

Suggested Reference Material:

The Career Equipment Fleet Manager, Association of Equipment Management Professionals. Reference that you are taking an EVT exam to be eligible for member price of \$225.00 from 970-384-0510

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

1901, **Standard for Automotive Fire Apparatus**

1911, **Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus**

1071, **Standard for Emergency Vehicle Technician Professional Qualifications**

1917, **Standard for Automotive Ambulances**

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) 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

Section B

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

1. **NFPA 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

c. Safety Components

- (1) Vehicle data recorder
- (2) Stability Control
- (3) DPF Regeneration

2. **NFPA 1911**

a. Pump Test requirements

b. Service/Performance test

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 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) Level II Body & Cab Repairs
- (2) Water tank repair Level II Technician
- (3) EVT III Responsibilities

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 1917.**

a. Payload

b. FDA & ambulance components

c. Legal requirements

d. Administration

e. Statement of exemptions

f. Low idle alternator output

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. Roadability

- (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