

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
- (7) Stability tests

#### c. Safety Components

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

### 2. NFPA 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 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