

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

NFPA 1002 - 2017 Edition

Prerequisite – Current certifications for NFPA 1003 ARFF, NFPA 1001 Fire Fighter II

A completed application and payment plan are required one week before taking the Fire Apparatus Driver Operation – ARFF test. The candidate must have the knowledge and skills as outlined in NFPA 1002, 2017 Edition.

There are several ways to obtain this knowledge such as technical college program, individual fire department training, training organizations, self-study... The Minnesota Fire Service Certification Board does not provide any training nor do we provide examination reviews

Standard: NFPA 1002, 2017 Edition

The questions and skills tested are designed to test the candidate on the knowledge and proficiencies as outlined in NFPA 1002 for Fire Apparatus Driver/Operator. All questions have been referenced to a specific standard in NFPA 1002.

Reference List (V9.0) The textbooks listed below were used in developing the test questions and the practical exams for the Certification test. The candidate should have knowledge of the information contained in the related books below:

- NFPA 1002, Standard on Fire Apparatus Drive/Operator Professional Qualifications, 2017 Edition
- IFSTA, Airport Rescue and Fire Fighting, 6th Edition

Test

The test is in two parts, a written test and a Skills Test. The written test is made up of 100 multiple-choice questions selected at random from a test bank of 263 questions. A score of 70% (adjusted by standard measurement of error) must be achieved in order to achieve a passing score. The Skills Test will consist of four to five stations where the candidate must demonstrate skills in a number of areas. Candidates will have 100 minutes (1 minute per question) to complete the written test and will be given a reasonable amount of time as determined by the evaluator, to complete the practical skills.

Test Cost

\$150.00

NOTE: Candidate must supply OSHA approved Protective Equipment.

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

Re-certification

- Every three years - 48 hours total of a combination of Service Delivery, Task Performance, and/or Training/Education with a minimum of 24 hours of Training/Education.
 - NFPA 1002 (2017 Edition) 1.2.6 Emergency response personnel who drive and operate fire apparatus shall remain current with the general knowledge, skills, and JPRs addressed for each level or position of qualification. Emergency response personnel who drive and operate fire apparatus shall remain current with practices and applicable standards and shall demonstrate competency on an annual basis.
- Re-certification Cost: \$25.00

Minnesota Fire Service Certification Fire Apparatus Operator – ARFF

Apparatus Driver Operator- ARFF

NFPA 1002 2017 Edition



Requirements:

1. Hold current certifications for NFPA 1003 Airport Fire Fighter and NFPA 1001 Fire Fighter II.
2. Completed application form and fee of \$150 is covered.
3. Candidate will be required to complete skill stations 1-3, either Station 4 or 5 as determined at random by the evaluator AND Skill Station 6 if they do not hold a current Fire Fighter I or II certification.
4. PPE is required (no SCBA).
5. Candidate will be required to provide and operate fire apparatus.
 - a. Your department must provide the apparatus you test on.
6. Candidate shall be licensed to drive all vehicles they are expected to operate.

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

STATION 1

ARFF APPARATUS ROUTINE INSPECTION

Candidate: _____

Evaluator: _____

Tested Standard: NFPA 1002 (2017) 4.2.1, 4.2.2, 9.1.1

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. Document the visual and operational checks, given maintenance and inspection forms, so that all items are checked for operation and deficiencies are reported. Perform visual and operational checks on the systems and components specified in the following list, in addition to those in 4.2.1, given an ARFF vehicle and the manufacturer's servicing, testing, and inspection criteria; and policies and procedures of the jurisdiction, so that the operational status of the vehicle is verified.

OBJECTIVE: Given an ARFF vehicle, perform a routine vehicle pre-trip inspection to verify that the apparatus is operational.

