



**Official Skill Sheets for Practical Skills
Ontario, Canada**

**FIRE APPARATUS DRIVER/OPERATOR
(Apparatus Equipped with Fire Pump)
NFPA 1002, Chapter 5, 2014 Edition**

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

Enquiries regarding completion of this booklet should be directed to your
Instructor or Fire Chief.

Upon successful mastery of all practical skills, completed and signed pages
3 to 5 of this document should be sent to:

**Manager
Academic Standards and Evaluation Unit
Ministry of Community Safety and Correctional Services
Office of the Fire Marshal and Emergency Management
25 Morton Shulman Avenue, 2nd Floor
Toronto, Ontario
M3M 0B1
OFMTestingandCertification@ontario.ca**



As the Fire Apparatus Driver/Operator (Apparatus Equipped with Fire Pump) course is predominantly a "hands-on" program, the testing of the skills learned during the course is as important as testing the knowledge components. The successful completion of every skill sheet in this booklet is necessary to fulfill the requirements of each Job Performance Requirement listed in Chapter 5 of NFPA 1002, 2014 Edition (Apparatus Equipped with Fire Pump).

Successful completion of all the practical skills contained in this booklet is required for eligibility for Ontario Office of the Fire Marshal and Emergency Management (OFMEM) Apparatus Equipped with Fire Pump Certification. Candidates must be prepared for any of the practical skills contained in this booklet to be on a specific evaluation session. Ontario Office of the Fire Marshal and Emergency Management Practical Skills Evaluations are designed so that there is the potential for any of the practical skills to be evaluated. Every skill on any practical skills evaluation will contain the same components and steps as outlined in this booklet.

It is the responsibility of every Fire Apparatus Driver/Operator (Apparatus Equipped with Fire Pump) Designated Instructor to ensure that each candidate has passed every skill. The Designated Instructor must verify that each skill sheet in this booklet has been signed and indicates that the candidate has successfully mastered the skill.

Each candidate's Skills Book contains a "Verification of Successful Completion of Practical Skills Course" form on page 3. **This completed and signed form must be submitted to the Ontario Office of the Fire Marshal and Emergency Management prior to the date of the Practical Skills Evaluation. Only those individuals whose form has been received by the Ontario Office of the Fire Marshal and Emergency Management will be eligible to take the Practical Skills Evaluation for obtaining certification to this Standard.**



Suggested Readings:

Information for meeting NFPA 1002, 2014 Edition Job Performance Requirements (JPRs) for FIRE APPARATUS DRIVER/OPERATOR (FIRE PUMP) is found in the following suggested readings:

Publisher/Title/Edition

1. NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2014 Edition
 - Refer to Chapter 5 regarding Apparatus Equipped with Fire Pump (pages 9 and 10)
2. IFSTA, *Pumping Apparatus and Aerial Driver/Operator Handbook*, 3rd Edition

OR

3. Jones and Bartlett, *Fire Apparatus Driver/Operator: Pumper, Aerial, Tiller and Mobile Water Supply*, 2nd Edition



ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

FIRE APPARATUS DRIVER/OPERATOR
(FIRE PUMP) (NFPA 1002-2014)

PRACTICAL SKILLS

VERIFICATION OF SUCCESSFUL COMPLETION OF PRACTICAL SKILLS COURSE

This completed and signed form must be submitted to the Ontario Office of the Fire Marshal and Emergency Management prior to the date of the Practical Skills Evaluation. Only those individuals whose forms have been received by the Ontario Office of the Fire Marshal and Emergency Management will be eligible to take the Practical Skills Evaluation for obtaining certification to this Standard.

