

FIRE APPARATUS DRIVER/OPERATOR 1A

EMERGENCY VEHICLE OPERATIONS

I N S T R U C T O R G U I D E



Published by

STATE FIRE TRAINING
PO Box 944246
Sacramento, CA 94244-2460

January 2011



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

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State Fire Training

Mission Statement

The mission of State Fire Training is to enable the California fire service to safely protect life and property through education, training, and certification.

California Fire Service Training and Education System

The California Fire Service Training and Education System (CFSTES) was established to provide a single statewide focus for fire service training in California. CFSTES is a composite of all the elements that contribute to the development, delivery, and administration of training for the California fire service. The authority for the central coordination of this effort is vested in the Training Division of the California State Fire Marshal's Office with oversight provided by the State Board of Fire Services.

The role of CFSTES is one of facilitating, coordinating, and assisting in the development and implementation of standards and certification for the California fire service. CFSTES manages the California Fire Academy System by providing standardized curriculum and tests; accredited courses leading to certification; approved standardized training programs for local and regional delivery; administering the certification system; and publishing Certification Training Standards, Instructors Guides, Student Manuals, Student Supplements, and other related support materials.

This system is as successful and effective as the people involved in it are. It is a fire service system developed by the fire service, for the fire service... and we believe it is the best one in the country.

Acknowledgments

State Fire Training coordinated the development of the material contained in this guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) recommended this guide for adoption by the State Fire Marshal (SFM). This guide is appropriate for fire service personnel and for personnel in related occupations that are pursuing State Fire Training certification.

Ken Pimlott Acting Director of CAL FIRE	
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Special acknowledgement and thanks are extended to the following members of CDF/State Fire Training Curriculum Development Division for their diligent efforts and contributions that made the final publication of this document possible.

Alicia Hamilton Fire Service Training Specialist III
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The material contained in this document was compiled and organized through the cooperative effort of numerous professionals within, and associated with, the California fire service. We gratefully acknowledge these individuals who served as principal developers for this document.

Special acknowledgement and thanks are extended to Mark Romer, Roseville Fire Department and Darren Hall for this updated 2008 edition.

David Anderson CDF – Riverside Unit	Tom Hostetter CDF – Nevada/Yuba/Placer Unit
Gus Bryant Kern County Fire Department	Don Mashburn Sacramento Fire Department
Robert Confer Tiburon And Ben Lomond Fire Districts	Tom Murray San Francisco Fire Department (Retired)
Tom Davis Modesto Regional Fire Training Center	Don Ockey Fresno City Fire Department
Roy Francis Pasadena Fire Department	John Owens CDF – San Luis Obispo Unit
Thomas D. Gallinatti Oakland Fire Department	Mark Romer, Team Leader Roseville Fire Department (Retired)

"We gratefully acknowledge the hard work and accomplishments of those before us who built the solid foundation on which this program continues to grow."



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Student Profile

Target Group

Fire service emergency response personnel

Prerequisites

- Fire apparatus driving experience on a public way (two options)
 - California Class C driver's license ***and*** a signed verification of driving fire apparatus on a public way
 - ✦ Section 4.3.1 of the NFPA Standard for Fire Apparatus Driver/Operator Professional Qualifications, 2009 Edition
 - ✦ Signed by you and your Fire Chief
 - California driver's license
 - ✦ Class A, B, or C ***with*** the fire fighter endorsement
- Fire Fighter I training recommended

Desired Attendance Time Frame

None



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Class Requirements and Space

The characteristics of the classroom and support facilities have a great impact on the learning environment and the instructor's success or failure. For this course, it is advisable for the instructor to adhere as closely as possible to the following guidelines.

Equipment

Writing board with markers/erasers

Appropriate audiovisual equipment

Appropriate audiovisual materials

Driving Grounds And Equipment

1. Fire apparatus
2. Adequate driving space
3. Tire pressure gauges
4. Wiping rags
5. Creepers
6. 48-inch pillars (minimum of 20)
7. 18-inch cones (minimum of 60)
8. Numbered lane change cards
9. 100-foot tape measure
10. Stopwatch
11. Clipboard

Materials

Unit 1

- Progress Chart
- Activity 1-3-1, "Legal Aspects Of Emergency And Nonemergency Driving"

Unit 2

- Activity 2-15-1, "Daily Apparatus And Equipment Check"

Unit 3

- Activity 3-2-1, "Principles Of Defensive Driving"



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Unit 4

- Mandatory Driving Exercise 4-1-1, "Diminishing Clearance Exercise"
- Mandatory Driving Exercise 4-1-2, "Serpentine Exercise"
- Mandatory Driving Exercise 4-1-3, "Three-Point Turnaround Exercise"
- Mandatory Driving Exercise 4-1-4, "Station Apparatus Backing Exercise"
- Mandatory Driving Exercise 4-1-5, "Alley Dock Exercise"

Unit 5

- Optional Driving Exercise 5-1-1, "Lane Change Exercise"
- Optional Driving Exercise 5-1-2, "Offset Alley Exercise"
- Optional Driving Exercise 5-1-3, "Dogleg Exercise"
- Optional Driving Exercise 5-1-4, "Parallel Parking Exercise"

Written Tests

- Test 1
- Test 2
- Certification Exam



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Introduction to the Manual

The **2011 Fire Apparatus Driver/Operator 1A** Instructor Guide has been updated to reflect the new California fire fighter's licensing law (AB #1648), the current California Vehicle Code (CVC) requirements, and the 2009 NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications. This course also requires three corresponding textbooks: the current edition of the California Commercial Driver Handbook published by the Department of Motor Vehicles, the second edition of IFSTA's Pumping Apparatus Driver/Operator Handbook, and the Fire Apparatus Driver/Operator 1A Student Supplement published by State Fire Training. All certification exam questions were developed using any one of the three textbooks.