Performed visual and operational checks of the following systems and components and inspect the following:

	<u>Deduction Points</u>
Batteries for corrosion and loose cable connections	_____5
Braking system operation	_____5
Coolant system hoses and fluid level	_____5
Electrical system for proper voltage	_____5
Fuel level	_____5
Hydraulic fluid level (If applicable)	_____5
Engine oil level	_____5
Tires for proper inflation	_____5
Steering system fluid level and steering wheel play of less than 10 degrees in either direction.	_____5
Belts for excessive wear and proper tension	_____5
Any built-in safety features for proper operation and condition	_____5
Secondary extinguishing systems	_____5
Vehicle mounted breathing air systems	_____5
Ensure that all tools, appliances, and equipment are operational	_____5
Checked water tank and other extinguishing agent (if equipped) levels	_____5
Recognize system problems and corrected any deficiencies in accordance with departmental policies and procedures and manufacturer specifications.	_____10

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

STATION 1

ARFF APPARATUS ROUTINE INSPECTION (CONTINUED)

Document inspection, including any deficiencies found, on the appropriate form(s)
according to department requirements to ensure accurate recordkeeping. _____5
Verified operational status of the vehicle _____10

Total Points Possible 100

Total Deductions _____

Score _____

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

SKILL STATION 2 OPERATE FIXED SYSTEMS

Candidate: _____

Evaluator: _____

Tested Standard: NFPA 1002 (2017) 4.3.7

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.

OBJECTIVE: Given an ARFF apparatus, operate fixed systems and equipment found on the vehicle.

Deduction Points

Deployed equipment	_____15
Energized or started equipment	_____15
Operated equipment in accordance to manufacturer specifications and departmental policies and procedures	_____15
Monitored the equipment for problems	_____10
Corrected any equipment problems	_____10
De-energized equipment	_____10
Re-serviced equipment	_____15
Stowed equipment on apparatus	_____10

Total Points Possible 100

Total Deductions _____

Score _____

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

SKILL STATION 3

ARFF APPARATUS POSITIONING AND OPERATION

Candidate: _____

Evaluator: _____

Tested Standard: NFPA 1002 (2017) 9.2.1, 9.2.2, & 9.2.3

Maneuver and position an ARFF vehicle, given an incident location and description that involves the largest aircraft that uses the airport, so that the vehicle is positioned for correct operation at each operational position for the aircraft. Produce a fire stream while the vehicle is in both forward and reverse power modulation, given a discharge rate and intended target, so that the pump is engaged, the turrets are deployed, the agent is delivered to the intended target at the correct rate, and the apparatus is moved and monitored for potential problems. Produce a fire stream, given a rate of discharge and water supplied from the sources specified in the following list, so that the pump is engaged, the turrets are deployed, the agent is delivered to the intended target at the correct rate, and the apparatus is continuously monitored for potential problems.

OBJECTIVE: Given an ARFF apparatus, maneuver and position the apparatus for operation. Maneuver the apparatus while producing a fire stream at the turret's specified flow rate so that it reaches the intended target. Produce a fire stream from various water sources at the turret's specified flow rate so that it reaches the intended target.

Identified and explained the following:

	<u>Deduction Points</u>
Control tower lighting signals, airport marking and aircraft types	_____5
Aircraft entry and egress points, danger areas & apparatus placement	_____5
Theoretical & critical fire areas	_____5
Principles of agent management & application	_____5
Effects of terrain and wind on agent application, distribution rates, & density	_____5
Capabilities and limitations of turret devices	_____5
Determined the proper vehicle position for rescue operations	_____5
Determined the proper vehicle position for firefighting operations	_____5
Maneuvered the vehicle into proper position for firefighting and/or rescue operations while avoiding obstacles	_____10
Positioned the vehicle within reach capabilities of the turret device	_____10
Engaged the pump	_____5
Deployed the turrets	_____5
Delivered agent to the intended target at the turrets specified flow rate	_____5
Determined the length of time that agent will last	_____5

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

SKILL STATION 3

ARFF APPARATUS POSITIONING AND OPERATION (CONTINUED)

Maneuvered the vehicle in forward motion while moving agent	_____5
Maneuvered the vehicle in reverse motion while moving agent	_____5
Monitored the vehicle for potential problems	_____10

Total Points Possible 100

Total Deductions _____

Score _____

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

SKILL STATION 4

AIRPORT ROADWAY AND OFF-ROAD DRIVING

Candidate: _____

Evaluator: _____

Tested Standard: NFPA 1002 (2017) 9.1.2, & 9.1.3

Operate an ARFF apparatus, given a predetermined route, on an airport that includes the maneuvers listed in 4.3.1, and operation in all aircraft movement areas, so that the vehicle is operated in compliance with all applicable federal, state/provincial, and local laws and departmental rules and regulations.