To be completed by the **candidate**:

Name: _____

Address: _____

City: _____ Prov: _____ Postal Code: _____

Department/Agency: _____

Fire Apparatus
Driver/Operator (Fire Pump)
Course Location: _____

Fire Apparatus
Driver/Operator (Fire Pump)
Course Start Date: _____

Fire Apparatus
Driver/Operator (Fire Pump)
Course End Date: _____

To be completed by the **Designated Instructor**:

As Designated Instructor for this course, I verify that the above candidate has successfully completed all of the practical skills required for the level of:

Fire Apparatus Driver/Operator - Apparatus Equipped with Fire Pump

Print Name: _____

Signature: _____ Date: _____



**VERIFICATION OF SUCCESSFUL COMPLETION OF PRACTICAL SKILLS
EVALUATION**

To be completed by the **Lead Evaluator** present for **two (2)** of the practical skills evaluated below:

STUDENT NAME:			
DEPARTMENT/AGENCY:			
COURSE DATES:		LOCATION:	
EVALUATION DATE:		LOCATION:	
LEAD EVALUATOR(S):			

	Pass/Fail
Daily Inspection Exercise NFPA 1002-2014, 5.1.1	
Evaluator signature: _____ Date: _____	
Pump Operator Exercise - Producing Effective Streams at Draft NFPA 1002-2014, 5.2.1	
Evaluator signature: _____ Date: _____	
Pump Operator Exercise - Producing Effective Streams from a Pressurized Source (Fire Hydrant) NFPA 1002-2014, 5.2.1	
Evaluator signature: _____ Date: _____	
Relay Pumping Exercise - Relay Pumping From a Pressurized Source NFPA 1002-2014, 5.2.2	
Evaluator signature: _____ Date: _____	



ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

FIRE APPARATUS DRIVER/OPERATOR
(FIRE PUMP) (NFPA 1002-2014)

PRACTICAL SKILLS

	Pass/Fail
Foam Fire Stream Exercise NFPA 1002-2014, 5.2.3	
Evaluator signature: _____ Date: _____	
Supply Water to Fire Sprinkler and Standpipe Systems Exercise NFPA 1002-2014, 5.2.4	
Evaluator signature: _____ Date: _____	



Table of Contents

Daily Inspection Exercise	8
Pump Operator Exercise - Producing Effective Streams at Draft	11
Pump Operator Exercise - Producing Effective Streams from a Pressurized Source (Fire Hydrant)	12
Relay Pumping Exercise - Relay Pumping From a Pressurized Source	13
Foam Fire Stream Exercise	14
Supply Water to Fire Sprinkler and Standpipe Systems Exercise	15



FIRE APPARATUS DRIVER/OPERATOR (FIRE PUMP)

Successful completion of the practical skills in this section is necessary to fulfill the requirements of the following sections in Chapter 5 of NFPA 1002-2014:

Fire Apparatus Driver/Operator (Apparatus Equipped with Fire Pump) Standard

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

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

5.2.2 Pump a supply line of 65 mm (2½ 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.

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

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.



General - NFPA 1002-2014, 5.1.1

Daily Inspection Exercise

CANDIDATE NAME:

SKILL SHEET # 1

Skill Objective: 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 and its manufacturer’s specifications, 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

Skill Procedure: The candidate, given a fire pumper apparatus and daily check sheet (Activity Sheet 2) will document all test, inspections, servicing functions of the water tank and other extinguishing agent levels (if applicable), pumping systems, foam systems, and note deficiencies.

<u>Items to be checked</u>	Pass/Fail
If the candidate:	
1. Ensured water tank level was full	
2. Checked primer pump oil reservoir level, if applicable	
3. Checked foam tank level, if applicable	
4. Evaluated condition of the pump packing for excessive leaking	
5. Properly engaged pump	
6. Properly operated priming pump	
7. Demonstrated proper throttle techniques	
8. Exercised pump valves	
9. Exercised drain valves	
10. Operated change over-valve (for two stage pumps)	
11. Operated pressure control device	

DAILY INSPECTION EXERCISE CONTINUED ON NEXT PAGE



ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

FIRE APPARATUS DRIVER/OPERATOR
(FIRE PUMP) (NFPA 1002-2014)

PRACTICAL SKILLS

General - NFPA 1002-2014, 5.1.1
Daily Inspection Exercise

CANDIDATE NAME:

