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1906

Standard for Wildland Fire Apparatus

2016



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NFPA® 1906

Standard for

Wildland Fire Apparatus

2016 Edition

This edition of NFPA 1906, *Standard for Wildland Fire Apparatus*, was prepared by the Technical Committee on Fire Department Apparatus. It was issued by the Standards Council on May 26, 2015, with an effective date of June 15, 2015, and supersedes all previous editions.

This document has been amended by one or more Tentative Interim Amendments (TIAs) and/or Errata. See “Codes & Standards” at www.nfpa.org for more information.

This edition of NFPA 1906 was approved as an American National Standard on June 15, 2015.

Origin and Development of NFPA 1906

The first edition of NFPA 1906, *Standard for Wildland Fire Apparatus*, was published in 1995 to provide a standard for apparatus that are basically designed and deployed to combat fires in wildland. The document covered apparatus with pumps ranging in size from 20 gpm to 250 gpm (76 L/min to 950 L/min) and water tanks with a capacity of 125 gal (473 L) or more.

Requirements were also provided for the first time for foam proportioning systems using Class A foam as a fire suppressant agent and for compressed air foam systems (CAFS). The apparatus covered in the standard included built-to-specification apparatus and fire-fighting packages designed to be slipped onto a vehicle chassis.

In the 2001 edition, the requirements for low-voltage electrical systems, including the emergency warning systems, were brought in line with the requirements in NFPA 1901, *Standard for Automotive Fire Apparatus*. The chapter on pumps was reorganized to provide requirements for four types of pumps, with the range of sizes changed to include pumps from 10 gpm (38 L/min) to 500 gpm (1900 L/min). The allowable minimum size on water tanks was lowered to 50 gal (190 L), and the chapter on line-voltage systems was removed. The document was also updated in other areas where appropriate to make the requirements consistent with those in NFPA 1901.

The 2006 edition was a general updating of the document, including making requirements consistent with those in NFPA 1901 where appropriate. It added requirements for what the manufacturer certification of test results must include and for better illumination and signage for controls, switches, instruction plates, gauges, and instruments. This edition also introduced the concept of estimated in-service weight as a basis for measuring certain stability requirements and linked the maximum top speed of the apparatus to the tire manufacturer's ratings. It also required more head height at seating positions and the use of red seat belts if available.

The 2006 edition also reorganized the requirements for water pumps installed on the wildland fire apparatus into seven categories and updated the requirements for baffling water tanks to better address smaller water tanks. The standard required type testing of foam systems followed by individualized testing of each installation. Two annexes were added, one to provide an equipment size and weight chart, the other to provide guidelines for first-line and reserve fire apparatus. Finally, the document was reorganized according to the *Manual of Style for NFPA Technical Committee Documents*.

The 2012 edition was a complete reorganization of the document, to follow the same format and style as NFPA 1901, *Standard for Automotive Fire Apparatus*. It included a new category of wildland fire apparatus titled Wildland Mobile Water Supply Apparatus, giving specific requirements for vehicles equipped with a minimum of 1000 gal (4000 L) water tanks designed to operate off-road. This revision also included appropriate updates consistent with those requirements in NFPA 1901.

The 2016 edition of NFPA 1906 includes a new chapter on the design of wildland fire crew carriers specifically for the purpose of transporting wildland fire crews. It also includes a new chapter

on ultra-high pressure (UHP) fire pumps and associated equipment due to the increased use of UHP fire pumps. This edition provides guidance to manufacturers and purchasers as to the design, testing, and performance of UHP fire pumps with a rated discharge pressure of 1100 psi (7600 kPa) or greater. The 2016 edition of NFPA 1906 also introduces a new design concept of the on-board pump-and-roll firefighting position in Chapter 14. This is a seated, belted, and protected position that allows for safe and effective use of pump-and-roll operations in situations where walk along-side pump-and-roll operations are not practical. The Committee also has clarified the requirements within Chapter 16 for pump controls and has added updated tables to the chapter for the engine speed advancement interlock test. Additional changes have been made throughout the document to remove redundant language and to clarify requirements.