Operate an ARFF apparatus, given a predetermined route, off of an improved surface, that incorporates 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 departmental rules and regulations and the design limitations of the vehicle.

OBJECTIVE: Given an ARFF vehicle, drive the vehicle on paved airport and off improved surfaces that incorporate maneuvers and features that the driver/operator may encounter during normal operations.

Vehicle:

Effects of liquid surge, braking reaction time, & load factors on vehicle control _____5
Effects of center of gravity on roll-over potential, steering reactions, speed
& centrifugal force. _____5
Skid avoidance, shifting, & other operational limits of the vehicle _____5
Identified & maintained awareness of vehicle gauges and instruments _____5

Airfield:

Control tower light signals, airfield markings, runway and taxiway
designations, aircraft movement areas, & air and vehicle operations _____5
Emergency and non-emergency vehicle operations _____5
Hazards of driving with obscured vision including driving at night
or through smoke _____5

Driving:

Checked & adjusted driver's seat, vehicle mirrors, and controls _____5
Ensured all occupant restraints are secured before putting vehicle in motion _____FAIL
Maneuvered vehicle through turns and curves safely _____10
Maneuvered vehicle through turns intersections safely _____10

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

SKILL STATION 4

AIRPORT ROADWAY AND OFF-ROAD DRIVING (CONTINUED)

Maneuvered vehicle on or under bridges & negotiated railroad crossings verifying height clearances & weight restrictions. (if applicable to jurisdiction)	_____10
Maneuvered upgrades and downgrades safely	_____10
Operated vehicle under adverse environmental or off-road surface conditions	_____10
Maintained control of vehicle, traveling at safe speeds & operated vehicle in accordance with applicable laws and airport rules	_____10

Total Points Possible 100

Total Deductions _____

Score _____

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

SKILL STATION 5 OBSTACLE DRIVING

Candidate Number _____

Evaluator: _____

Tested Standard: NFPA 1002 (2017 Edition) Section: 4.3.2, 4.3.3, 4.3.4, 4.3.5 & 4.3.6

Back a vehicle from a roadway into restricted spaces on both the right and left sides of the vehicle, given a fire department vehicle, a spotter, 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. (4.3.2)

Maneuver a vehicle around obstructions on a roadway while moving forward and in reverse, given a fire department vehicle, a spotter for backing, 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)

Turn a fire department vehicle 180 degrees within a confined space, given a fire department vehicle, 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. (4.3.4)

Maneuver a fire department vehicle in areas with restricted horizontal and vertical clearances, given a fire department vehicle and a course that requires the operator to move through areas of restricted horizontal and vertical clearances, so that the operator accurately judges the ability of the vehicle to pass through the openings and so that no obstructions are struck. (4.3.5)

Operate a vehicle using defensive driving techniques under emergency conditions, given a fire department vehicle and emergency conditions, so that control of the vehicle is maintained. (4.3.6)

OBJECTIVE: The candidate will, given a Fire Department pumper, perform three of the following maneuvers in a safe manner and in compliance with all state and local laws: 1.) back a vehicle from a roadway into restricted places on both the right and left sides of the vehicle, given a spotter and restricted spaces 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 obstacles, 2.) maneuver a vehicle around obstructions on a roadway while moving forward and in reverse, given a spotter for backing and a roadway with obstructions, so that the vehicle is maneuvered through the obstructions without stopping to change the direction of traffic and without striking the obstructions, 3.) turn a vehicle 180 degrees within a confined space, given a spotter for backing, 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.) maneuver a vehicle in areas with

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

SKILL STATION 5 OBSTACLE DRIVING (CONTINUED)

restricted horizontal and vehicle clearances, given a course with areas of restricted horizontal and vertical clearances, so that the operator accurately judges the ability of the vehicle to pass through the openings and so that no obstructions are struck and 5.) Operate a fire department pumper using defensive driving techniques, so that control of the vehicle is maintained

