump, problems related to small-diameter or dead-end mains, low-pressure and private water supply systems, hydrant coding systems, and reliability of static sources.

Requisite Skills. The ability to position a fire department pumper to operate at a fire hydrant and at a static water source, power transfer from vehicle engine to pump, draft, operate pumper pressure control systems, operate the volume/pressure transfer valve (multistage pumps only), operate auxiliary cooling systems, make the transition between internal and external water sources, and assemble hose lines, nozzles, valves, and appliances.

5.2.2

Pump a supply line of 2 ½ in. (65 mm) or larger, given a relay pumping evolution the length and size of the line and the desired flow and intake pressure, so that the correct pressure and flow are provided to the next pumper in the relay.

Requisite Knowledge: Hydraulic calculations for friction loss and flow using both written formulas and estimation methods, safe operation of the pump, problems related to small-diameter or dead-end mains, low-pressure and private water supply systems, hydrant coding systems, and reliability of static sources.

Requisite Skills: The ability to position a fire department pumper to operate at a fire hydrant and at a static water source, power transfer from vehicle engine to pump, draft, operate pumper pressure control systems, operate the volume/pressure transfer valve (multistage pumps only), operate auxiliary cooling systems, make the transition between internal and external water sources, and assemble hose lines, nozzles, valves, and appliances.

5.2.3

Produce a foam fire stream, given foam-producing equipment, so that properly proportioned foam is provided.

Requisite Knowledge. Proportioning rates and concentrations, equipment assembly procedures, foam systems limitations, and manufacturer specifications.

Requisite Skills. The ability to operate foam proportioning equipment and connect foam stream equipment.

5.2.4

Supply water to fire sprinkler and standpipe systems, given specific system information and a fire department pumper, so that water is supplied to the system at the correct volume and pressure.

Requisite Knowledge. Calculation of pump discharge pressure; hose layouts; location of fire department connection; alternative supply procedures if fire department connection is not usable; operating principles of sprinkler systems as defined in NFPA 13, NFPA 13D, and NFPA 13R; fire department operations in sprinklered properties as defined in NFPA 13E; and operating principles of standpipe systems as defined in NFPA 14.

Requisite Skills. The ability to position a fire department pumper to operate at a fire hydrant and at a static water source, power transfer from vehicle engine to pump, draft, operate pumper pressure control systems, operate the volume/pressure transfer valve (multistage pumps only), operate auxiliary cooling systems, make the transition between internal and external water sources, and assemble hose lines, nozzles, valves, and appliances.