



**Standardized Curriculum Form
Ontario, Canada**

**Office of the Fire Marshal and Emergency Management
Curriculum based on
NFPA 1002, Chapter 5, 2014 Edition**

**FIRE APPARATUS DRIVER/OPERATOR -
FIRE PUMP**

**National Fire Protection Association Standard for
Fire Apparatus Driver/Operator Professional Qualifications**

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April 2017

Components of the OFMEM Academic Standards and Evaluation Unit Standardized Curriculum Form

The OFMEM Academic Standards and Evaluation Unit Standardized Curriculum Forms in Ontario, Canada, are based on internationally-recognized, competency-based, professional qualification standards through the National Fire Protection Association (NFPA). Columns within this form from pages 4 and onward are composed of:

NFPA Objective

National Fire Protection Association Objectives are major competencies and Job Performance Requirements (JPR) within a professional qualifications standard that learners must acquire before successful completion of voluntary testing and certification. To attain these competencies, the OFMEM is offering flexible training delivery models centered on being accessible, attainable, and affordable.

Requisite Knowledge

As defined in published NFPA Professional Qualifications Standards, Requisite Knowledge is “Fundamental knowledge one must have in order to perform a specific task”. This can be acquired by referring to the various suggested readings described below. Information used to construct multiple choice test questions in the Provincial Certification Exam for FIRE APPARATUS DRIVER/OPERATOR - FIRE PUMP is derived from these materials.

Requisite Skills

As defined in published NFPA Professional Qualifications Standards, Requisite Skills are “The essential skills one must have in order to perform a specific task”. This can be acquired by referring to the various suggested readings described below along with the latest version of the Office of the Fire Marshal and Emergency Management’s Skills Sheets Booklet for FIRE APPARATUS DRIVER/OPERATOR - FIRE PUMP. This booklet is used by Provincial Examiners to evaluate Requisite Skill requirements for those voluntarily seeking certification to NFPA 1002, Chapter 5, 2014 Edition.

Suggested Readings

A total of 50 multiple choice questions in the Provincial Certification Exam for FIRE APPARATUS DRIVER/OPERATOR - FIRE PUMP (NFPA 1002-2014) will appear on the test, and are derived from the following suggested readings:

<u>Publisher/Title/Edition</u>	<u>Key Word Reference</u>
1. NFPA 1002, <i>Standard for Fire Apparatus Driver/Operator Professional Qualifications</i> , 2014 Edition <ul style="list-style-type: none">Refer to Chapter 5 regarding Apparatus Equipped with Fire Pump (pgs. 9 - 10)	NFPA 1002, 2014 Ed.
2. IFSTA, <i>Pumping Apparatus Driver/Operator Handbook</i> , 3 rd Edition <ul style="list-style-type: none">Refer to sections within chapters covering Apparatus Equipped with Fire Pump material	IFSTA PADO, 3 rd Ed.
OR	
3. Jones and Bartlett, <i>Fire Apparatus Driver/Operator: Pump, Aerial, Tiller, and Mobile Water Supply</i> , 2 nd Edition <ul style="list-style-type: none">Refer to sections within chapters covering Apparatus Equipped with Fire Pump material	J&B FADO, 2 nd Ed.

Knowledge Test Weighting (Out of 100%)

This column references percentage of multiple choice questions that will appear on the Provincial Certification Exam for knowledge-based testing for FIRE APPARATUS DRIVER/OPERATOR - FIRE PUMP.

Questions are validated by a Provincial Advisory Committee (PAC), and used for voluntary, knowledge-based testing of those seeking certification to NFPA 1002, Chapter 5, 2014 Edition through the Academic Standards and Evaluation Unit of the Office of the Fire Marshal and Emergency Management. A mark of 70% or better is required to receive a “Pass” on the knowledge test.

Skill Sheet

This column references skill objectives that will be evaluated by the Office of the Fire Marshal and Emergency Management, to test Requisite Skill requirements of FIRE APPARATUS DRIVER/OPERATOR - FIRE PUMP for those voluntarily seeking certification to NFPA 1002, Chapter 5, 2014 Edition.