During the revision process, the developers included the following:

- An increase in group and individual activities
- Endnotes detailing specific code sections as they relate to the lesson plan
- PowerPoint slides for all lesson plans
- Video clips for the driving exercises

This publication is intended to serve as an instructor guide and includes lesson plans, a slide index, student activities, and tests. For each topic identified in the course outline, a lesson plan has been developed that contains: a time frame, level of instruction, behavioral objective, materials needed, references, preparation statement, lesson content, and endnotes. Suggested application methods have been identified throughout the lessons for you to use during your presentation.

- **Time Frame:** The estimated duration required for in-class presentation.
- **Level Of Instruction:** Identifies the instructional level that the material was designed to fulfill. Obviously, you have the latitude to increase the level based on available time, local conditions, and the students' apperceptive base.
- **Behavioral Objective:** The behavioral objective is a statement of the student's performance desired at the end of instruction. You must ensure that enough information is given in the presentation and/or activities to enable the student to perform according to the goal.
- **Materials Needed:** This should be a complete list of everything you will need to present the lesson, including visual aids, tests, and so on.
- **References:** These are the specific references the curriculum development team used when developing the lesson plan. In addition, references may be listed as additional study aids for instructors to enhance the lesson -- books, manuals, bulletins, scripts, visual aid utilization plans, and the like. The corresponding pages in the student supplement are also listed here.



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- **Preparation:** The motivational statement connects the student with the lesson plan topic through examples or illustrations relating to their occupation, injury, and even mortality. You will need to develop this statement to fit your target audience.
- **Lesson Content:** Includes information used in the four-step method of instruction.

Cognitive Lesson Plans

PRESENTATION	APPLICATION
Everything you say or display Content Notes	Student Participation <ul style="list-style-type: none">• Questions• Activities• Audiovisual Cues

Psychomotor Lesson Plan

OPERATIONS	KEY POINTS
Specific actions to be performed by the students	The who, what, when, where, why, and how (the "tricks of the trade")
Begin with a verb, followed by a noun	Safety practices

Appendix A – Glossary

- Glossary of terms used throughout the course.

Appendix B – Instructor Tests

- Course tests with answer keys.

Appendix C – Student Tests

- Test masters to copy for your students. Keep these in good condition to use for future classes. Collect these tests after they have been graded and discussed in class.
- **Do not let the students keep them since you will be using the same tests for your next class.**



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Emergency Vehicle Operations

Course Outline

Course Objectives: To provide the student with...

- a) Information on driver responsibilities, recognized standards, and related laws for fire apparatus.
- b) Information and techniques on basic inspections, documentation, maintenance, and troubleshooting fire apparatus.
- c) Information and techniques on driving and positioning fire apparatus.
- d) The opportunity to increase their driving skills during simulated driving conditions.

Course Content.....40:00

Unit 1: Responsibilities, Standards, And Laws

- 1-1 Orientation And Administration1:00
- 1-2 Fire Apparatus Driver/Operator Responsibilities.....0:45
- 1-3 Legal Aspects Of Emergency And Nonemergency Driving.....1:00

Unit 2: Inspection, Basic Maintenance, Documentation, And Troubleshooting

- 2-1 Introduction To Inspection, Basic Maintenance, And Troubleshooting0:30
- 2-2 Inspection And Basic Maintenance Of The Driver And Crew Areas, Apparatus Body, And Compartmentation0:15
- 2-3 Inspection And Basic Maintenance Of The Frame, Axles, Steering And Suspension Systems, Driveline, Wheels, And Tires0:15
- 2-4 Troubleshooting The Frame, Axles, Steering And Suspension Systems, Driveline, Wheels, And Tires0:30
- 2-5 Inspection And Basic Maintenance Of Engine Systems0:45
- 2-6 Troubleshooting Engine Systems0:30
- 2-7 Inspection And Basic Maintenance Of The Transmission And Clutch0:15
- 2-8 Troubleshooting The Transmission And Clutch0:15
- 2-9 Inspection And Basic Maintenance Of The Starting, Charging, And Other Electrical Systems0:30
- 2-10 Troubleshooting The Starting, Charging, And Other Electrical Systems2:00
- 2-11 Inspection And Basic Maintenance Of Brake Systems1:30
- 2-12 Troubleshooting Brake Systems1:00
- 2-13 Inspection And Basic Maintenance Of Auxiliary And Accessory Equipment.....0:15
- 2-14 Inspection Documentation And Reports0:15
- 2-15 Pretrip Inspection Procedures2:00



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Unit 3: Driving Practices

3-1	Accident Statistics And Liability	0:30
3-2	Principles Of Defensive Driving	2:00
3-3	Driving Apparatus To Incidents.....	1:00
3-4	Principles Of Off-Road Driving.....	1:00
3-5	Principles Of Braking And Stopping.....	0:30
3-6	Principles Of Steering And Load Control	1:30
3-7	Driving During Adverse Weather Conditions	0:15
3-8	Positioning Apparatus.....	1:00