SKILL SHEET # 1

Items to be checked	Pass/Fail
If the candidate:	
12. Visually inspected foam system, if equipped	
13. Properly disengaged pump	
14. Ensured tightness of screws and bolts on pump panel, using appropriate hand tools	
15. Utilized safety equipment	
16. Recognized system problems	
17. Corrected any deficiency noted according to policies and procedures	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade:

Pass

Fail

Evaluator's Signature: _____

Date: _____



General - NFPA 1002-2014, 5.1.1
Daily Inspection Exercise

CANDIDATE NAME:

SKILL SHEET # 1

ACTIVITY SHEET
For
Pump Test, Inspection and Service Form

Use safety equipment and hand tools to test, inspect or service the items on the checklist to recognize any system problems and correct any deficiency according to agency policies and procedures. Place a mark in the "Item Checked" column after each item is checked. Use the "Notes" column to note any deficiencies. Date and sign the form in the indicated area.

Item	Item Checked	Notes
Ensure water tank level is full		
Check primer pump oil reservoir level, if applicable		
Check foam tank level, if applicable		
Evaluate condition of the pump packing for excessive leaking		
Properly engage pump		
Operated change over-valve (for two stage pumps) if applicable		
Property operate priming system		
Demonstrate proper throttle operation		
Exercise pump valves		
Exercise drain valves		
Operate pressure control device		
Visually inspect foam system, if applicable		
Properly disengage pump		
Ensure tightness of screws and bolts on pump panel, using appropriate hand tools		
Utilize safety equipment		



ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

FIRE APPARATUS DRIVER/OPERATOR
(FIRE PUMP) (NFPA 1002-2014)

PRACTICAL SKILLS

Operations - NFPA 1002-2014, 5.2.1

Pump Operation Exercise - Producing Effective Streams at Draft

CANDIDATE NAME:

SKILL SHEET # 2

Skill Objective: 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

Skill Procedure: The candidate, given a fire pumper apparatus shall properly position, connect, and perform a pumping operation from draft. The candidate shall be given assistance in connecting the hard suction hoses and operation of the hand lines (not with making any hand line connections).

<u>Items to be checked</u>	<u>Pass/Fail</u>
<i>If the candidate:</i>	
1. Positioned the pumper to operate at a static water source	
2. Performed a power transfer from vehicle engine to pump	
3. Performed a draft	
4. Operated pumper pressure control systems	
5. Operated the volume/pressure transfer valve (multistage pumps only)	
6. Operated auxiliary cooling systems	
7. Assembled hose lines, nozzles, valves and appliances	
8. Maintained draft, with water flow to the appropriate hand line, apparatus, master stream, fire sprinkler system, or standpipe system.	
9. Verbally communicated troubleshooting techniques to maintain draft	
10. Performed entire operation safely	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade:

Pass

Fail

Evaluator's Signature: _____

Date: _____



Operations - NFPA 1002-2014, 5.2.1

Pump Operation Exercise - Producing Effective Streams from a Pressurized Source (Fire Hydrant)

CANDIDATE NAME:

SKILL SHEET # 3

Skill Objective: 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

Skill Procedure: The candidate, given a fire pumper apparatus shall properly position, connect, and perform a pumping operation from pressurized source (fire hydrant).

<u>Items to be checked</u>	<i>Pass/Fail</i>
If the candidate:	
1. Positioned the pumper to operate at a fire hydrant	
2. Performed a power transfer from vehicle engine to pump	
3. Attached pumper to hydrant and opened hydrant	
4. Operated pumper pressure control systems	
5. Operated the volume/pressure transfer valve (multistage pumps only)	
6. Operated auxiliary cooling systems	
7. Made the transition between internal and external water sources	
8. Assembled hose lines, nozzles, valves and appliances	
9. Maintained a safe residual pressure with water flow to the appropriate apparatus, master stream, hand line, fire sprinkler system, or standpipe system.	
10. Performed entire operation safely	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade:

Pass

Fail

Evaluator's Signature: _____

Date: _____



Operations - NFPA 1002-2014, 5.2.2
Relay Pumping Exercise - Relay Pumping from a Pressurized Source
(Fire Hydrant)

CANDIDATE NAME:

SKILL SHEET # 4

Skill Objective: Pump a supply line of 2 ½ in. (65mm) 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.

