



DEPARTMENT OF FINANCIAL SERVICES

Division of State Fire Marshal
Bureau of Fire Standards and Training

Title: RN3267 FLUSAR Vehicle Machinery Rescue Operations

Effective Date: May 01, 2016

Revision Date: July 16, 2019

Section I - Course Information

Course Title: FLUSAR Vehicle Machinery Rescue Operations

Course Number(s): RN3267

Class Days/Time: If being taught at the Florida State Fire College Campus 11655 NW Gainesville Road, Ocala, FL 34482 Bldg. C – Classrooms – Monday - Friday 8 a.m.- 5 p.m.

Section II - Points of Contact

Training Supervisor:

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Section III – Course Description

Vehicle and Machinery Rescue Operations is designed to teach light vehicle and machinery rescue. The student will gain the knowledge to recognize hazards, how to use equipment, and implement techniques necessary to operate safely and effectively at incidents involving persons injured or entrapped in a typical vehicle commonly found in the jurisdiction. Students will learn the following through practical skills evolutions and scenarios:

- How to perform extrication and disentanglement operations
- Stabilize a common passenger vehicle
- Determine common passenger vehicle access and egress points
- Operate powered hydraulic rescue tools
- Isolate and manage potentially harmful energy sources
- Determine small machinery access and egress points
- Disentangle victim(s) given an extrication involving a small or simple machine.

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Section IV - Course Materials, Grading, and Attendance

Recommended Book: Copy of NFPA 1670 and Florida Vehicle Machinery Rescue Operations Task Book (DFS-K4-2156)

Prerequisite(s): RN3268 FLUSAR Rope Rescue Operations

Contact Hours: This class has 40 contact hours.

Continuing Educations Units (CEU's): None

Pre-Course Assignment: None

Required Materials: A complete materials list can be obtained by going to the provided hyper link at: <http://www.flrules.org/Gateway/reference.asp?No=Ref-07236>

NOTE: Students must bring gloves, hardhat and proper attire for rope rescue operation exercises.

Grading: Students must achieve a minimum cumulative score of 70% to pass this course. Course grades are determined from assignments and activities including, but not limited to homework, projects, quizzes, exams, presentations and practical skills. The instructor also has the discretion to award (**but not deduct**) points based on course participation. Below is the breakdown of the final accumulative grading:

- Homework 20 points
- Final Written Exam 40 points
- Final Practical Exam 40 points

Attendance: Students are required to attend all sessions of the course.

- Excused absences - Students are permitted excused absences totaling no more than 10% of class (4 hours maximum); the instructor shall be the sole determining authority in the determination of an excused absence and may assign supplemental work to make up for missed class time.
- Unexcused absences - The instructor shall be the sole determining authority in the determination of an unexcused absence (i.e. "no call, no show"). The instructor has no obligation to offer the student an opportunity to make up assignments, including quizzes and/or exams, but may do so at his/her discretion.

Section V - Instructor Qualifications

As per Chapter 69A-37.065, Florida Administrative Codes, *Programs of Study and Vocational Courses*, instructors must meet the following qualifications to be authorized to teach this course:

F.A.C. 69A-37.065(7)(a)(3) Instructor Qualifications: An instructor providing training under this paragraph (a), must be qualified by the Bureau of Fire Standards and Training within the Division. Qualified instructors are:

3. Instructor Qualifications. An instructor providing training under this section must be qualified and approved by the Bureau. All instructors shall submit an Instructor Approval Request Form DFS-K4-2168 at this link: https://floridastatefirecollege.org/provider/pr_instructor_app.asp, which is incorporated by reference in subsection 69A-37.039(2), F.A.C., and can be obtained where indicated in subsection 69A-37.039(1), F.A.C., and be approved by the Bureau prior to the first day of the course. Qualified instructors are:

