Saskatchewan Evaluation and Certification Guide

Appendix D

NFPA 1002

Fire Apparatus Driver/Operator Professional Qualifications

Revised 2021

Saskatchewan Public Safety Agency

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This document is an appendix to the Evaluation and Certification Guide published by the

Saskatchewan Public Safety Agency. Use this Appendix in conjunction with the Guide.

Introduction

NFPA Standard 1002 Fire Apparatus Driver/Operator Professional Qualifications identifies the Job Performance Requirements (JPRs) and Knowledge Requirements that must be completed before a candidate may apply for certification. This document is part of the Saskatchewan Certification and Evaluation Guide (ECG). You should read the Guide before proceeding. The Guide is found at: www.saskatchewan.ca/residents/environment-public-health-and-safety/fire-safety/fire-service-and-emergency-management-training-and-certification#fire-service-and-emergency-management-certification.

Qualifications and Certification Steps:

To gain certification at the Apparatus Equipped with Fire Pump level the candidate must:

1. Be a member in good standing of a Saskatchewan Fire Department or other eligible emergency service and possess a valid Saskatchewan Drivers Licence.
2. Be certified under NFPA 1001 Standard for Fire Fighter Professional Qualifications, Level 1.
3. Successfully pass a 100 question written evaluation based on the reference material listed below. The test is 2 hours long with a 70% passing mark.

- IFSTA Pumping and Aerial Apparatus Driver/Operator Handbook, (3rd Edition),
- Saskatchewan Traffic Safety Act and Vehicle Equipment Regulations, 1987.
- NFPA 1002 – Professional Qualifications for Fire Apparatus Driver/Operator
- NFPA 13 – Standard for the Installation of Sprinkler Systems
- NFPA 13D – Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
- NFPA 13 – Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height
- NFPA 14 – Standard for the Installation of Standpipe and Hose Systems

4. Successfully complete a practical evaluation based on the JPRs outlined in this appendix and NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications.

To gain certification at the Apparatus Equipped with Aerial Device level, the candidate must:

1. Be a member in good standing of a Saskatchewan Fire Department or other eligible emergency service and possess a valid Saskatchewan Drivers Licence.
2. Be certified at the Apparatus Equipped with Fire Pump level.
3. Complete NFPA 1002 JPRs through self-study, training on the job and/or through courses and seminars.
4. Successfully pass a 50 question written evaluation based upon the IFSTA Pumping and Aerial Apparatus Driver/Operator Handbook, (3rd Edition). The test is 1 hour long with a 70% passing mark.
5. Successfully pass a practical evaluation based on the JPRs outlined in this Appendix and NFPA 1002 for Apparatus Equipped with Aerial Device.

The JPR sheets provided in this document are a general guide to identifying the knowledge and skills a candidate will be evaluated against during the certification process. They are also a means for an individual to record their progress as they familiarize themselves with each JPR.

The **complete** NFPA standard must be **read** and **understood**. Each NFPA standard and each JPR within the standard have specific requisites that must be met. The standard lists the requisite knowledge and skills that a candidate must possess to be able to successfully complete the certification process.

Certification is based upon successfully completing the standard established by NFPA. Candidates are cautioned that they must be prepared for evaluation on all JPRs and Knowledge Requirements in the standard.

NFPA Objective		Requisite Knowledge	Requisite Skill
4.2 Preventative Maintenance			
Perform visual and operational checks on the systems and components specified in the following list, given a fire department vehicle, its manufacturer's specifications, and policies and procedures of the jurisdiction, so that the operational status of the vehicle is verified:	**4.2.1**	Manufacturer specifications and requirements; policies and procedures of the jurisdiction.	• The ability to use hand tools. • Recognize system problems. • Correct any deficiency noted according to policies and procedures. • Inspect the following: 1. Battery (ies). 2. Braking system. 3. Coolant system. 4. Electrical system. 5. Fuel. 6. Hydraulic fluids. 7. Oil 8. Tires. 9. Steering system. 10. Belts. 11. Tools, appliances, and equipment. 12. Built-in safety features
Document the visual and operational checks, given maintenance and inspection forms, so that all items are checked for operation and deficiencies are reported.	**4.2.1**	• Departmental requirements for documenting maintenance performed. • The importance of keeping accurate records.	• The ability to use tools and equipment. • Complete all related departmental forms.