Skill Procedure: The candidate, given a fire pumper apparatus as a source pumper, shall properly position and set up the apparatus to pump (from a fire hydrant) in relay to a designated relay apparatus.

<u>Items to be checked</u>	<i>Pass/Fail</i>
If the candidate:	
1. Positioned the pumper to operate at a fire hydrant	
2. Performed a power transfer from vehicle engine to pump	
3. Operated pumper pressure control systems	
4. Operated the volume/pressure transfer valve (multistage pumps only)	
5. Operated auxiliary cooling systems	
6. Made the transition between internal and external water sources	
7. Assembled hose lines, nozzles, valves and appliances	
8. Provided the correct pressure and flow to the next pumper in the relay	
9. Maintained a safe residual pressure	
10. Performed entire operation safely	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade:

Pass

Fail

Evaluator's Signature: _____

Date: _____



ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

FIRE APPARATUS DRIVER/OPERATOR
(FIRE PUMP) (NFPA 1002-2014)

PRACTICAL SKILLS

Operations - NFPA 1002-2014, 5.2.3
Foam Fire Stream Exercise

CANDIDATE NAME:

SKILL SHEET # 5

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

Skill Procedure: The candidate, given a fire apparatus pumper, foam-producing equipment (in-line or bypass-type eductor), and a water source shall produce a foam-fire stream so that properly proportioned foam is provided.

<u>Items to be checked</u>	<i>Pass/Fail</i>
If the candidate:	
1. Verbalized checking the eductor and nozzle for compatibility, and made sure that they were rated for the same flow.	
2. Checked and verbalized the foam concentration listing on the side of the container matched the eductor percentage rating	
3. Set the proportioner to the proper percentage rating	
4. Attached eductor to hose or discharge outlet	
5. Selected and attached the attack hose line	
6. Placed eductor suction into the concentrate	
7. Opened discharge valve and increased to the pressure recommended by the eductor manufacturer	
8. Set the pressure control device	
9. Produced properly proportioned foam stream	
10. Verbalized that foam hose lines and equipment would be flushed with clean water	
11. Performed entire operation safely	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade:

Pass

Fail

Evaluator's Signature: _____

Date: _____



ONTARIO OFFICE OF THE FIRE MARSHAL AND EMERGENCY MANAGEMENT

FIRE APPARATUS DRIVER/OPERATOR
(FIRE PUMP) (NFPA 1002-2014)

PRACTICAL SKILLS

Operations - NFPA 1002-2014, 5.2.4
Supply Water to Fire Sprinkler and Standpipe Systems Exercise

CANDIDATE NAME:

SKILL SHEET # 6

Skill Objective: 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.

Skill Procedure: The candidate, given a fire apparatus, fire hydrant and a fire department connection to a fire sprinkler system shall position the fire apparatus, connect to a fire hydrant and provide water supply to a fire department connection to support the fire sprinkler system.

<u>Items to be checked</u>	Pass/Fail
If the candidate:	
1. Positioned the pumping apparatus to supply the FDC from a fire hydrant	
2. Performed a power transfer from vehicle engine to pump	
3. Ensured multistage pump is in volume position, if applicable	
4. Removed caps and inspected FDC for:	
a) Debris	
b) Damaged threads	
c) Gasket	
5. Connected a minimum of two 2 ½ in. supply lines to the FDC	
6. Established a water supply from fire hydrant	
7. Supplied water to fire sprinkler system	
8. Established correct pressure at FDC	
9. Operated pumper pressure control valve	
10. Operated auxiliary cooling systems	
11. Maintained safe residual pressure	
12. Performed entire operation safely	

Candidate MUST successfully master each step listed to pass this skill.

Candidate's Grade:

Pass

Fail

Evaluator's Signature: _____

Date: _____