Unit 4: Mandatory Driving Exercises

4-1	Introduction To The Mandatory Driving Exercises	0:30
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Unit 5: Optional Driving Exercises

5-1	Introduction To The Optional Driving Exercises.....	0:15
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Practice And Testing The Driving Exercises.....	14:00
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Unit Tests	3:00
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Certification Exam	1:00
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Texts and References

- Basic Fire Control Module 2A Automotive Battalion Student Supplement, CDF, 1999 Edition, Off Road Vehicle Operations Unit
- California Commercial Driver Handbook, DMV, 2008 Edition
- Chilton technical manuals
- Driver Awareness Instructor Course Manual, California Commission on Peace Officer Standards and Training, 1999 Edition
- Engineer Training Manual, Tiburon Fire Protection District, 2000 Edition, Section 53
- <http://www.bendix.com/troubleshooting/>
- Introduction to Fire Pump Operations, Delmar, 2005 Edition
- Motor Truck & Diesel Repair Manual, Bendix Commercial Vehicle Systems, 29th Edition
- NFPA 1001: Standard for Fire Fighter Professional Qualifications, 2008 Edition
- NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications, 2009 Edition
- NFPA 1451: Standard for a Fire Service Vehicle Operations Training Program, 2007 Edition
- NFPA 1500: Standard on Fire Department Occupational Safety and Health Program, 2007 Edition



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- NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments, 2007 Edition
- NFPA 1911: Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus, 2007 Edition
- NFPA Journal, July/August 2001 Edition
- NFPA Journal, November/December 2007 Edition
- Off Road and 4-Wheel Driver Operational Procedures Manual, Kern County Fire Department, 1999 Edition
- Pumping Apparatus Driver/Operator Handbook, IFSTA, Second Edition
- Sacramento Regional Driver's Training Authority Student Manual, First Edition
- State of California Vehicle Code, DMV, 2007 Edition
- Title 49 CFR Transportation, U.S. Government Printing Office, October 2006 Edition
- University of Michigan Transportation Research Study of 1998, University of Michigan
- Webster's Unabridged Dictionary, Random House, Second Edition



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Emergency Vehicle Operations

Calendar of Events

DAY	TOPIC	TITLE	TIME	ACTIVITY	EVALUATION	
Day 1	1-1	Orientation And Administration	1:00			
	1-2	Fire Apparatus Driver/Operator Responsibilities	0:45			
	1-3	Legal Aspects Of Emergency And Nonemergency Driving	1:00	1-3-1		
	2-1	Introduction To Inspection, Basic Maintenance, And Troubleshooting	0:30			
	2-2	Inspection And Basic Maintenance Of The Driver And Crew Areas, Apparatus Body, And Compartmentation	0:15			
	2-3	Inspection And Basic Maintenance Of The Frame, Axles, Steering And Suspension Systems, Driveline, Wheels, And Tires	0:15			
	2-4	Troubleshooting The Frame, Axles, Steering And Suspension, Driveline, Wheels, And Tires	0:30			
	2-5	Inspection And Basic Maintenance Of Engine Systems	0:45			
	2-6	Troubleshooting Engine Systems	0:30			
	2-7	Inspection And Basic Maintenance Of The Transmission And Clutch	0:15			
	2-8	Troubleshooting The Transmission/Clutch	0:15			
	2-9	Inspection And Basic Maintenance Of The Starting, Charging, And Other Electrical Systems	0:30			
	2-10	Troubleshooting The Starting, Charging, And Other Electrical Systems	1:30			
		Day 1 Total	8:00			
Day 2	2-10	Troubleshooting The Starting, Charging, And Other Electrical Systems	0:30			
	2-11	Inspection And Basic Maintenance Of Brake Systems	1:30			
	2-12	Troubleshooting Brake Systems	1:00			
	2-13	Inspection And Basic Maintenance Of Auxiliary And Accessory Equipment	0:15			
			1:00			Test #1
	2-14	Inspection Documentation And Reports	0:15			
	2-15	Pretrip Inspection Procedures	2:00	2-15-1		
	3-1	Accident Statistics And Liability	0:30			
	3-2	Principles Of Defensive Driving	1:00			
		Day 2 Total	8:00			



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DAY	TOPIC	TITLE	TIME	ACTIVITY	EVALUATION	
Day 3	3-2	Principles Of Defensive Driving	1:00	3-2-1		
	3-3	Driving Apparatus To Incidents	1:00			
	3-4	Principles Of Off-Road Driving	1:00			
	3-5	Principles Of Braking And Stopping	0:30			
	3-6	Principles Of Steering And Load Control	1:30			
	3-7	Driving During Adverse Weather Conditions	0:15			
	3-8	Positioning Apparatus	1:00			
			1:00			Test #2
	4-1	Introduction To The Mandatory Driving Exercises	0:30			
	5-1	Introduction To The Optional Driving Exercises	0:15			
	Day 3 Total		8:00			
Day 4		Diminishing Clearance Exercise*	8:00	4-1-1		
		Serpentine Exercise*		4-1-2		
		Three-Point Turnaround Exercise*		4-1-3		
		Station Apparatus Backing Exercise*		4-1-4		
		Alley Dock Exercise*		4-1-5		
		Lane Change Exercise		5-1-1		
		Offset Alley Exercise		5-1-2		
		Dogleg Exercise		5-1-3		
		Parallel Parking Exercise		5-1-4		
	Day 4 Total			8:00		
Day 5		Practice Driving Exercises	7:00		Performance Exams	
		Graded Exercises				
		Certification Exam	1:00		Certification Exam	
	Day 5 Total		8:00			