Competencies:

Backing

1. Back the vehicle into an alley dock from the left
(Criteria: Traffic Observation, Roadway Observation, Signaling, Observation of Spotter, Mirror Usage, No stopping until maneuver is complete, Does not strike course boundaries)
2. Back the vehicle into an alley dock from the right.
(Criteria: Traffic Observation, Roadway Observation, Signaling, Observation of Spotter, Mirror Usage, No stopping until maneuver is complete, Does not strike course boundaries)

Maneuver/Turn/Restricted Clearances:

1. Maneuver the vehicle through a serpentine forward and reverse
(Criteria: Does not hit course boundaries, appropriate speed, Spotter Observation, Mirror Usage)
2. Turning in a confined space, perform an restricted area Y-turn.
(Criteria: Does not hit course boundaries, Stopping, Spotter Observation, Acceleration)

Diminishing Clearances:

1. Drive the vehicle through a diminishing clearance obstacle.
(Criteria: Appropriate speed, does not strike horizontal or vertical boundaries)
2. Drive the vehicle through an offset lane change obstacle.
(Criteria: Appropriate speed, does not strike boundaries, and maintain safe distances)

Emergency Driving:

1. Drive the vehicle safely under simulated emergency conditions
(Criteria: Appropriate speed, Right of way, safe distances, audible and visual signals activated)
2. Drive the vehicle safely through controlled intersection.
(Criteria: Appropriate speed, Right of way, audible and visual signals activated)

General:

1. Operate passenger restraint devices
2. Maintain safe following distances.
3. Maintain control of vehicle while accelerating, decelerating, and turning in all conditions.
4. Proper use of mirrors
5. Use of automotive gauges and controls
6. Operate under adverse environmental or driving surface conditions.

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

SKILL STATION 5 OBSTACLE DRIVING (CONTINUED)

Candidate Number _____

Evaluator: _____

Did the candidate, as instructed, demonstrate competency in the following:

Deduction Points

Back the vehicle into an alley dock from the left	_____ 10
Back the vehicle into an alley dock from the right	_____ 10
Maneuver the vehicle through a serpentine forward and reverse	_____ 10
Turning in a confined space/perform a restricted area Y-turn.	_____ 10
Drive the vehicle through a diminishing clearance obstacle.	_____ 10
Drive the vehicle through an offset lane change obstacle.	_____ 10
Drive the vehicle safely under simulated emergency conditions	_____ 10
Drive the vehicle safely through controlled intersection	_____ 10
Operate passenger restraint devices	_____ Fail
Maintain safe following distances	_____ Fail
Maintain control of vehicle while accelerating, decelerating, and turning in all conditions	_____ Fail
Proper use of mirrors	_____ 10
Use of automotive gauges and control.	_____ 10

Total Points Possible 100

Total Deductions _____

Score _____

Minnesota Fire Service Certification

Fire Apparatus Operator – ARFF

SKILL STATION 6

FIRE DEPARTMENT COMMUNICATIONS

Candidate Number _____

Evaluator: _____

Tested Standard: NFPA 1002 (2017 Edition) Section: 4.4.1, 4.4.2, 4.4.3 & 4.4.4

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 center (4.4.1)

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)

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)

Activate emergency procedures, given an emergency situation and department SOPs, so that emergency actions can be initiated. (4.4.4)

OBJECTIVE: The candidate, given a scenario; shall demonstrate competencies as detailed below with respect to fire department communication devices and fire department policies and procedures.

Note: This station only required for those not holding a current Fire Fighter I Certificate.

Did the candidate, as instructed, demonstrate competency in the following:

	<u>Deduction Points</u>
The ability to operate fire department communications equipment	_____ 10
Correctly relay information	_____ 10
Record information received	_____ 10
Follow fire department procedures for answering nonemergency telephone calls	_____ 10
Follow departmental radio procedures and etiquette for routine traffic	_____ 15
Follow protocol on Emergency traffic	_____ 15
Demonstrate Emergency evacuation signals	_____ 15
The ability to activate emergency procedures in accordance with the department's SOPs	_____ 15

Total Points Possible 100

Total Deductions _____

Score _____