JPRs for Apparatus Equipped with Fire Pump **2 of 18**

NFPA Objective		Requisite Knowledge	Requisite Skill
4.3 Driving/Operating			
Operate a fire apparatus, given a vehicle and a predetermined route on a public way that incorporates the maneuvers and features that the driver/operator is expected to encounter during normal operations, so that the vehicle is operated in compliance with all applicable state and local laws, and departmental rules and regulations.	**4.3.1**	• The importance of donning passenger restraint devices and ensuring crew safety. • The common causes of fire apparatus accidents and the recognition that drivers of fire apparatus are responsible for the safe and prudent operation of the vehicle under all conditions. • The effects on vehicle control of liquid surge, braking reaction time, and load factors. • Effects of high center of gravity on roll-over potential, general steering reactions, speed and centrifugal force. • Applicable laws and regulations. • Principles of skid avoidance, night driving, shifting and gear patterns. • Negotiating intersections, railroad crossings and bridges. • Weight and height limitations for both roads and bridges. • Identification and operation of automotive gauges. • Operational limits.	• The ability to operate passenger restraint devices. • Maintain safe following distances. • Maintain control of the vehicle while accelerating, decelerating and turning, given road, weather and traffic conditions. • Operate under adverse environmental or driving surface conditions. • Use of automotive gauges and controls.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Back a vehicle from a roadway into restricted spaces on both the right and left sides of the vehicle, given a fire apparatus; a spotter where the spotter assists the driver in performing the maneuver; and restricted spaces 3.7 m (12 ft) in width, requiring 90-degree right-hand 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.	**4.2.5**	• Vehicle dimensions. • Turning characteristics. • Spotter signaling. • Principles of safe vehicle operation.	• The ability to use mirrors. • Judge vehicle clearance.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Maneuver a vehicle around obstructions on a roadway while moving forward and in reverse, given a fire apparatus; a spotter where the spotter assists the driver in performing the maneuver; and a roadway with obstructions, so that the vehicle is maneuvered through the obstructions without stopping to change the direction of travel and without striking the obstructions.	**4.3.3**	• Vehicle dimensions. • Turning characteristics. • The effects of liquid surge. • Spotter signaling. • Principles of safe vehicle operation.	• The ability to use mirrors. • Judge vehicle clearance.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Turn a fire apparatus 180 degrees within a confined space, given a fire apparatus, a spotter for backing up, and 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.	**4.3.3**	• Vehicle dimensions. • Turning characteristics. • The effects of liquid surge. • Spotter signaling. • Principles of safe vehicle operation.	• The ability to use mirrors. • Judge vehicle clearance.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Maneuver a fire apparatus in areas with restricted horizontal and vertical clearances, given a fire apparatus and a course that requires the operator to move through areas of restricted horizontal and vertical clearances, so that the operator judges the ability of the vehicle to pass through the openings and so that no obstructions are struck.	**4.3.5**	• Vehicle dimensions. • Turning characteristics. • The effects of liquid surge. • Spotter signaling. • Principles of safe vehicle operation.	• The ability to use mirrors. • Judge vehicle clearance.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Operate a vehicle using defensive driving techniques, given an assignment and a fire apparatus, so that control of the vehicle is maintained.	**4.3.6**	• The importance of donning passenger restraint devices and ensuring crew safety. • The common causes of fire apparatus accidents and the recognition that drivers of fire apparatus are responsible for the safe and prudent operation of the vehicle under all conditions. • The effects on vehicle control of liquid surge, braking reaction time, and load factors. • The effects of high center of gravity on roll-over potential, general steering reactions, speed, and centrifugal force. • Applicable laws and regulations. • Principles of skid avoidance, night driving, shifting, gear patterns. • Automatic braking systems in wet and dry conditions. • Negotiation of intersections, railroad crossings, and bridges.	• The ability to operate passenger restraint devices. • Maintain safe following distances. • Maintain control of the vehicle while accelerating, decelerating and turning, given road, weather and traffic conditions. • Operate under adverse environmental or driving surface conditions. • Use of automotive gauges and controls.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Operate all fixed systems and equipment on the vehicle not specifically addressed elsewhere in this standard, given systems and equipment, manufacturer's specifications and instructions, and departmental policies and procedures for the systems and equipment, so that each system or piece of equipment is operated in accordance with the applicable instructions and policies.	**4.3.7**	• Manufacturer's specifications and operating procedures. • Policies and procedures of the jurisdiction.	• The ability to deploy, energize and monitor the system or equipment. • Recognize and correct system problems.