*Mandatory Driving Exercise



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TOPIC: 1-1: Orientation And Administration

TIME FRAME: 1:00

LEVEL OF INSTRUCTION: Level I

AUTHORITY: 2009 NFPA 1002: Chapters 1 and 4

BEHAVIORAL OBJECTIVE:

Condition: Given an oral evaluation

Behavior: The student will confirm knowledge of the course objectives by completing an oral evaluation

Standard: To the instructor's satisfaction according to the information contained in Fire Apparatus Driver/Operator 1A Student Supplement, SFT, 2011 Edition, Pages 1-4 and Pumping Apparatus Driver/Operator Handbook, IFSTA, Second Edition, Pages 1-10

MATERIALS NEEDED:

- Writing board/pad with markers/erasers
- Appropriate audiovisual equipment
- Appropriate audiovisual materials
- Progress chart

REFERENCES:

- NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications, 2009 Edition, Chapters 1 and 4 and Appendix A
- NFPA 1451: Standard for a Fire Service Vehicle Operations Training Program, 2007 Edition
- NFPA 1500: Standard on Fire Department Occupational Safety and Health Program, 2007 Edition, Sections 5.2.2 and 5.3.1
- NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments, 2007 Edition, Sections 6-4 and 6-5
- NFPA 1911: Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus, 2007 Edition
- Pumping Apparatus Driver/Operator Handbook, IFSTA, Second Edition, Pages 1-10



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PREPARATION:

Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.

Attention (attract)

Begin

Curiosity (arouse)

Association

Interest (create)

Students

Desire (stimulate)

Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.



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Emergency Vehicle Operations

PRESENTATION	APPLICATION
<p>III. FACILITIES ORIENTATION</p> <ul style="list-style-type: none">A. Classroom location(s)B. RestroomsC. Food locationsD. SmokingE. BreaksF. TelephonesG. Parking <p>IV. STUDENT REGISTRATION</p> <ul style="list-style-type: none">A. Forms<ul style="list-style-type: none">1. State Fire Training2. College <p>NOTE: Provide step-by-step directions for completing the forms.</p> <ul style="list-style-type: none">B. Resolve any tuition issues as needed <p>V. STUDENT EVALUATION</p> <ul style="list-style-type: none">A. Activities<ul style="list-style-type: none">1. Complete all activitiesB. Two written unit tests<ul style="list-style-type: none">1. Each followed with group discussion2. All tests must be completed and passed with a minimum score of 80% <p>NOTE: Tests must be returned to the instructor after review.</p> <ul style="list-style-type: none">C. Driving exercises<ul style="list-style-type: none">1. Manipulative skills tracking and accountability2. Minimum score of 80% required to pass each mandatory manipulative performance testD. Progress chart<ul style="list-style-type: none">1. Use student identification numbers<ul style="list-style-type: none">a) No names2. Federal law prohibits publication of identifiable student grades	



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PRESENTATION	APPLICATION
<p>E. State certification exam</p> <ol style="list-style-type: none"> 1. Not related to final course grade 2. Must pass the class first before taking the exam 3. 50 question multiple-choice exam 4. Minimum 70% required to pass the certification exam <p>VI. COURSE DESCRIPTION</p> <p>A. 40-hour class</p> <ol style="list-style-type: none"> 1. Classroom information and activities 2. Reading assignments 3. Apparatus inspection 4. Hands-on driving exercises <p>B. Identify start and end times</p> <ol style="list-style-type: none"> 1. Class will begin on time 2. Student attendance requirements <ol style="list-style-type: none"> a) Must attend the entire course b) State Fire Training allows considerations for excused absences up to four hours <p>C. Proper attire</p> <ol style="list-style-type: none"> 1. Classroom <ol style="list-style-type: none"> a) Station wear or equivalent b) Station boots or equivalent 2. Field exercises <ol style="list-style-type: none"> a) Station wear or equivalent b) Station boots or equivalent c) Helmet d) Gloves <p>D. Required textbooks</p> <ol style="list-style-type: none"> 1. <u>Pumping Apparatus Driver/Operator Handbook, IFSTA, Second Edition</u> 	



