EVT III Study guide (Rev 01-2025)

- **NFPA Study Guide for 1900, 1910, 1071**
- **Review all EVT 1 Study Guides for classes EVT 1A, 1B & 1C**
- **Review EVT 2 Study Guide**

EVT 3A Study Guide

Monitoring out sourced repairs

Identify required diagnostic checks and performance testing
Identify required record-keeping and documentation

- Work order identifying maintenance or repair need
- Outsourced vehicle tracking document or database:

o List of outsourced vehicles
o Outsource location
o Primary contact information
o Outsource reason

- Maintenance
- Repair

o Projected return date
o Progress reports

- Written
- Verbal
- Photos
- Anticipated cost

Inspecting Completed Vehicles

Identify the function, construction, and operation of vehicles and systems
Vehicle types

- Type I
- Type III
- Etc. (Type VI, Aerial, Tender)

Systems (and components)

- Chassis
- Cab and body
- Pumps and tanks
- Electrical

Identify diagnostic checks and performance testing procedures
Performance test (was the vehicle repaired correctly)
Identify required record-keeping and documentation
Manufacturer requirements
AHJ requirements

Identify common deficiencies

- Corrosion
- Rust, oxidation, electrolysis
- Warping
- Leaks
  Class 1
  Class 2
  Class 3

- Fluid and lubrication levels
  - Cracks, fractures, breaks
  - Loose, broken, worn, or missing components
  - Identify repair procedures
  - Identify vehicle safety requirements and confirm that they are diagnostically checked to manufacturer's specifications

Monitoring Inventory Levels

- Identify current suppliers
- Evaluate previous repair history
- Identify agency and purchase policies
- Determine current needs
- Use previous repair history to predict future needs

Ordering Parts

- Identify the function, operation, and construction of component
- Identify applicable standards
- Identify manufacturer specifications
- Identify recommended part substitutions
- Identify parts locations
- Identify transportation systems
- Research written and electronic sources and manuals
- Communicate verbally and in writing

Preparing Estimates

Identify the function, construction, and operation of emergency response vehicles
Identify estimated repair times

- Technician experience and skill level
- Fleet priority
- Parts availability
- Staffing levels

Identify parts and component costs

- Replacement part cost
- Secondary costs
- Replacing associated parts impacted by new part
- Replacing items damaged during repair
- Additional problems discovered during repair

Shipping cost

Labor cost (Outside labor: Machine Shop, Welding, Upholstery, etc)

Identify applicable vehicle standards

 Manufacturer specifications (vehicle)

 Original equipment manufacturer (OEM) specifications (part or component)

 NFPA standards

 AHJ standards

5. Estimate and calculate costs and repair times
6. Complete documentation and record-keeping

Adhering to Repair and Maintenance Schedules

Identify the function, construction, and operation of emergency response vehicles

Identify resource availability

- Matching resources to workload
- Technicians available to do the work
- Vehicle available to cover for vehicles out of service

Identify factors that impact resource availability

- Fleet management
- Required scheduled inspection cycles
- New vehicle prep
- Budget cycles
- Fire season
- Wet season
- Weather

Staff levels

- Training schedules
- Vacation time
- Work injury/illness

Event

- Accident
- Catastrophic failure

1. Identify agency requirements
2. Utilize resources
3. Evaluate requests
4. Project maintenance or repair results

Documenting Warranty Repairs

1. Identify the function, construction, and operation of emergency response vehicles
2. Identify current warranties
3. Identify technical service bulletins
    - Purpose/use
    - Where to locate
4. Identify required diagnostic checks or performance tests
5. Identify required record-keeping and documentation
6. Identify diagnostic checks or performance testing procedures
7. Identify vehicle safety requirements
8. Identify manufacturer specifications
    - Whether or not something is covered by warranty
    - Who can perform warranty repairs
    - Manufacturer-designated repair facility
    - Manufacturer-negotiated in-house repairs
9. Identify agency policies and procedures
10. Communicate verbally and in writing
11. Comply with the record-keeping requirements of the manufacturer and the authority having jurisdiction (AHJ)

Creating Work Orders

1. Identify required record-keeping
2. Identify agency record-keeping system
3. Identify previous repair history
4. Identify the function, construction, and operation of emergency response vehicles
5. Apply agency record-keeping system
6. Communicate verbally and in writing
7. Utilize diagnostic skills

Validating Maintenance Records

1. Identify record-keeping and accounting procedures
2. Describe how to analyze statistics
3. Identify agency policy and procedure
4. Recognize, evaluate, analyze, and calculate statistical information, accounting reports, and cost performance reports

Developing Apparatus Specifications

1. Identify current quality standards and requirements of the agency, state and local laws and regulations, the American Society of Mechanical Engineers (ASME), the Society of Automotive Engineers (SAE), the Occupational Safety and Health Administration (OSHA), and NFPA for the construction of a fire apparatus
2. Recognize agency guidelines
3. Organize and identify apparatus components based on the needs of the applicable divisions
4. Communicate verbally and in writing

Human Resources

Assigning Tasks or Responsibilities

1. Identify the function, construction, and operation of vehicles and systems
2. Identify required testing
3. Identify required record-keeping and documentation
4. Identify common deficiencies
5. Identify repair procedures
6. Identify testing procedures
7. Identify apparatus safety requirements
8. Identify skill levels of assigned technicians
    - Involve labor and management
    - Job performance analysis
        - Training
        - Monitoring
        - Evaluation
        - Feedback
        - Modification
9. Identify agency priorities
10. Identify available resources
11. Communicate verbally and in writing
12. Evaluate technician performance

Conducting Individual Technician Training

1. Identify the function, operation, and construction of component
2. Identify applicable standards
3. Identify manufacturer specifications
4. Identify recommended procedures
5. Determine the technician's capability
6. Research, communicate, and deliver training material based on methods and practices
7. Evaluate the results

Evaluating Technician Performance

Identify allowable repair times
Describe how to evaluate and analyze technician strengths and weaknesses

- Give assignment
- Measure performance completion
- Evaluate skill completion (or lack of completion)
    - Skill degradation
    - Skill enhancement
- Maintain work history base on equipment/specific brand

Evaluating Technician Performance (Cont)

1. 1 Sometimes it may be intuition or instinct
2. Identify agency policies and procedures
3. Describe appropriate workplace behavior
4. Identify job descriptions
5. Describe goals of the evaluation program
6. Communicate verbally and in writing

- 5 W's (who, what, when, when, why)
- End date / start date
- "What ifs"
- Write first, then communicate verbally
- Evaluate and document performance

Recommending and Enforcing Discipline

1. Identify agency policies and procedures
2. Demonstrate an awareness of the situation and the individual involved
3. Communicate verbally and in writing
4. Assess employee abilities and attitudes
5. Implement the most effective alternative

Recommending and Enforcing Safety Policies and Procedures

1. Identify agency safety policies and procedures
2. Identify federal, state, local, and industry standards for workplace safety
3. Identify safety hazards
4. Identify safe practices
5. Identify equipment limitations
6. Identify personal protection devices
7. Communicate verbally and in writing
8. Promote a safe working environment