

ADO-Aerial Apparatus Manipulative Skill Objectives

PREVENTIVE MAINTENANCE

1. **Perform and operate (when necessary to determine operational readiness) routine tests, inspections, and servicing functions on specified systems and components and document results on appropriate forms.**

- A. **For a fire department Apparatus**

Reference: NFPA 1002, 2017 Edition, 4.2.1(b), 4.2.2 (b), 4.3.7 (b).

Condition: Given a fire department aerial apparatus (with manufacturer specifications), inspection form or check-off sheet (Sample check-off sheet provided in Appendix B).

Competence:

- Check batteries for fluid level and corrosion (if **maintenance** free, check indicator for correct color).
- Check braking system for fluid level/drain air tanks of water.
- Check coolant system for fluid level, leaks, cleanliness.
- Check electrical system for corrosion and tight connections.
 - Siren and other warning devices.
 - Headlights, running lights, and turn signal flashers.
 - Emergency warning lights.
- Check fuel level.
- Check hydraulic system for fluid level and leaks.
- Check engine oil for fluid level and leaks.
- Check transmission fluid level (if applicable).
- Check other fluid levels as appropriate.
- Check tires for pressure and wear.
- Check steering system for range of motion and looseness.
- Check engine belts for tightness and wear.
- Check tools, appliances, and equipment, fixed equipment, lighting.
- Check windshield wiper blades/fluid level.
- Start apparatus and monitor gauges and other control devices.
- Check all items off on check-off sheet (see Appendix B)
- Identify, document, and report deficiencies found.
- Determine operational readiness of apparatus.

Time: 15:00 minutes.

B. Fire Department Aerial Device system.

Reference: NFPA 1002, 2017 Edition, 6.1.1 (b)

Condition: Given a fire department aerial apparatus (with manufacturers specifications) determine readiness of aerial device on an aerial apparatus. (Sample check-off sheet provided in Appendix B).

Competence:

- Check cable system (if applicable).
- Check aerial device hydraulic system(s).
- Check hydraulic tank level.
- Operate PTO shift.
- Check slides and rollers.
- Check stabilizing system(s).
- Check aerial device safety systems / interlocks.
- Check leveling devices.
- Check breathing air system (if applicable).
- Check communication system.
- Check master stream/waterway.
- Check tools, appliances, and equipment, fixed equipment, lighting.
- Identify, document and report deficiencies as found.
- Determine operational readiness of aerial device.

Time: 15:00 minutes.

DRIVING OPERATIONS

NOTICE: The driving skills in this standard are used to determine participant's qualifications to become certified at the level of ADO-Aerial Apparatus. The passing of these skills does not qualify a participant for any other certification or licenser, such as a Commercial Drivers License (CDL) and is not intended to certify, verify or approve an individuals ability to drive fire apparatus on state or federal highways. The responsibility to determine who will drive fire apparatus resides with the local fire department or the authority having jurisdiction.

SPOTTER INSTRUCTIONS: During the manipulative examination a SPOTTER will be used. The purpose of having a spotter assist while backing an apparatus is to protect life and property. The spotter should alert the driver if property damage could occur or damage the apparatus. A spotter will be allowed to assist in directing the driver when to stop the apparatus during the test.

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2. **Operate a fire department aerial apparatus so that the vehicle is safely operated in compliance with all applicable state and local laws, departmental rules and regulations.**

Reference: NFPA 1002, 2017 Edition, 4.3.1(b), 4.3.6(b) 4.3.7(b)

Condition: Given a fire department aerial apparatus (with manufacturers specifications) and a predetermined route on a public way that incorporates the maneuvers and features specified below, and that the driver/operator is expected to encounter during normal operations:

- a. Travel a straight section of urban, business street or a 2-lane rural road at least 1 mile in length.
- b. Make 1 left & 1 right hand turn from a stoplight or stop sign.
- c. Negotiate 1 through-intersection.
- d. Negotiate 1 curve, either right or left.

Competence:

- Adjust and use mirrors.
- Use seat belts for all occupants.
- Observe all posted speed limits.
- Maintain safe following distances.
- Maintain control of the vehicle while accelerating, decelerating, and turning.
- Stop fully at all stop signs or stop lights.
- Use turn signals.
- Keep apparatus in correct lane of travel.
- Monitor all gauges so vehicle is operated within manufactures specifications.

