

**New Hampshire Department of Safety
Division of Fire Standards and Training & Emergency Medical Services**

DRIVER / OPERATOR – ALL VEHICLES

2017 EDITION



COURSE SUMMARY & OUTLINE



Driver/Operator-All Vehicles

2017 Edition

Course Summary

Description	<p>The Driver/Operator-All Vehicles course is designed to provide emergency medical services providers and firefighters with the fundamental knowledge and skills required to drive and operate modern emergency vehicles safely and efficiently. Topics covered include vehicle terminology, design and construction, driving skills, emergency response considerations and skills, and basic maintenance considerations and skills. Additionally, the course includes the National Traffic Incident Management Responder Training program.</p>
NFPA Standard Referenced	<p>NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications, 2017 edition</p>
Textbook Referenced	<p>IFSTA Pumping and Aerial Apparatus Driver/Operator Handbook, Third edition</p>
Additional References	<ul style="list-style-type: none"> ● New Hampshire Commercial Driver's License (CDL) Manual ● Federal Motor Carrier Safety Regulations ● NFPA 1451: Standard for a Fire and Emergency Service Vehicle Operations Training Program, 2018 edition ● NFPA 1500: Standard on Fire Department Occupational Safety, Health, and Wellness Program, 2018 edition ● NFPA 1901: Standard for Automotive Fire Apparatus, 2016 edition ● NFPA 1911: Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles, 2017 edition
Prerequisite	<p>Valid Driver's License</p>
Enrollment	<ul style="list-style-type: none"> ● Minimum: 8 Students ● Maximum: 16 Students
Timeline	<p>Total Time Required for Delivery: 24 Hours</p> <ul style="list-style-type: none"> ● Module 1: Understanding Emergency Vehicles: 4 Hours ● Module 2: Maintaining Emergency Vehicles: 4 Hours ● Module 3: Driving & Operating Emergency Vehicles: 4 Hours ● Module 4: Skill Drills: 8 Hours ● Traffic Incident Management (TIMs): 4 Hours
Certification Exam	<ul style="list-style-type: none"> ● Knowledge: 50 question written test ● Skills: 2 skill stations



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Course Outline

Module 1: Understanding Emergency Vehicles

Outline

Activity 1-1: Emergency Vehicle Types

Discussion 1-2: Introduction to Emergency Vehicle Design & Construction

Activity 1-3: Emergency Vehicle Design & Construction Breakout Stations

- a. Chassis & Driveline Components
- b. Safety Systems & Components
- c. Brake Systems & Components
- d. Vehicle Dimensions & Weight

References

**IFSTA Pumping & Aerial Apparatus
Driver/Operator Handbook, 3rd edition**

Chapter 1: Types of Apparatus Equipped with a Pump

Chapter 3: Apparatus Safety and Operating Emergency Vehicles

- Page 93 (Starting with Starting, Idling, and Shutting Down Apparatus) to Page 98 (Stopping at the end of the Axle Weight Distribution section)
- Page 108 (Starting with the ABS section) to Page 112

Module 2: Maintaining Emergency Vehicles

Outline

Activity 2-1: What is Maintenance?

Discussion 2-2: Introduction to Emergency Vehicle Checks

Activity 2-3: Emergency Vehicle Checks

- a. Engine Compartment Checks
- b. Cab Checks
- c. Brake System Checks
- d. Exterior Checks

References

**IFSTA Pumping & Aerial Apparatus
Driver/Operator Handbook, 3rd edition**

Chapter 2: Apparatus Inspection and Maintenance

- Page 29 to Page 68

Module 3: Driving & Operating Emergency Vehicles

Outline

Activity 3-1: Emergency Vehicle Driver/Operator Attributes

Activity 3-2: Basic Driving Knowledge

- a. Circle Safety Check
- b. Entering the Cab
- c. Starting the Vehicle
- d. Steering
- e. Acceleration
- f. Vehicle Positioning: Average travel lane
- g. Vehicle Positioning: Narrow travel lane
- h. Visual Habits While Driving
- i. Braking
- j. Stopping Distance
- k. Vehicle Positioning: Curves & Corners
- l. Backing
- m. Decreased Visibility
- n. Slippery Road Conditions
- o. Loss of Traction
- p. Vehicle Leaving the Roadway
- q. Brake Failure
- r. Tire Failure
- s. Hazards that could cause a Collision
- t. Unavoidable Collisions