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NFPA Objective		Requisite Knowledge	Requisite Skill
4.4 Fire Department Communications			
Initiate the response to a reported emergency, given the report of an emergency, fire department SOPs, and communications equipment, so that all necessary information is obtained, communications equipment is operated correctly, and the information is relayed promptly and accurately to the dispatch centre.	**4.4.1**	• Procedures for reporting an emergency. • Departmental SOPs for taking and receiving alarms, radio codes, or procedures. • Information needs of dispatch centre.	• The ability to operate fire department communications equipment. • Relay information. • Record information.
Receive a telephone call, given a fire department phone, so that procedures for answering the phone are used and the caller's information is relayed.	**4.4.2**	• Fire department procedures for answering non-emergency telephone calls.	• The ability to operate fire station telephone and intercom equipment.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Transmit and receive messages via the fire department radio, given a fire department radio and operating procedures, so that the information is accurate, complete, clear, and relayed within the time established by the AHJ.	**4.4.3**	• Departmental radio procedures and etiquette for routine traffic. • Emergency traffic. • Emergency evacuation signals.	• The ability to operate radio equipment and discriminate between routine and emergency traffic.
Activate emergency procedures, given an emergency situation and department SOPs, so that emergency actions can be initiated.	**4.4.4**	• Department SOPs. • Emergency communication procedures.	• The ability to activate emergency procedures in accordance with the department's SOPs.

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NFPA Objective		Requisite Knowledge	Requisite Skill
General Knowledge Requirements Continued...	**5.1.1**	• The organization of the fire department. • The role of the driver/operator in the organization. • The mission of fire service. • The fire department's standard operating procedures (SOPs) and rules and regulations as they apply to the driver/operator. • The value of fire and life safety initiatives in support of the fire department mission and to reduce fire fighter line-of-duty injuries and fatalities. • The role of other agencies as they relate to the fire department. • Aspects of the fire department's member assistance program. • The importance of physical fitness and a healthy lifestyle to the performance of the duties of a fire fighter. • The critical aspects of NFPA 1500.	

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NFPA Objective		Requisite Knowledge	Requisite Skill
Perform the visual and operational checks 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.	**5.2.1**	• Manufacturer's specifications and operating procedures. • Policies and procedures of the jurisdiction.	• The ability to use hand tools. • Recognize system problems. • Correct any deficiency noted according to policies and procedures.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Respond on apparatus to an emergency scene, given safety equipment as provided by the AHJ, so that the apparatus is correctly mounted and dismounted and seat belts are used while the vehicle is in motion. Continued…	**5.2.2**	• Mounting and dismounting procedures for riding fire apparatus. • Hazards and ways to avoid hazards associated with riding apparatus. • Prohibited practices. • Types of department safety equipment and the means for usage.	• The ability to use each piece of provided safety equipment.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Establish and operate in work areas at emergency and nonemergency scenes, given safety equipment, traffic and scene control devices, emergency and nonemergency scenes, traffic and other hazards, an assignment, and SOPs, so that procedures are followed, safety equipment is utilized, protected work areas are established as directed using traffic and scene control devices, and the driver/operator performs assigned tasks only in established, protected work areas.	**5.2.2**	• Potential hazards involved in operating on emergency and nonemergency scenes including vehicle traffic. • Utilities. • Environmental conditions. • Proper procedures for dismounting apparatus in traffic. • Procedures for safe operation at emergency and nonemergency scenes. • The safety equipment available for members on emergency and nonemergency scenes.	• The ability to use safety equipment. • Deploy traffic and scene control devices. • Dismount apparatus. • Establish and operate in the protected work areas as directed.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Connect a fire department pumper to a water supply as a member of a team, given supply or intake hose, hose tools, and a fire hydrant or static water source, so that connections are tight and water flow is unobstructed. Continued…	**5.2.3**	• Loading and off-loading procedures for mobile water supply apparatus. • Fire hydrant operation. • Suitable static water supply sources. • Procedures. • Protocol for connecting to various water sources.	• The ability to hand lay a supply hose. • Connect and place hard suction hose for drafting operations. • Deploy portable water tanks as well as the equipment necessary to transfer water between and draft from them. • Make hydrant-to- pumper hose connections for forward and reverse lays. • Connect supply hose to a hydrant. • Fully open and close the hydrant.