Time: 15:00 minutes.

3. Back a vehicle from a roadway into restricted spaces on both the right and/or left sides of the vehicle. (Alley Dock)

Reference: NFPA 1002, 2017 Edition, 4.3.2(b), 4.3.6(b)
*** See Appendix C for diagram of course and instructions.**

Condition: Given a fire department aerial apparatus (with manufacturer's specifications), spotter (used as a guide and safety to direct the apparatus when backing **only**), cones, and a restricted space 12 ft. in width, requiring 90-degree right or left-hand turns from the roadway, so that the vehicle is parked within the restricted area without having to stop and pull forward and without crossing over or striking cones. A marker should be placed on the ground, on the left side of the apparatus, to mark where the front left tire should be spotted, by the operator, to know where to stop the apparatus and park.

Competence:

- Adjust and use mirrors for backing.
- Driver/passengers wearing seat belts.
- Spotter used to back apparatus.
- Stop apparatus by aligning center of left tire with center of mark on ground indicating where the apparatus should be stopped and parked.
- Completed skill correctly without striking cones.

Time: 5:00 minutes

4. Maneuver vehicle around obstructions on a roadway while moving forward and in reverse. (Serpentine)

Reference: NFPA 1002, 2017 Edition, 4.3.3(b), 4.3.6(b)
*** See Appendix C for diagram of course and instructions.**

Condition: Given a fire department aerial apparatus (with manufacturer's specifications), spotter (used as a guide and safety to direct the apparatus when backing **only**), cones, a roadway with obstructions, so that the vehicle is maneuvered through the obstructions without stopping to change the direction of travel and without crossing over or striking cones.

Competence:

- Adjust and use mirrors for backing.
- Driver/passengers wearing seat belts.
- Spotter used to back apparatus.
- Completed skill correctly without crossing over or striking cones.

Time: 5:00 minutes

5. Turn a vehicle around 180 degrees within a confined space. (Confined Space Turnaround)

Reference: NFPA 1002, 2017 Edition, 4.3.4(b), 4.3.6(b)
*** See Appendix C for diagram of course and instructions.**

Condition: Given a fire department aerial apparatus (with manufacturer's specifications), spotter (used as a guide and safety to direct the apparatus when backing **only**), cones, area where vehicle cannot make a U-turn without stopping and backing up, so that the vehicle is turned 180 degrees without passing over or striking cones.

Competence:

- Adjust and use mirrors for backing.
- Driver/passengers wearing seat belts.
- Spotter used to back apparatus.
- Completed skill correctly without crossing over or striking cones.

Time: 5:00 minutes

6. Maneuver a vehicle in restricted horizontal and vertical clearances. (Diminishing Clearance)

Reference: NFPA 1002, 2017 Edition, 4.3.5(b), 4.3.6(b)
*** See Appendix C for diagram of course and instructions.**

Condition: Given a fire department aerial apparatus (with manufacturer's specifications), cones, course that requires the operator to move through areas of restricted horizontal clearances, so that the operator accurately judges the ability of the vehicle to pass through the openings without passing over or striking cones.

*** Width measurements for this skill may be modified due to the varying widths of apparatus. Modification should be based on the track width of the apparatus being used for training. To obtain a final width, measure the apparatus being used and add 2 inches on each side the track width and that will be the final width for training and testing purposes.**

Competence:

- Adjust and use mirrors.
- Driver/passengers wearing seat belts.
- Completed skill correctly without crossing over or striking cones.
- Stop the apparatus within 18 inches of apparatus bumper and cone at finish line.

Time: 5:00 minutes

7. Initiate a response

Reference: NFPA 1002, 2017 Edition, 4.4.1, 4.4.4

Condition: The candidate, given the report of an emergency, facility SOPs, and communications equipment, shall initiate a response so that all necessary information is obtained and recorded and communications equipment is operated properly, and emergency procedures are activated

Competence:

- Operates communications equipment properly (telephone, radio, cell phone, etc)
- Identifies the type of emergency and assesses the current situation
- Identifies the incident location
- Identifies the resources needed
- Records all pertinent information related to the emergency – CRITICAL POINT
- Notifies proper entity (fire brigade, fire department, unit supervisor, etc) and activates emergency response according to department SOPs – CRITICAL POINT