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PRESENTATION	APPLICATION
<p>2. <u>California Commercial Driver Handbook</u>, DMV, Current Edition</p> <p>3. Student supplement published by State Fire Training</p> <p>VII. COURSE OBJECTIVES</p> <p>A. Provide the students with</p> <ol style="list-style-type: none"> 1. Information on driver responsibilities, recognized standards, and related laws for fire apparatus 2. Information and techniques on basic inspections, documentation, maintenance, and troubleshooting fire apparatus 3. Information and techniques on driving and positioning fire apparatus 4. The opportunity to increase their driving skills during simulated driving conditions <p>VIII. HISTORICAL OVERVIEW</p> <p>A. Course development</p> <ol style="list-style-type: none"> 1. First as a career development guide <ol style="list-style-type: none"> a) Titled Driver/Operator I and II 2. 1988, two courses were developed <ol style="list-style-type: none"> a) Fire Apparatus Driver/Operator 1A <ol style="list-style-type: none"> 1) Emergency Vehicle Operations b) Fire Apparatus Driver/Operator 1B <ol style="list-style-type: none"> 1) Pump Operations 3. 2003, courses were updated 4. 2008, courses were updated to meet the <u>Pumping Apparatus Driver/Operator Handbook</u>, IFSTA, Second Edition 5. 2011, 1A course was updated to meet the new California fire fighter's licensing law (AB #1648) <p>B. Experience has demonstrated that the following skills and senses are needed to be a successful fire apparatus driver/operator</p>	



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PRESENTATION	APPLICATION
<ol style="list-style-type: none"> 1. Reading <ol style="list-style-type: none"> a) Able to read and understand the written word 2. Writing <ol style="list-style-type: none"> a) Ability to write clearly and concisely 3. Mathematics <ol style="list-style-type: none"> a) Basic mathematical skills for Fire Apparatus Driver/Operator 1A b) Basic algebra skills necessary for hydraulics in Fire Apparatus Driver/Operator 1B 4. Physically fit <ol style="list-style-type: none"> a) Per department standards 5. Vision <p>NOTE: NFPA 1582: <u>Standard on Comprehensive Occupational Medical Program for Fire Departments</u>, 2007 Edition, Section 6.4</p> <ol style="list-style-type: none"> a) Category A medical condition <ol style="list-style-type: none"> 1) Far visual acuity less than 20/40 binocular, corrected with contact lenses or spectacles, or far visual acuity less than 20/100 binocular for wearers of hard contacts or spectacles, uncorrected 2) Color perception <ul style="list-style-type: none"> • Monochromatic vision resulting in inability to use imaging devices such as thermal imaging cameras 3) Monocular vision 4) Any eye condition that results in the candidate not being able to safely perform one or more of the essential job tasks b) Category B medical condition <ol style="list-style-type: none"> 1) Diseases of the eye such as retinal detachment, progressive retinopathy, or optic neuritis 	



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<ul style="list-style-type: none"> 2) Ophthalmological procedures such as radial keratotomy, Lasik procedure, or repair of retinal detachment 3) Peripheral vision in the horizontal meridian of less than 110 degrees in the better eye or any condition that significantly affects peripheral vision in <i>both</i> eyes <p>6. Ears and hearing</p> <p>NOTE: NFPA 1582: <u>Standard on Comprehensive Occupational Medical Program for Fire Departments</u>, 2007 Edition, Section 6.5</p> <ul style="list-style-type: none"> a) Category A medical condition <ul style="list-style-type: none"> 1) Chronic vertigo or impaired balance as demonstrated by the inability to tandem gait walk 2) On audiometric testing, average hearing loss in the unaided better ear greater than 40 decibels (dB) at 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz when the audiometric device is calibrated to ANSI Z24.5, Audiometric Device Testing 3) Any ear condition (or hearing impairment) that results in the candidate not being able to safely perform one or more of the essential job tasks b) Category B medical condition <ul style="list-style-type: none"> 1) Unequal hearing loss 2) Average uncorrected hearing deficit at the test frequencies 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz greater than 40 dB in <i>either</i> ear <p>7. Mechanical ability</p> <ul style="list-style-type: none"> a) To understand the operation and maintenance of apparatus <p>8. Basic supervisory skills</p>	



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PRESENTATION	APPLICATION
<p>9. Ability to remain calm</p> <p>10. Ability to avoid "tunnel vision"</p> <p>11. Ability to identify safety hazards</p> <p>IX. APPLICABLE STANDARDS</p> <p>A. <u>NFPA 1500: Standard on Fire Department Occupational Safety and Health Program</u>, NFPA, 2007 Edition</p> <p>1. Chapter 5: Training, Education, and Professional Development</p> <p>a) Section 5.2.2</p> <p>1) Must meet applicable requirements specified in <u>NFPA 1002</u></p> <p>b) Section 5.3.1</p> <p>1) Department shall adopt or develop training and education that meet the minimum requirements</p> <p>2) Department shall provide training, education, and professional development programs to support the minimum qualifications and certifications expected of its members</p> <p>3) Members shall practice assigned skill sets on a regular basis but not less than annually</p> <p>4) Department shall provide specific training to members when written policies, practices, procedures, or guidelines are changed and/or updated</p> <p>2. Chapter 6: Fire Apparatus, Equipment, and Driver/Operators</p> <p>a) Department shall consider safety and health as primary concerns in the specification, design, construction, acquisition, operation, maintenance, inspection, and repair of all fire department apparatus</p>	



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Emergency Vehicle Operations