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NFPA Objective		Requisite Knowledge	Requisite Skill
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 monitored for potential problems: (1) Internal tank. (2) Pressurized source. (3) Static source. (4) Transfer from internal tank to external source.	**5.2.4**	• Hydraulic calculations for friction loss and flow using both written formulas and estimation methods. • Safe operation of pump. • Problems related to small-diameter or dead-end mains. • Low-pressure and private water supply systems. • Hydrant coding systems. • Reliability of static sources.	• 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. • Assemble hose lines, nozzles, valves and appliances.

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NFPA Objective		Requisite Knowledge	Requisite Skill
Pump a supply line of 65mm (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.	**5.2.5**	• 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. • Reliability of static sources.	• 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. • Assemble hose lines, nozzles, valves and appliances.
Produce a foam fire stream, given foam-producing equipment, so that properly proportioned foam is provided. Continued…	**5.2.6**	• Proportioning rates and concentrations. • Equipment assembly procedures. • Foam system limitations. • Manufacturer's specifications.	• The ability to operate foam proportioning equipment. • Connect foam stream equipment.

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NFPA Objective		Requisite Knowledge	Requisite Skill
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.	**5.3.1**	• Calculation of pump discharge pressure. • Hose layouts. • Location of fire department connection. • Alternative supply procedures if the 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. • Operating principles of standpipe systems as defined in NFPA 14.	• 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. • Assemble hose lines, nozzles, valves and appliances.

JPRs for Apparatus Equipped with an Aerial Device **1 of 4**

NFPA Objective		Requisite Knowledge	Requisite Skill
6.1 Apparatus Equipped with an Aerial Device - General			
Perform the visual and operation checks on the systems and components specified in the following list in addition to those specified in 4.2.1, given a fire department aerial apparatus, and policies and procedures of the jurisdiction, so that the operational readiness of the aerial apparatus is verified: (1) Cable systems (if applicable). (2) Aerial device hydraulic systems. (3) Slides and rollers. (4) Stabilizing systems. (5) Aerial device safety systems. (6) Breathing air systems. (7) Communication systems.	**5.4.1**	• Manufacturer's specifications and requirements. • Policies and procedures of the jurisdiction.	• The ability to use hand tools. • Recognize system problems. • Correct any deficiency noted according to policies and procedures.

JPRs for Apparatus Equipped with an Aerial Device **2 of 4**

NFPA Objective		Requisite Knowledge	Requisite Skill
6.2 Operations			
Maneuver and position an aerial apparatus, given an aerial apparatus, an incident location, a situation description, and an assignment, so that the apparatus is positioned for correct aerial device deployment.	**6.2.1**	• Capabilities and limitations of aerial devices related to: o reach. o tip load. o angle of inclination. o angle from chassis axis. • Effects of topography, ground, and weather conditions on deployment. • Use of aerial device.	• The ability to determine a correct position for the apparatus. • The ability to maneuver apparatus into that position. • Avoid obstacles to operations.
Stabilize an aerial apparatus, given a positioned vehicle and the manufacturer's recommendations, so that power can be transferred to the aerial device hydraulic system and the device can be deployed. Continued…	**6.2.2**	• Aerial apparatus hydraulic systems. • Manufacturer's specifications for stabilization. • Stabilization requirements. • Effects of topography and ground conditions on stabilization.	• The ability to transfer power from the vehicle's engine to the hydraulic system. • Operate vehicle stabilization devices.