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Committee Scope: This Committee shall have primary responsibility for documents on the design and performance of fire apparatus for use by the fire service.

Contents

Chapter 1 Administration	1906- 6	Chapter 10 Wildland Fire Crew Carrier Apparatus ..	1906- 18
1.1 Scope.	1906- 6	10.1 General.	1906- 18
1.2 Purpose.	1906- 6	10.2 Equipment.	1906- 18
1.3 Application.	1906- 6	10.3 Crew Compartment.	1906- 19
1.4 Retroactivity.	1906- 6	10.4 Crew Compartment Body Structural Integrity.	1906- 19
1.5 Equivalency.	1906- 6	10.5 Crew Compartment Entry Doors.	1906- 20
1.6 Units of Measure.	1906- 6	10.6 Crew Compartment Body Means of Escape. ..	1906- 20
Chapter 2 Referenced Publications	1906- 6	10.7 Crew Compartment Seats.	1906- 20
2.1 General.	1906- 6	10.8 Crew Compartment Seat Head Height.	1906- 20
2.2 NFPA Publications.	1906- 6	Chapter 11 Reserved	1906- 20
2.3 Other Publications.	1906- 6	Chapter 12 Chassis and Vehicle Components	1906- 20
2.4 References for Extracts in Mandatory Sections.	1906- 7	12.1 Carrying Capacity.	1906- 20
Chapter 3 Definitions	1906- 8	12.2 Engine and Engine System Design.	1906- 21
3.1 General.	1906- 8	12.3 Vehicle Components.	1906- 23
3.2 NFPA Official Definitions.	1906- 8	Chapter 13 Low-Voltage Electrical Systems and Warning Devices	1906- 24
3.3 General Definitions.	1906- 8	13.1 General.	1906- 24
Chapter 4 General Requirements	1906- 12	13.2 Wiring.	1906- 24
4.1 General.	1906- 12	13.3 Power Supply.	1906- 25
4.2 Requirements by Apparatus Type.	1906- 12	13.4 Batteries.	1906- 25
4.3 Responsibility of the Purchaser.	1906- 12	13.5 Starting Device.	1906- 26
4.4 Reserved.	1906- 12	13.6 Temperature Exposure.	1906- 26
4.5 Reserved.	1906- 12	13.7 Electromagnetic Interference.	1906- 26
4.6 Legal Requirements.	1906- 12	13.8 Optical Warning Devices.	1906- 26
4.7 Third-Party Certification of Test Results.	1906- 12	13.9 Audible Warning Devices.	1906- 29
4.8 Manufacturer Certification of Test Results.	1906- 13	13.10 Work Lighting.	1906- 29
4.9 Personnel Protection.	1906- 13	13.11 Reserved.	1906- 29
4.10 Controls and Instructions.	1906- 14	13.12 Backup Alarm.	1906- 30
4.11 Reserved.	1906- 14	13.13 Stop, Tail, and Directional Lights.	1906- 30
4.12 Component Protection.	1906- 14	13.14 Electrical System Performance Tests.	1906- 30
4.13 Vehicle Stability.	1906- 14	13.15 Documentation.	1906- 30
4.14 Fire Apparatus Performance.	1906- 15	Chapter 14 Driving and Crew Areas	1906- 31
4.15 Highway Performance.	1906- 15	14.1 General.	1906- 31
4.16 Serviceability.	1906- 15	14.2 Cab Tilt Systems.	1906- 33
4.17 General Pre-Delivery Tests.	1906- 15	14.3 Driving Compartment.	1906- 33
4.18 Tests on Delivery.	1906- 15	14.4 On-Board Pump-and-Roll Fire-Fighting Position.	1906- 34
4.19 Documentation.	1906- 15	Chapter 15 Body, Compartments, and Equipment Mounting	1906- 34
4.20 Data Required of the Contractor.	1906- 16	15.1 Compartmentation.	1906- 34
4.21 Statement of Exceptions.	1906- 17	15.2 Reserved.	1906- 34
Chapter 5 Wildland Fire Suppression Apparatus ...	1906- 17	15.3 Equipment Containment.	1906- 34
5.1 General.	1906- 17	15.4 Powered Equipment Racks.	1906- 34
5.2 Pump.	1906- 17	15.5 SCBA Storage.	1906- 35
5.3 Reserved.	1906- 17	15.6 Pump and Plumbing Access.	1906- 35
5.4 Water Tank.	1906- 17	15.7 Stepping, Standing, and Walking Surfaces.	1906- 35
5.5 Equipment Storage.	1906- 17	15.8 Access Handrails or Handholds.	1906- 36
5.6 Hose Storage.	1906- 17	15.9 Metal Finish.	1906- 36
5.7 Equipment.	1906- 17	15.10 Hose Storage.	1906- 37
Chapter 6 Reserved	1906- 18	15.11 Requirements for Mounting of Ground Ladders.	1906- 37
Chapter 7 Wildland Mobile Water Supply Fire Apparatus	1906- 18	15.12 Receivers and Anchors for Rope and Removable Winches.	1906- 37
7.1 General.	1906- 18	15.13 Slip-On Fire-Fighting Module.	1906- 37
7.2 Pump.	1906- 18	Chapter 16 Pumps for Wildland Fire Fighting and Associated Equipment	1906- 38
7.3 Reserved.	1906- 18	16.1 Application.	1906- 38
7.4 Water Tank.	1906- 18	16.2 Design and Performance Requirements.	1906- 38
7.5 Equipment Storage.	1906- 18	16.3 Pump Engine Requirements.	1906- 39
7.6 Hose Storage.	1906- 18		
7.7 Equipment.	1906- 18		
Chapter 8 Reserved	1906- 18		
Chapter 9 Reserved	1906- 18		

