

Suggested Reference Material:

The Career Equipment Fleet Manager, Association of Equipment Management Professionals.\$295.00

<https://aemp.org/page/Publications>

NFPA reference listed below - National Fire Protection Association (800) 344-3555 or www.nfpa.org

NFPA 1900: Standard for Aircraft Rescue and Firefighting Vehicles, Automotive Fire Apparatus, Wildland Fire Apparatus, and Automotive Ambulances (**NFPA 1901 and 1917 CHAPTERS**) 2024 edition

NFPA 1910: Standard for the Inspection, Maintenance, Refurbishment, Testing and Retirement of In-Service Emergency Vehicles and Marine Firefighting Vessels (**NFPA 1911 and 1071 CHAPTERS**) 2024 edition

LEARNING OBJECTIVES

Section A - The Supervisor shall understand the principles stated in **The Career Equipment Fleet Manager**

1. Information

- a. Benchmarking
 - (1) Definition
 - (2) Business Practice
 - (3) Implementation
- b. Specifications/Life Cycle Cost
 - (1) Specification Writing
 - (a) performance & functional
 - (2) Tires/Fuel
 - (3) Automatic Transmissions
 - (4) Diesel Engine/Gasoline Engines
 - (5) Road calls
- (6) Air brake dryers
- (7) Considerations for specifications
- (8) Fundamental requirement
- (9) Technical specifications
- (10) Functional specifications
- (11) Sole source
- c. Technology
 - (1) Maintenance software
 - (2) Computer based records
 - (3) Benefits of GPS/GIS
 - (4) Pitfalls of new technology and implementation

2. Policies

- a. Environmental
 - (1) Hazardous Materials
 - (2) Hazardous Waste
 - (3) EPA
 - (4) Fuel Storage Tank Regulations
 - (5) Containers
 - (6) Toxic Wastes
 - (7) Reactive Waste
 - (8) Employee Environmental Training
 - (9) Hazardous Communication Program
 - (10) Shop Ventilation
 - (11) Material Safety Data Sheets
 - (12) Used Oil
 - (13) Diesel Emission Fluid (DEF)
 - (a) NOx (nitrogen oxide) reduction
 - (b) NOx formation
 - (c) EGR (exhaust gas recirculation)
 - (d) SCR (selective catalyst reduction)
- b. Human Resource Chapter
 - (1) ADA
 - (a) Pre-employment Testing & Inquiries
 - (2) Discipline
 - (3) Sexual Harassment
 - (4) EEOC
 - (5) Employment Law
 - (6) Motivation
 - (7) Performance Evaluation
 - (8) Personnel Management
 - (9) Compensation Practices
 - (a) Fair Labor Standards Act (FLSA)
 - (10) Discrimination
 - (11) Quid Pro Quo
 - (12) Training
- c. Safety
 - (1) Emergency Evacuation Plan
 - (2) Personnel Protective Equipment
 - (3) Fire Extinguishers
 - (4) Lock out/Tag out
 - (5) Forklift Operator Training
 - (6) Safety awareness

3. Controls

- a. Outsourcing
 - (1) Reasons outsourcing fails
 - (2) Feasibility/Effectiveness
 - (3) Outsourcing and increased control
 - (4) Definition of control
- b. Parts Management
 - (1) Vendor managed inventory (VMI)
 - (2) Inventory volume/costs
 - (3) Purpose of inventory
 - (4) Just-in-Time
 - (5) Order quantity cost
- c. Preventive Maintenance
 - (1) Preventative/Scheduled Maintenance
 - (2) Unscheduled Maintenance
 - (3) Failure Analysis
 - (4) Oil Filters
 - (5) Labor Productivity
 - (6) Oil Analysis
- d. Shop/Facilities Management
 - (1) Diagnosing Problems
 - (2) Empowering
 - (3) Ethics
- (4) Failure & Breakdown Analysis
- (5) Job Assignments
- (6) On-the-Job Training
- (7) Productivity
- (8) Quality Control
- (9) Record Keeping
- (10) Regulations/Dot Bureau of Motor Carrier Safety
- (11) Scheduling
- (12) Serving Customers
- (13) Task Assignment
- (14) PMI / Driver / Technician
- (15) Road calls
- (16) Reports
- (17) Unscheduled maintenance cost
- (18) Vehicle availability
- (19) Maintenance controls
- (20) Overtime
- (21) Work standards
- (22) Repair authorization
- (23) Labor hours available

Section B

The Supervisor shall understand the requirements for Fire Apparatus and Automotive Ambulances as stated by **NFPA**.

1. NFPA 1900/1901

a. Definitions

- (1) Authority Having Jurisdiction (AHJ)
- (2) Load Management System
- (3) In-Service Weight

b. Requirements

- (1) Acceptance tests
- (2) Acceleration test
- (3) Certification test

(4) Braking System GVWR

(5) Reflective stripping

(6) DPF regeneration

(7) Stability tests

c. Safety Components

(1) Vehicle data recorder

(2) Stability Control

(3) DPF Regeneration

2. NFPA 1910/1911

a. Pump Test requirements

b. Service/Performance test

- (1) Pressure measuring equipment

c. Gauges

- (1) Calibration

d. Flow equipment

e. Pump Vacuum Test

f. Preventive Maintenance

g. Documentation

h. Operational Tests

i. Intake Reliefs

j. Test Results

k. Tire requirements

l. Out of Service Criteria

(1) Definition

(2) Engine systems

(3) Engine cooling system

(4) Stop engine light

(5) Transmission temperature

(6) Wheels/Axle

(7) Welding

(8) Warning lights

(9) Cab area

(10) Aerial device

m. Qualification of Personnel

n. Safety

o. Vehicle Stability/Instability

(1) Weight

p. Braking System

q. Aerial Instability

r. Types of leaks/leakage

3. NFPA 1910/1071

a. Definitions

(1) JPR

(2) Technician Levels

(3) Emergency Response Vehicle

(4) Aerial Device Safety

(5) Deficiency

(6) Defect

(7) Test

(8) Structural Integrity

b. Duties & Responsibilities

(1) EVT I, II, III Responsibilities

(2) Level II Body & Cab Repairs

(3) Water tank repair Level II Technician

c. Chassis Testing

(1) Parking Brake

(2) Cab Tilt

(3) Pump & Tank Systems

d. Requisite Knowledge

(1) Level III

(a) Repair Times

(b) Failure Analysis

e. Training

(1) Continuing Education

(2) Technician Education

f. Requisite Skills

4. NFPA 1900/1917

a. Payload

b. FDA & ambulance components

c. Legal requirements

d. Administration

e. Statement of exemptions

f. Low idle alternator output

(1) Accessory electrical loads

g. High idle alternator output

h. Patient compartment sound level test

i. Multiplex circuit protection

j. Ambulance Performance

(1) Altitude requirement

(2) Refueling distance

(3) temperature requirements

k. Water leak test

l. Oxygen system

(1) Leak test

(2) Storage

m. Personal protection

n. Road Performance

(1) Speed requirement

o. Wiring

(1) Wiring protection

(2) Wire harness construction

p. Scene lighting

q. Patient compartments and level testing

r. Patient compartment interior noise

s. Longitudinal weight distribution

t. Ambulance components

(1) Reliability

(2) Serviceability

u. Line Voltage Receptacles