PRESENTATION	APPLICATION
<p>b) Department shall specify restraint devices for fire apparatus, including those restraint devices for emergency medical service (EMS) members operating in the patient compartment of the ambulance</p> <p>B. <u>NFPA 1001: Standard for Fire Fighter Professional Qualifications</u>, NFPA, 2008 Edition</p> <ol style="list-style-type: none"> 1. Chapter 5: Fire Fighter I <ol style="list-style-type: none"> a) Section 5.1.1 <ol style="list-style-type: none"> 1) General knowledge requirements b) Section 5.1.2 <ol style="list-style-type: none"> 1) General skill requirements <p>C. <u>NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications</u>, NFPA, 2009 Edition</p> <ol style="list-style-type: none"> 1. Chapter 1: Administration 2. Chapter 4: General Requirements 3. Chapter 5: Apparatus Equipped with Fire Pump 4. Appendix A: Explanatory Material <p>D. <u>NFPA 1911: Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus</u>, NFPA, 2007 Edition</p> <ol style="list-style-type: none"> 1. Chapter 1 Administration 2. Chapter 4 General Requirements 3. Chapter 5 Retirement of Fire Apparatus 4. Chapter 6 Out-of-service Criteria 5. Chapters 7-15 Inspection and Maintenance 6. Chapter 16 Road Tests and Annual Weight Verification 7. Chapters 17-23 Performance Testing <p>E. <u>NFPA 1451: Standard for a Fire Service Vehicle Operations Training Program</u>, NFPA, 2007 Edition</p> <ol style="list-style-type: none"> 1. Entire standard applies 	



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

PRESENTATION	APPLICATION
<p>F. Other standards</p> <ul style="list-style-type: none">1. Departmental <p>X. RELEVANCE OF STANDARDS</p> <p>A. Legal</p> <ul style="list-style-type: none">1. Nationally recognized2. Upheld in court<ul style="list-style-type: none">a) Liabilityb) Held personally accountable3. Negligence/liability<ul style="list-style-type: none">a) Possible affects<ul style="list-style-type: none">1) Driving record2) Personal insurance3) Career impact	



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

SUMMARY:

The professional fire apparatus driver/operator must recognize his or her role in the fire service and the responsibility that entails. The ability to remain calm, think clearly, decisively, and with intent are just part of the traits which are critical for this position.

EVALUATION:

The student will complete the oral evaluation at a time determined by the instructor.

ASSIGNMENT:

Review your notes and read Fire Apparatus Driver/Operator 1A Student Supplement, SFT, 2011 Edition, Pages 1-4 and Pumping Apparatus Driver/Operator Handbook, IFSTA, Second Edition, Pages 1-10. Study for our next session.



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

DRIVER/OPERATOR 1A PROGRESS CHART	BEGINNING DATE:												
	ENDING DATE:												
	MANDATORY					OPTIONAL							
CLASS SIZE LIMITED TO 25 STUDENTS	Activity 1-3-1	Activity 2-15-1	Activity 3-2-1	Exercise 4-1-1	Exercise 4-1-2	Exercise 4-1-3	Exercise 4-1-4	Exercise 4-1-5	Exercise 5-1-1	Exercise 5-1-2	Exercise 5-1-3	Exercise 5-1-4	
STUDENT IDENTIFICATION													
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FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

DRIVER/OPERATOR 1A PROGRESS CHART	BEGINNING DATE:											
	ENDING DATE:											
CLASS SIZE LIMITED TO 25 STUDENTS	Test #1	Test #2	Attendance Day 1	Attendance Day 2	Attendance Day 3	Attendance Day 4	Attendance Day 5	LICENSE			PASS/FAIL	Cert Exam
								CDL with Fire Fighter Endorsement	Signed driving verification			
STUDENT IDENTIFICATION												
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FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

TOPIC:	1-3: Legal Aspects Of Emergency And Nonemergency Driving
TIME FRAME:	1:00
LEVEL OF INSTRUCTION:	Level II
AUTHORITY:	2009 NFPA 1002: Sections 4.3.1 and 4.3.6
BEHAVIORAL OBJECTIVE:	
Condition:	Given an activity and written test
Behavior:	The student will confirm a knowledge of California's driving regulations and laws relating to emergency and nonemergency driving by completing the activity and written test
Standard:	With a minimum 80% accuracy according to the information contained in <u>Fire Apparatus Driver/Operator 1A Student Supplement</u> , SFT, 2011 Edition, Pages 7-17 and <u>Pumping Apparatus Driver/Operator Handbook</u> , IFSTA, Second Edition, Pages 9-10 and 63-64
MATERIALS NEEDED:	<ul style="list-style-type: none">• Writing board/pad with markers/erasers• Appropriate audiovisual equipment• Appropriate audiovisual materials• Activity 1-3-1: Legal Aspects Of Emergency And Nonemergency Driving
REFERENCES:	<ul style="list-style-type: none">• AB #1648, Chapter 360, January 2011• <u>California Commercial Driver Handbook</u>, DMV, 2008 Edition, Pages 1-18• <u>Pumping Apparatus Driver/Operator Handbook</u>, IFSTA, Second Edition, Pages 9-10 and 63-64• <u>State of California 2001 Vehicle Code</u>, DMV, 2007 Edition, Pages 4-6, 460-467, 583, 607-608, and 623-817• <u>Title 49 CFR Transportation</u>, U.S. Government Printing Office, October 2006 Edition, Part 383
PREPARATION:	Each instructor must develop a motivational statement on why the student should learn the upcoming material. The purpose is to establish relevancy of the lesson to the audience. The ACID BASE acronym can be used to help develop student motivation.