**Office of the Fire Marshal and Emergency Management
Provincial Advisory Committee for FIRE APPARATUS DRIVER/OPERATOR - FIRE PUMP**

NFPA 1002, Chapter 5, 2014 Edition

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This document has been reviewed and approved by the Manager of the Academic Standards and Evaluation Unit of the Office of the Fire Marshal and Emergency Management (OFMEM) in Ontario, Canada:

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Course: FIRE APPARATUS DRIVER/OPERATOR - FIRE PUMP

Standard: NFPA 1002, Chapter 5, 2014 Edition

NFPA Objective	Requisite Knowledge	Requisite Skills	Suggested Readings	Knowledge Test Weighting	Skill Sheet #
5.1 General					
The requirements of Fire Fighter I as specified in NFPA 1001 (or the requirements of Advanced Exterior Industrial Fire Brigade Member or Interior Structural Fire Brigade Member as specified in NFPA 1081) and the job performance requirements defined in Sections 5.1 and 5.2 shall be met prior to qualifying as a fire department driver/operator — pumper.					
5.1.1					
Perform the routine tests, inspections, and servicing functions 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	Manufacturer's specifications and requirements	The ability to use hand tools	IFSTA PADO, 3rd Ed. Chapters 2, 10, 14, 15 J&B FADO, 2nd Ed. Chapters 1, 2, 3, 6, 8, 14, 19	10% of questions	Skill Sheet #1
	Policies and procedures of the jurisdiction	Recognize system problems			
		Correct any deficiency noted according to policies and procedures			



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NFPA Objective	Requisite Knowledge	Requisite Skills	Suggested Readings	Knowledge Test Weighting	Skill Sheet #
5.2 Operations					
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	Hydraulic calculations for friction loss and flow using written formulas and estimation methods	The ability to position a fire department pumper to operate at a fire hydrant and at a static water source	IFSTA PADO, 3rd Ed. Chapters 4, 5, 6, 7, 8, 9, 10, 11 J&B FADO, 2nd Ed. Chapters 7, 11	70% of questions	Skill Sheets #2, #3
	Safe operation of pump	Power transfer from vehicle engine to pump			
	Problems related to small-diameter or dead-end mains	Draft			
	Low-pressure and private water supply systems	Operate pumper pressure control systems			
	Hydrant coding systems	Operate the volume/pressure transfer valve (multistage pumps only)			
	Reliability of static sources	Operate auxiliary cooling systems			
		Make the transition between internal and external water sources			
	Assemble hose lines, nozzles, valves and appliances				
5.2.2					
Pump a supply line of 65mm (2 ½ in.) 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.	Hydraulic calculations for friction loss and flow using both written formulas and estimation methods	The ability to position a fire department pumper to operate at a fire hydrant and at a static water source	IFSTA PADO, 3rd Ed. Chapters 4, 5, 7, 8, 9, 10, 12 J&B FADO, 2nd Ed. Chapter 13	10% of questions	Skill Sheet #4
	Safe operation of the pump	Power transfer from vehicle engine to pump			
	Problems related to small-diameter or dead-end mains	Draft			
	Low pressure and private water supply systems	Operate pumper pressure control systems			
	Hydrant coding systems	Operate the volume/pressure transfer valve (multistage pumps only)			
	Reliability of static sources	Operate auxiliary cooling systems			
		Make the transition between internal and external water sources			
	Assemble hose lines, nozzles valves and appliances				



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NFPA Objective	Requisite Knowledge	Requisite Skills	Suggested Readings	Knowledge Test Weighting	Skill Sheet #
5.2.3					
Produce a foam fire stream, given foam-producing equipment, so that properly proportioned foam is provided	Proportioning rates and concentrations	The ability to operate foam proportioning equipment	IFSTA PADO, 3rd Ed. Chapter 14 J&B FADO, 2nd Ed. Chapter 14	5% of questions	Skill Sheet #5
	Equipment assembly procedures	Connect foam stream equipment			
	Foam system limitations Manufacturer's specifications				
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	Calculation of pump discharge pressure	The ability to position a fire department pumper to operate at a fire hydrant and at a static water source	IFSTA PADO, 3rd Ed. Chapters 4, 7, 10 J&B FADO, 2nd Ed. Chapters 6, 7	5% of questions	Skill Sheet #6
	Hose layouts	Power transfer from vehicle engine to pump			
	Location of fire department connection	Draft			
	Alternative supply procedures if fire department connection is not usable	Operate pumper pressure control systems			
	Operating principles of sprinkler systems as defined in NFPA 13, NFPA 13D, and NFPA 13R	Operate the volume/pressure transfer valve (multistage pumps only)			
	Fire department operations in sprinklered properties as defined in NFPA 13E	Operate auxiliary cooling systems			
	Operating principles of standpipe systems as defined in NFPA 14	Make the transition between internal and external water sources			
		Assemble hose line, nozzles, valves and appliances			