



Driver/Operator-Aerial Apparatus

2017 Edition

Course Summary

Description	<p>The Driver/Operator-Aerial Apparatus course provides the fundamental knowledge and skills required to safely operate fire service aerial apparatus. Lab sessions and hands-on skill drills cover aerial device terminology, design and construction, driving and positioning, stabilization, operation of the aerial device, strategies and tactics for aerial apparatus, and maintenance. Students learn about all types of aerial devices and are given the knowledge required to understand the manufacturer specific considerations for the safe operation of aerial apparatus. Successful completion of the course leads to the certification exam required to obtain NHFST and Pro-Board certification.</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">● 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
Prerequisites	<ul style="list-style-type: none">● Valid Driver's License● Driver/Operator-All Vehicles or NHFST Emergency Vehicle Driver Training● Firefighter I
Enrollment	<ul style="list-style-type: none">● Minimum: 8 Students● Maximum: 16 Students
Timeline	<p>Total Time Required for Delivery: 32 Hours</p> <ul style="list-style-type: none">● Module 1: Understanding Aerial Apparatus: 4 Hours● Module 2: Operating Aerial Apparatus: 12 Hours● Module 3: Maintaining Aerial Apparatus: 4 Hours● Module 4: Aerial Apparatus on the Fire Ground: 12 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 Aerial Apparatus

Outline

Activity 1-1: Aerial Apparatus Types

- a. Rear-Mount Aerial Ladder
- b. Mid-Mount Aerial Ladder
- c. Tractor-Drawn Aerial Ladder
- d. Rear-Mount Aerial Platform
- e. Mid-Mount Aerial Platform
- f. Articulating Aerial Platform
- g. Quint
- h. Water Tower

Discussion 1-2: Introduction to Aerial Apparatus Design & Construction

Activity 1-3: Aerial Apparatus Design & Construction Breakout Stations

- a. Hydraulic System
- b. Stabilization System
- c. Aerial Device
- d. Elevated Master Streams

References

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

Chapter 16: Introduction to Aerial Fire Apparatus
• Page 541 to Page 580

Module 2: Operating Aerial Apparatus

Outline

Discussion 2-1: Introduction to Stabilizing Aerial Apparatus

Activity 2-2: Stabilizing Aerial Apparatus

- a. Uneven pavement
- b. Manholes
- c. Storm drains
- d. Curbs
- e. Snowbanks
- f. Ice
- g. Broken pavement
- h. Grass
- i. Obstructions
- j. Hose / Miscellaneous hazards

Discussion 2-3: Introduction to Operating Aerial Apparatus

Activity 2-4: Operating Aerial Apparatus

- a. Overhead clearance
- b. PPE
- c. Turntable perspective
- d. Waterway position
- e. Climbing safety
- f. Platform perspective
- g. Articulating booms
- h. Pump panel step / grounding
- i. Loads
- j. Wind
- k. Snow / Ice
- l. Mechanical Problems

Evolution 2-5: Aerial Apparatus Stabilization & Operation - Basic

- a. Aerial Ladder
- b. Elevating Platform

Evolution 2-6: Aerial Apparatus Stabilization - Advanced

Evolution 2-7: Aerial Apparatus Operation - Advanced

- a. Aerial Ladder
- b. Elevating Platform

References

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

Chapter 17: Positioning Aerial Apparatus

Chapter 18: Stabilizing Aerial Apparatus

Chapter 19: Operating Aerial Apparatus

Module 3: Maintaining Aerial Apparatus

Outline

Discussion 3-1: Maintaining Aerial Apparatus

Activity 3-2: Aerial Apparatus Checks

- a. Aerial Ladder Check
- b. Elevating Platform Check

Discussion 3-3: Aerial Apparatus Testing

References

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

Chapter 16: Introduction to Aerial Fire Apparatus

- Page 581 to Page 586
- Page 592 to Page 604

Module 4: Aerial Apparatus on the Fire Ground

Outline

Discussion 4-1: Aerial Apparatus Driver/Operator Roles & Responsibilities

Activity 4-2: Fire Strategies & Tactics

- a. Roof Access - Aerial Ladder
- b. Roof Access - Elevating Platform
- c. Window Access / Rescue - Aerial Ladder
- d. Window Access / Rescue - Elevating Platform
- e. Ventilation - Aerial Ladder
- f. Ventilation - Elevating Platform
- g. Fire Attack - Offensive
- h. Fire Attack - Defensive

Activity 4-3: Technical Rescue Strategies & Tactics

- a. Access to an Elevated Location
- b. High Point Anchor without Lifting Eyes
- c. High Point Anchor with Lifting Eyes
- d. Moving Patients via Stokes
- e. Water Rescue
- f. Hazardous Materials Decontamination
- g. Hoisting a United States flag
- h. Rigging for an Aerial Climb

Evolution 4-4: Aerial Apparatus Checks

- a. Aerial Ladder
- b. Elevating Platform

Evolution 4-5: Aerial Apparatus Roll-In Drills

- a. Aerial Ladder
- b. Elevating Platform

Evolution 4-6: Elevated Master Stream Operations

- a. Aerial Ladder
- b. Elevating Platform

Evolution 4-7: Aerial Apparatus Fire Ground Scenarios

- a. Aerial Ladder
- b. Elevating Platform

Evolution 4-8: United States Flag

References

NFPA 1002

6.1.1: Perform the visual and operational 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) Communications systems

6.2.1: 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.

	<p>6.2.2: 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.</p> <p>6.2.3: 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.</p> <p>6.2.4: Lower an aerial device using the emergency operating system, given an aerial device, so that the aerial device is lowered to its bedded position.</p> <p>6.2.5: 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.</p>
<p>IFSTA Pumping & Aerial Apparatus Driver/Operator Handbook, 3rd edition</p>	<p>Chapter 20: Aerial Apparatus Strategies & Tactics</p>
<p>NHFST Skill Sheets</p>	<p>DOA-1-V: Aerial Apparatus Check-Operational</p> <p>DOA-1-O: Aerial Apparatus Check-Visual</p> <p>DOA-2: Emergency Response & Aerial Apparatus Positioning</p> <p>DOA-3: Aerial Apparatus Stabilization</p> <p>DOA-4: Aerial Device Operation</p> <p>DOA-5: Aerial Device Emergency Lowering</p> <p>DOA-6: Elevated Master Stream Operation</p>