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

Attention (attract)

Curiosity (arouse)

Interest (create)

Desire (stimulate)

Begin

Association

Students

Experience

Cite examples or use related illustrations of near-miss incidents, injuries, or fatalities. Write this section "from the heart." Be creative! Have fun with it or be serious, but remember the goal is to stimulate student motivation.



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

PRESENTATION	APPLICATION
<p>I. LICENSING REQUIREMENTS</p> <p>A. Federal Department of Transportation (DOT)</p> <ol style="list-style-type: none"> 1. Code of Federal Regulations (CFR) <ol style="list-style-type: none"> a) Set basic requirements for states' commercial drivers license programs b) Title 49 CFR, Part 383.23 <ol style="list-style-type: none"> 1) Commercial drivers license standard <p>B. California</p> <ol style="list-style-type: none"> 1. Assembly Bill 1648 <ol style="list-style-type: none"> a) Effective January 1, 2011 b) Amends Sections 1808.1, 12804.9, and 15278 and adds Section 12804.11 to the Vehicle Code c) Change the provisions regulating the operation of fire-fighting equipment <ol style="list-style-type: none"> 1) Permit employed or volunteer fire fighters to operate fire-fighting equipment with a Class A, B, or C license and a <u>fire fighter endorsement</u> issued by the DMV d) Applying for the fire fighter endorsement <ol style="list-style-type: none"> 1) Proof of current employment with a fire department as a fire fighter or registration as a volunteer fire fighter 2) Evidence of fire equipment operation training 3) Passing the written fire fighter examination developed by DMV with the cooperation of the OSFM 4) Submitting a report of medical examination on a DMV-approved form 	<p>The basic requirements for individual state commercial driver license programs are found in which document?</p>



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

PRESENTATION	APPLICATION
<p>e) Repealed three sections of the Vehicle Code that affect fire fighters</p> <ol style="list-style-type: none"> 1) Section 12954: Driver's license fire fighters emergency exemption <ul style="list-style-type: none"> • Exempted fire fighters from the requirement to have in their immediate possession the appropriate driver's license when operating fire-fighting equipment during an emergency, or when returning from an emergency 2) Section 15250.6: Fire fighter equipment driver's license requirements 3) Section 15250.7: Fire fighter equipment driver's license duplicate fee <p>2. California Commercial Driver Handbook (CCDH)</p> <ol style="list-style-type: none"> a) Guidelines and standards based upon Title 19 CFR <p>C. Types of California driver's licenses</p> <ol style="list-style-type: none"> 1. Class A <ol style="list-style-type: none"> a) May drive any legal combination of vehicles <ol style="list-style-type: none"> 1) Including vehicles under Class B and C 2. Class B <ol style="list-style-type: none"> a) Limited to drive <ol style="list-style-type: none"> 1) Any single vehicle with a GVWR of more than 26,000 pounds 2) A 3-axle vehicle 3) Any bus (except trailer bus) with endorsement 4) Any farm labor vehicle with endorsement 5) All vehicles under Class C 	<p>The Class A driver's license allows the holder to operate which type of vehicles?</p>



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

PRESENTATION	APPLICATION
<p>II. CALIFORNIA VEHICLE CODE (CVC)</p> <p>A. Legally binding and enforceable</p> <p>B. Code 3 authorization</p> <ol style="list-style-type: none">1. Section 30<ol style="list-style-type: none">a) Red lights and sirensb) Restricted to authorized police, fire, and lifesaving services2. Section 165.2<ol style="list-style-type: none">a) Definition of an authorized emergency vehicle <p>C. Warning systems</p> <ol style="list-style-type: none">1. Section 25252<ol style="list-style-type: none">a) Emergency vehicles must have at least one burning red warning lamp in frontb) Visible for 1,000 feet to the frontc) Minimum allowable by law2. Section 25252.5(a)<ol style="list-style-type: none">a) Flashing high beams on authorized emergency vehicles3. Section 25258<ol style="list-style-type: none">a) Additional lights on authorized emergency vehiclesb) Flashing white light<ol style="list-style-type: none">1) Opticom™	<p>ACTIVITY 1-3-1: Complete the activity in the student supplement.</p> <p>What CVC section gives Code 3 authorization?</p> <p>What is the distance required by law, for a red warning lamp to be visible?</p>



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

PRESENTATION	APPLICATION
<ul style="list-style-type: none"> 4. Section 25259(a) <ul style="list-style-type: none"> a) Additional warning lights on authorized emergency vehicles b) Flashing amber lights 5. Section 25268 <ul style="list-style-type: none"> a) Use of flashing warning amber lights b) Limits use of flashing amber 6. Section 25269 <ul style="list-style-type: none"> a) Limits use of flashing or steady burning red light 7. Section 27000(a) <ul style="list-style-type: none"> a) Horns or warning devices b) Identifies who shall be equipped with a horn 8. Section 27001(a) <ul style="list-style-type: none"> a) Use of horns b) When reasonably necessary 9. Section 27002 <ul style="list-style-type: none"> a) Sirens b) Identifies who shall legally use a siren D. Civil liability <ul style="list-style-type: none"> 1. Section 17001 <ul style="list-style-type: none"> a) Liability of a public entity 2. Section 17002 <ul style="list-style-type: none"> a) Extent of liability 3. Section 17004 <ul style="list-style-type: none"> a) Liability of public employees operating an authorized emergency vehicle 4. Section 17004.5 <ul style="list-style-type: none"> a) Liability of private fire departments <p>NOTE: Section 17001 is discussed in greater depth in Unit 4 – Topic 1.</p>	