- a. Instructors with requisite faculty credentials for the academic institution that is registered in the Florida Department of Education Statewide Course Numbering System to teach the course; or
- b. Instructors with requisite faculty credentials as determined by the United States Fire Administration – National Fire Academy; or
- c. Instructors with requisite faculty credentials as determined by the respective regionally accredited or nationally accredited university or college; or
- d. Instructors who hold an active Single Course Exemption Certification issued by the Division as outlined in subsection 69A-37.059(4), F.A.C.; or
- e. Florida Instructor I, II, or III, as defined in rule 69A-37.059, F.A.C., who has completed the required courses under this paragraph (7)(a), which is recorded in the Bureau’s database. These instructors are known as Adjunct Instructors and are approved to teach courses under the supervision of a Lead Instructor; or
- f. Florida Instructor I, II, or III, as defined in rule 69A-37.059, F.A.C., who has completed the required courses under this paragraph (7)(a), and has previously taught this course as an Adjunct Instructor which was recorded in the Bureau’s database. These instructors are known as Lead Instructors.

Section VI – Job Performance Requirements Applicable Fire and Life Safety Initiatives

Given information from discussion and reading materials, the student will satisfy the Job Performance Requirements (JPR) of the applicable National Fire Protection Association (NFPA) standards, as well as any applicable skill sheets.

NFPA 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents*, 2014 Edition

Chapter 8

8.1* General Requirements. Organizations operating at vehicle search and rescue incidents shall meet the requirements specified in Chapter 4.

8.2 Awareness Level

8.2.1 Organizations operating at the awareness level for vehicle emergencies shall meet the requirements specified in Section 8.2.

8.2.2 All members of the organization shall meet the requirements specified in Chapter 4 of NFPA 472, *Standard for Competence of Responders at Hazardous Materials/Weapons of Mass Destruction Incidents*, commensurate with the organization's needs.

8.2.3 Organizations operating at the awareness level for vehicle emergencies shall implement procedures for the following:

- (1) Recognizing the need for a vehicle search and rescue
- (2)*Identifying the resources necessary to conduct operations
- (3)*Initiating the emergency response system for vehicle search and rescue incidents
- (4)*Initiating site control and scene management
- (5)*Recognizing general hazards associated with vehicle search and rescue incidents
- (6) Initiating traffic control

8.3 Operations Level

8.3.1 Organizations operating at the operations level for vehicle emergencies shall meet the requirements specified in Sections 8.2 and 8.3.

8.3.2 All members of the organization shall meet the requirements of Chapter 5 of NFPA 472, *Standard for Competence of Responders at Hazardous Materials/Weapons of Mass Destruction Incidents*, commensurate with the organization's needs.

8.3.3*The organization shall have members capable of recognizing hazards, using equipment, and implementing techniques necessary to operate safely and effectively at incidents involving persons injured or entrapped in a typical vehicle commonly found in the jurisdiction.

8.3.4 Organizations operating at the operations level for vehicle emergencies shall develop and implement procedures for the following:

- (1)*Sizing up existing and potential conditions at vehicle search and rescue incidents
- (2) Identifying probable victim locations and survivability
- (3)*Making the search and rescue area safe, including identifying and controlling the hazards presented by the vehicle, its position, or its systems
- (4)*Identifying, containing, and stopping fuel release
- (5) Protecting a victim during extrication or disentanglement
- (6) Packaging a victim prior to extrication or disentanglement
- (7)*Accessing victims trapped in a typical vehicle commonly found in the jurisdiction
- (8)*Performing extrication and disentanglement operations involving packaging, treating, and removing victims trapped in a typical vehicle commonly found in the jurisdiction through the use of hand and power tools
- (9)*Mitigating and managing general and specific hazards associated with vehicle search and rescue incidents that involve vehicles typically found in the jurisdiction
- (10) Procuring and utilizing the resources necessary to conduct vehicle search and rescue operations
- (11) Maintaining control of traffic at the scene of vehicle search and rescue incidents

Chapter 12 Machinery Search and Rescue

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12.1* General Requirements. Organizations operating at machinery search and rescue incidents shall meet the requirements specified in Chapter 4.

12.2 Awareness Level.

12.2.1 Organizations operating at the awareness level for machinery emergencies shall meet the requirements specified in Section 12.2.

12.2.2 All members of the organization shall meet the requirements specified in Chapter 4 of NFPA 472, *Standard for Competence of Responders at Hazardous Materials/Weapons of Mass Destruction Incidents*, commensurate with the organization's needs.