Activity 3-3: Emergency Response Knowledge

- a. Pre-Response Considerations
- b. Speed & Space Management
- c. Intersection Management: Stop Signs
- d. Intersection Management: Traffic Signals
- e. Railroad Crossings
- f. Multiple Responding Vehicles: Same Direction
- g. Multiple Responding Vehicles: Opposing Directions
- h. School Busses
- i. Ambulance Operations
- j. Divided Highway Response

References

IFSTA Pumping & Aerial Apparatus Driver/Operator Handbook, 3rd edition

Chapter 3: Apparatus Safety and Operating Emergency Vehicles

- Page 79 to Page 93
- Page 98 (Starting with Driving Downhill) to Page 108 (Stopping before the start of the ABS section)
- Page 113 to Page 116
- Page 118 to Page 131

Chapter 4: Positioning Apparatus

- Page 149 (Starting at Special Positioning Situations) to Page 155

Chapter 16: Introduction to Aerial Fire Apparatus

- Page 574 to Page 580

Chapter Addendum: Fire Service Knowledge and Skills for Driver/Operators

Module 4: Skill Drills

Outline

Evolution 4-1: Emergency Vehicle Checks

Discussion 4-2: Emergency Vehicle Driver/Operator Roles & Responsibilities

Evolution 4-3: Basic Driving Skills

Evolution 4-4: Emergency Response Skills

Evolution 4-5: CDL Maneuvering Skills

- a. Straight Line Backing
- b. Offset Backing
- c. Alley Dock
- d. Parallel Park

Evolution 4-6: NFPA Maneuvering Skills

- a. Confined Space Turnaround
- b. Serpentine
- c. Diminishing Clearance

References

NFPA 1002

4.2.1: 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:

- (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

4.2.2: Document the visual and operational checks, given maintenance and inspection forms, so that all items are checked for operation and deficiencies are reported.

4.3.1: 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.

4.3.2: Back a vehicle from a roadway into restricted spaces on both the right and left side of the vehicle, given a fire apparatus; a spotter where the spotter assists the driver in performing the maneuver; 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 obstructions.

4.3.3: 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 direction of travel and without striking the obstructions.

4.3.4: 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

	<p>backing up, so that the vehicle is turned 180 degrees without striking obstructions within the given space.</p> <p>4.3.5: 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.</p> <p>4.3.6: Operate a vehicle using defensive driving techniques, given an assignment and a fire apparatus, so that control of the vehicle is maintained.</p> <p>4.3.7: Operate all fixed systems and equipment on the vehicle not addressed elsewhere in this standard, given the systems and equipment, manufacturer's specifications and instructions, and department 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.</p> <p>4.4.1: 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.</p> <p>4.4.2: 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.</p> <p>4.4.3: 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.</p> <p>4.4.4: Activate emergency procedures, given an emergency situation and department SOPs, so that emergency actions can be initiated.</p>
<p>NHFST Skill Sheets</p>	<p>DOAV-1-B: Emergency Vehicle Checks - Brakes</p> <p>DOAV-1-C: Emergency Vehicle Checks - Cab</p> <p>DOAV-1-EC: Emergency Vehicle Checks - Engine Compartment</p> <p>DOAV-1-EX: Emergency Vehicle Checks - Exterior</p> <p>DOAV-2: Basic Driving Skills</p> <p>DOAV-3: Restricted Clearance Backing</p> <p>DOAV-4: Roadway Obstructions (Serpentine)</p> <p>DOAV-5: Confined Space Turnaround</p> <p>DOAV-6: Restricted Horizontal & Vertical Clearance</p> <p>DOAV-7: Defensive Driving Skills</p> <p>DOAV-8: Fixed System Operation</p> <p>DOAV-9: Emergency Response Initiation</p> <p>DOAV-10: Telephone Procedures</p> <p>DOAV-11: Radio Procedures</p> <p>DOAV-12: Emergency Procedures</p>