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

PRESENTATION	APPLICATION
<p>E. Rules of the road</p> <ol style="list-style-type: none"> 1. Section 21055 <ol style="list-style-type: none"> a) Exemption of authorized emergency vehicles b) While sounding siren c) Display a lighted red lamp 2. Section 21056 <ol style="list-style-type: none"> a) Effect of exemption <p>NOTE: Sections 21055 and 21056 are also discussed in greater depth in Unit 4 – Topic 1.</p> <ol style="list-style-type: none"> 3. Section 21706 <ol style="list-style-type: none"> a) Following emergency vehicles b) No closer than 300 feet 4. Section 21707 <ol style="list-style-type: none"> a) Fire areas b) No vehicles within the identified fire areas 5. Section 21708 <ol style="list-style-type: none"> a) Fire hoses b) No driving over or across any fire hose unless provided with jumpers or other appliances to protect the hose 6. Section 22104 <ol style="list-style-type: none"> a) No U-turns in front of the driveway entrance or approaches to a fire station 	<p>What is the minimum distance between a vehicle and the emergency apparatus?</p> <p>Is there a law that addresses civilian vehicles within a fire area?</p>



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

PRESENTATION	APPLICATION
<p>b) Cannot use the driveway entrance or approaches to a fire station for turning a vehicle to proceed in the opposite direction</p> <p>7. Section 22454</p> <p>a) School bus</p> <p> 1) Meeting and passing</p> <p>b) All vehicles to stop under this law</p> <p> 1) Emergency vehicles are not exempt from this law</p> <p>F. Safety</p> <p>1. Section 26700(a)</p> <p>a) Every fire apparatus shall be equipped with an adequate windshield</p> <p>2. Section 27305</p> <p>a) Public fire vehicles are required to have seatbelts for all seats</p> <p>NOTE: Individual cities and counties may have laws applicable to their specific region, locality, or department.</p>	<p>Is there any situation in which an emergency vehicle, while operating Code 3, is not exempt from passing other vehicles?</p>



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

SUMMARY:

As a fire apparatus driver/operator, in order to safely and legally perform your job, you must have a clear understanding of all laws and statutes, which are relevant to your position. By understanding and following the laws, your personal liability is greatly reduced.

EVALUATION:

The student will complete the activity and written test at a time determined by the instructor.

ASSIGNMENT:

Review your notes and read Fire Apparatus Driver/Operator 1A Student Supplement, SFT, 2011 Edition, Pages 7-17 and Pumping Apparatus Driver/Operator Handbook, IFSTA, Second Edition, Pages 9-10 and 63-64 in order to prepare yourself for the upcoming test. Study for our next session.



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

ACTIVITY 1-3-1

TITLE:	Legal Aspects Of Emergency And Nonemergency Driving
TIME FRAME:	0:45
MATERIALS NEEDED:	<ul style="list-style-type: none">• <u>State of California Vehicle Code</u>, DMV, 2007 Edition (one copy for each group)• Writing board/pad with markers/erasers
INTRODUCTION:	This activity provides the students the opportunity to research the laws and regulations governing emergency and nonemergency driving of fire apparatus using the California Vehicle Code.
DIRECTIONS:	<ol style="list-style-type: none">1. Break the class into three groups.2. For each topic listed, identify the applicable CVC section.3. Using the writing board or pad, write the code section and a brief summary highlighting its important points.4. You have 30 minutes to complete this activity.5. Be prepared to discuss your answers with the class.
INSTRUCTOR NOTE:	The section and page numbers listed below apply to the 2007 Edition of the California Vehicle Code. It is imperative that you update these if using a newer edition of the code.



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

GROUP 1

Code 3 Authorization

1. Red lights and sirens restriction

Section 30, Page 4

Civil Liability

2. Liability of a public entity

Section 17001, Page 607

Warning Systems

3. Red warning lamps

Section 25252, Page 844

4. Additional warning lights

Section 25259, Page 846

5. Use of flashing warning amber lights

Section 25268, Page 848

6. Use of horns

Section 27001, Page 874

Rules Of The Road

7. Exemption of authorized emergency vehicles

Section 21055, Page 624

GROUP 2

Code 3 Authorization

1. Definition of an authorized emergency vehicle

Section 165(b)(2), Page 6

Civil Liability

2. Liability of public employees

Section 17004, Page 607

Warning Systems



FIRE APPARATUS DRIVER/OPERATOR 1A

Emergency Vehicle Operations

3. Flashing upper beams

Section 25252.5, Page 844

4. Limits use of flashing or steady burning red light

Section 25269, Page 849

Rules Of The Road

5. Duty of drive with due regard

Section 21056, Page 624

Safety

7. Windshields

Section 26700, Page 869

GROUP 3

Civil Liability

1. Liability of private fire departments

Section 17004.5, Page 607

Warning Systems

2. Controlling traffic signals

Section 25258, Page 846

3. Horns

Section 27000, Page 874

4. Sirens

Section 27002, Page 874

Rules Of The Road

5. Following emergency vehicles

Section 21706, Page 673

6. Vehicles within the identified fire areas

Section 21707, Page 673

Safety

7. Seatbelts

Section 27305, Page 882