16.4	Power Train Capability.	1906– 41	21.9	Manufacturer's Predelivery Tests.	1906– 60
16.5	Construction Requirements.	1906– 41	Chapter 22	Line Voltage Electrical Systems	1906– 61
16.6	Pump Intake.	1906– 41	22.1	1906– 61
16.7	Pump Discharge Outlets.	1906– 42	Chapter 23	Reserved	1906– 61
16.8	Pump Drains.	1906– 43	Chapter 24	Reserved	1906– 61
16.9	Pump Operator's Location.	1906– 43	Chapter 25	Winches	1906– 61
16.10	Pump Controls.	1906– 43	25.1	General.	1906– 61
16.11	Pump Engine Controls.	1906– 44	25.2	Winch Wire or Synthetic Rope.	1906– 61
16.12	Instrumentation.	1906– 44	25.3	Clutch.	1906– 61
16.13	Required Testing.	1906– 46	25.4	Electric Powered Winches.	1906– 61
Chapter 17	Reserved	1906– 54	25.5	Hydraulically Driven Winches.	1906– 62
Chapter 18	Water Tanks	1906– 54	Chapter 26	Reserved	1906– 62
18.1	General.	1906– 54	Chapter 27	Vehicle Protection Systems	1906– 62
18.2	Tank Construction.	1906– 54	27.1	Brush Rails.	1906– 62
18.3	Tank-to-Pump Intake Line.	1906– 54	27.2	Grille Guard.	1906– 62
18.4	Filling and Venting.	1906– 54	27.3	Skid Plates.	1906– 62
18.5	Reserved.	1906– 55	Chapter 28	Ultra-High Pressure Fire Pumps and Associated Equipment	1906– 62
18.6	Water Tank Capacity Certification.	1906– 55	28.1	Application.	1906– 62
Chapter 19	Reserved	1906– 55	28.2	Pump Performance.	1906– 62
Chapter 20	Foam Proportioning Systems for Class A Foam Concentrate	1906– 55	28.3	Power Train Capability.	1906– 63
20.1	Application.	1906– 55	28.4	Construction Requirements.	1906– 63
20.2	Requirements by Type of Foam Proportioning System.	1906– 55	28.5	Pump Intakes.	1906– 63
20.3	Design and Performance Requirements of a Foam Proportioning System.	1906– 55	28.6	Pump Discharges.	1906– 64
20.4	Controls for Foam Proportioning Systems.	1906– 56	28.7	Pump Operator's Panel.	1906– 64
20.5	Foam Proportioning System Pressure Gauges, Flowmeters, and Indicators.	1906– 56	28.8	Pump Controls.	1906– 64
20.6	Atmospheric Foam Concentrate Tank.	1906– 56	28.9	Pump Drive Systems.	1906– 64
20.7	Foam Concentrate Pump.	1906– 57	28.10	Engine Controls.	1906– 65
20.8	Pressure Vessel Foam Concentrate or Foam Solution Tanks.	1906– 57	28.11	Gauges and Instruments.	1906– 65
20.9	Labels and Instruction Plates.	1906– 58	28.12	Required Testing.	1906– 65
20.10	Foam Proportioning System Accuracy.	1906– 58	Annex A	Explanatory Material	1906– 69
20.11	Testing and Documentation.	1906– 58	Annex B	Specifying and Procuring Wildland Fire Apparatus	1906– 101
Chapter 21	Compressed Air Foam Systems (CAFS) .	1906– 59	Annex C	Weights and Dimensions for Common Equipment	1906– 123
21.1	Application.	1906– 59	Annex D	Guidelines for First Line and Reserve Apparatus	1906– 123
21.2	General Requirements.	1906– 59	Annex E	Informational References	1906– 133
21.3	Compressed Air System.	1906– 59	Index	1906– 134
21.4	Air Mixing.	1906– 59			
21.5	Compressed Air System Piping.	1906– 59			
21.6	Air System Controls.	1906– 59			
21.7	Foam System Pressure Gauges, Flowmeters, and Indicators.	1906– 60			
21.8	Labels and Instruction Plates.	1906– 60			