JPRs for Apparatus Equipped with an Aerial Device **3 of 4**

NFPA Objective		Requisite Knowledge	Requisite Skill
Maneuver and position the aerial device from each control station, given an incident location, a situation description, and an assignment, so that the aerial device is positioned to accomplish the assignment. Continued…	**6.2.3**	• Aerial device hydraulic systems. • Hydraulic pressure relief systems. • Gauges and controls. • Cable systems. • Communication systems. • Electrical systems. • Emergency operating systems. • Locking systems. • Manual rotation and lowering systems. • Stabilizing systems. • Aerial device safety systems. • System overrides and the hazards of using overrides. • Safe operational limitations of the given aerial device. • Safety procedures specific to the device. • Operations near electrical hazards and overhead obstructions.	• The ability to raise the aerial device. • Rotate the aerial device. • Extend the aerial device. • Position to a specified location. • Lock the aerial device. • Unlock the aerial device. • Retract the aerial device. • Lower the aerial device. • Bed the aerial device.

JPRs for Apparatus Equipped with an Aerial Device **4 of 4**

NFPA Objective		Requisite Knowledge	Requisite Skill
Lower an aerial device using the emergency operating system, given an aerial device, so that the aerial device is lowered to its bedded position.	**6.2.4**	• Aerial device hydraulic systems. • Hydraulic pressure relief systems. • Gauges and controls. • Cable systems. • Communication systems. • Electrical systems. • Emergency operating systems. • Locking systems. • Manual rotation and lowering systems. • Stabilizing systems. • Aerial device safety systems. • System overrides and the hazards of using overrides. • Safe operational limitations of the given aerial device. • Safety procedures specific to the device. • Operations near electrical hazards and overhead obstructions.	• The ability to rotate and position to center. • Unlock the aerial device. • Retract the aerial device. • Lower the aerial device. • Bed the aerial device using the emergency operating system.
Deploy and operate an elevated master stream, given an aerial device, a master stream device, and a desired flow, so that the stream is effective.	**6.2.5**	• Nozzle reaction. • Range of operation. • Weight limitations.	• The ability to connect a water supply to a master stream device. • Control an elevated nozzle.

Application Form:
NFPA 1002 – Fire Apparatus Driver/Operator

Refer to Appendix D of the Evaluation and Certification Guide before completing this form. The Evaluation and Certification Guide is available on our website.

Contact Information:

Name: _____ (First Name) _____ (Initial/Middle Name) _____ (Surname)

Home Address: _____ (Address) _____ (City/Town) _____ (Postal Code)

Phone Number: _____ (Home Phone) _____ (Work Phone) _____ (Mobile Phone)

Email Address: _____ Date of Birth: _____ (MM-DD-YYYY)

Employment/Membership:

_____ Emergency Services Organization

_____ Name of Chief/Supervisor

Cerification Lebel & Prerequisites:

Select one level only - prerequisites must be completed before making application

Apparatus Equipped with Fire Pump The following prerequisites must be completed to be eligible for certification:

- ☐ I am a member in good standing of a Fire Department or other eligible emergency service
- ☐ I have completed the Job Performance Requirements listed in Appendix D of the Evaluation and Certification Guide
- ☐ I possess a current valid Saskatchewan Drivers License and am not prohibited from driving
- ☐ I am Certified at Level 1 in NFPA 1001 Fire Fighting Professional Qualifications

IFSAC Certificate Number _____ *Include a photocopy of your Certificate with this application*

Apparatus Equipped with Aerial Device The following prerequisites must be completed to be eligible for certification:

- ☐ I am a member in good standing of a Fire Department or other eligible emergency service
- ☐ I have completed the Job Performance Requirements listed in Appendix D of the Evaluation and Certification Guide
- ☐ I possess a current valid Saskatchewan Drivers License and am not prohibited from driving
- ☐ I am Certified at the **Apparatus Equipped with Fire Pump** level in NFPA 1002 - Fire Apparatus Driver/Operator

IFSAC Certificate Number _____ *Include a photocopy of your Certificate with this application*

Declaration

Practical evaluations for Certification may be physically strenuous and potentially hazardous. Your signature below indicates that you understand the demands that will be placed on you during testing – and – that you are physically capable of taking part in all practical evaluation sessions required for the Level you have selected above.

Signature: _____ Date: _____

Complete and return this form to:

Saskatchewan Public Safety Agency,
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Fax: (306) 787-7107