12.2.3 Organizations operating at the awareness level for machinery emergencies shall implement procedures for the following:

- (1) Recognizing the need for a machinery search and rescue
- (2)*Identifying the resources necessary to conduct operations
- (3)*Initiating the emergency response system for machinery search and rescue incidents
- (4)*Initiating site control and scene management
- (5)*Recognizing general hazards associated with machinery search and rescue incidents

12.3 Operations Level.

12.3.1 Organizations operating at the operations level for machinery emergencies shall meet the requirements specified in Sections 12.2 and 12.3.

12.3.2 All members of the organization shall meet the requirements specified in Chapter 5 of NFPA 472, *Standard for Competence of Responders at Hazardous Materials/Weapons of Mass Destruction Incidents*, commensurate with the organization's needs.

12.3.3 The organization shall have members capable of recognizing hazards, using equipment, and implementing techniques necessary to operate safely and effectively at incidents involving persons injured or entrapped in a small machine. (Refer to the definition *small machine* in NFPA 1006, *Standard for Technical Rescuer Professional Qualifications*.)

12.3.4 Organizations operating at the operations level for machinery emergencies shall develop and implement procedures for the following:

- (1)*Sizing up existing and potential conditions at machinery search and rescue incidents
- (2) Identifying probable victim locations and survivability
- (3)*Making the search and rescue area safe, including the stabilization and isolation (e.g., lockout/tagout) of all machinery involved
- (4)*Identifying and controlling the hazards presented by the release of fluids as gases associated with the machinery, which include, but are not limited to, fuel, cutting or lubricating oil, and cooling water
- (5) Protecting a victim during extrication or disentanglement
- (6) Packaging a victim prior to extrication or disentanglement
- (7) Accessing victims trapped in machinery

(8)*Performing extrication and disentanglement operations involving packaging, treating, and removing victims trapped in machinery where the entrapment is limited to digits or where the machine can be simply disassembled, or is constructed of lightweight materials that can be cut, spread, or lifted and has only simple hazards that are readily controlled

(9)*Mitigating and managing general and specific hazards associated with machinery search and rescue incidents

(10) Procuring and utilizing the resources necessary to conduct machinery search and rescue operations

(11)*Identifying potential emergency events in buildings where mechanical equipment exist, such as elevators, and developing preplans

12.3.5 Rescue members shall make provisions for fall protection or protection for both rescuers and subjects when working in areas where potential falls can occur.

Section VII –Suggested Plan of Instruction

The following is the plan of instruction used during course offerings held at the Florida State Fire College. It also serves as the suggested instructional block format for other approved training providers who use the recommended text book. All class offerings **must** satisfy the JPRs listed in *Section VI – Job Performance Requirements* regardless of textbook used.

Day/Date	Chapters	Activities
Day 1	Class Introductions and Orientation Vehicle and Machinery Operations Level Overview Extrication Equipment (overview/operation) -Skill Stations: -Stabilization -Lifting Techniques -Glass Removal -Displacement Practices	<ul style="list-style-type: none"> • Introductions • Practical skills • Homework
Day 2	Review of Homework Stabilization Practices Cutting Practices Hydraulic Tool Orientation Evolutions	<ul style="list-style-type: none"> • Practical skills • Homework
Day 3	Review of Homework Extrication Lecture Victim Packaging and Removal Evolutions Extrication Evolutions Tunneling Evolutions	<ul style="list-style-type: none"> • Practical skills • Homework

Day 4	Review of Homework Extrication Evolutions Multiple Configuration Evolutions/Scenarios	<ul style="list-style-type: none"> • Practical skills • Homework
Day 5	Review of Homework Final Written Exam Final Practical Exam Course Completion	<ul style="list-style-type: none"> • Final written exam • Final practical exam

Section VIII – Final Practical and Grading Rubric

Description of Assignment:

The Final Practical Skills Check-off is designed for the student to demonstrate competency of the skills identified through the following JPR's in NFPA 1670 utilizing the state task book for completion.

Format and Grading of Assignment:

Students will be given a practical skills evaluation based on those acquired skills learned under NFPA 1670 JPRs. A Pass/Fail will be applied based on the State task book assignments for the final course grade.

Section IX – Review Date and Author

May 01, 2016	Unknown
July 16, 2019	Kenneth Kurth