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Information on referenced publications can be found in Chapter 2 and Annex E.

Chapter 1 Administration

1.1* Scope. This standard shall define the minimum requirements for the design, performance, and testing of new automotive fire apparatus that are designed primarily to support wildland fire suppression operations.

1.2 Purpose. The purpose of this standard shall be to establish the minimum requirements for new automotive wildland fire apparatus that will be safe and reliable when properly maintained and used within design parameters.

1.3 Application.

1.3.1* This standard shall apply to new fire apparatus that meet the following criteria:

- (1) Rated at minimum 10,001 lb (4501 kg) gross vehicle weight rating (GVWR)

- (2) Designed specifically for supporting wildland fire suppression operations
- (3) Contracted for on or after January 1, 2016

1.3.2 Nothing shall prevent the use of the standard prior to January 1, 2016, if the purchaser and the contractor agree.

1.3.3 This standard shall not apply to fire apparatus designed to support structural fire fighting or associated fire department operations, which are covered by the requirements of NFPA 1901.

1.4* Retroactivity. The standard is not intended to be applied retroactively.

1.5 Equivalency. Nothing in this standard is intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard.

1.5.1 Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency.

1.5.2 The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

1.6 Units of Measure.

1.6.1* In this standard, values for measurement in U.S. customary units shall be followed by an equivalent in SI units.

1.6.2 Either set of values can be used, but the same set of values (either U.S. customary units or SI units) shall be used consistently.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1901, *Standard for Automotive Fire Apparatus*, 2016 edition.

NFPA 1963, *Standard for Fire Hose Connections*, 2014 edition.

2.3 Other Publications.

2.3.1 ANSI Publications. American National Standards Institute, 25 West 43rd Street, 4th floor, New York, NY 10036.

ANSI/NEMA Z535.4, *Product Safety Signs and Labels*, 2011.

2.3.2 ASME Publications. American Society of Mechanical Engineers, Two Park Avenue, New York, NY 10016-5990.

ANSI/ASME B1.20.7, *Hose Coupling Screw Threads, Inch*, 1991 (R2003).

ASME B40.100, *Pressure Gauges and Gauge Attachments*, 2005.

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