Time: 5:00 minutes

8. Communications – Telephone Calls

Reference: NFPA 1002, 2017 Edition, 4.4.2

Condition: The candidate, given a specific situation, shall demonstrate the procedures for answering emergency and non-emergency calls using department communications equipment and ensuring that all information is received and relayed appropriately

Competence:

- Identifies self and department in a timely fashion
- Records all pertinent information received by caller (date, time, caller's name, callback number, and their own name)
- Hangs up last

Time: 3:00 minutes

9. Communications – Radio

Reference: NFPA 1002, 2017 Edition, 4.4.3

Condition: The candidate will properly demonstrate transmitting and receiving radio messages using radio equipment

Competence:

- Checks equipment and ensures that radio is on right frequency, battery is charged, and radio is ready to be used – CRITICAL POINT
- Waits for open channel prior to transmitting, ensuring that they are not interrupting other transmissions
- Differentiates between routine and emergency traffic
- Uses radio phonetics correctly
- Transmits message clearly, concisely, and using clear speech (no codes)

Time: 1:00 minute

AERIAL OPERATIONS

10. Maneuver and position an aerial apparatus so that the apparatus is properly positioned for safe aerial device (PLATFORM or LADDER) deployment for rescue and ventilation activities. The operator will be able to successfully position an aerial device to a:

A. Window.

Reference: NFPA 1002, 2017 Edition, 6.2.1 (b), 6.2.2 (b), 6.2.3 (b).

Condition: Given an aerial apparatus, an incident location, an assignment, and 2-firefighter team (Operator and Spotter)

Competence:

- Position aerial apparatus for operation, (upwind, out of collapse zone, correct position for grade/terrain).
- Assess overhead hazards for deployment of aerial device, i.e. overhead wires, powerlines, and trees (must verbalize).
- Set park brake, engage PTO, (chock wheels if applicable).
- Assess surface conditions for stabilization purposes (must verbalize).
- Stabilize apparatus using stabilizing devices, use leveling device.
- Switch selector valve to aerial device.
- Verbalize weight restrictions while operating aerial device.
- Elevate, rotate, extend and lower aerial device (AERIAL LADDER or PLATFORM device) level with windowsill for RESCUE operations.
- Elevate, rotate, extend and lower aerial device (AERIAL LADDER or PLATFORM) to side of window frame for VENTILATION operations.

Time: 7:00 minutes

B. Roof.

Reference: NFPA 1002, 2017 Edition, 6.2.1 (b), 6.2.2 (b), 6.2.3 (b).

Condition: Given an aerial apparatus, an incident location, an assignment, and 2-firefighter team (Operator and Spotter)

Competence:

- Position aerial apparatus for operation, (upwind, out of collapse zone, correct position for grade/terrain).
- Assess overhead hazards for deployment of aerial device, i.e. overhead wires, powerlines, and trees (must verbalize).
- Set park brake, engage PTO, (chock wheels if applicable).
- Assess surface conditions for stabilization purposes.
- Stabilize apparatus using stabilizing devices, use leveling device.
- Switch selector valve to aerial device.
- Verbalize weight restrictions while operating aerial device.
- **AERIAL LADDER:** elevate, rotate, extend device and lower to target area, extended 6 feet above roof (following manufactures recommendation for supported and unsupported positions), for RESCUE or VENTILATION operations.
- **PLATFORM:** elevate, rotate, extend and lower platform level with roof for RESCUE or VENTILATION operations.

Time: 7:00 minutes

C. Elevated Master stream.

Reference: NFPA 1002, 2017 Edition, 6.2.1 (b), 6.2.2 (b), 6.2.3 (b) 6.2.5 (b)

Condition: Given an aerial apparatus, an incident location, an assignment, and 2-firefighter team (Operator and Spotter).

Competence:

- Position aerial apparatus for operation, (upwind, out of collapse zone, correct position for grade/terrain).
- Assess overhead hazards for deployment of aerial device, i.e. overhead wires, powerlines, and trees (must verbalize).
- Set park brake, engage PTO, (chock wheels if applicable).
- Assess surface conditions for stabilization purposes (must verbalize).
- Stabilize apparatus using stabilizing devices, use leveling device.
- Switch selector valve to aerial device.
- Verbalize weight restrictions while operating aerial device.
- Establish water supply to apparatus.
- Activate water flow to nozzle.
- Flow effective water stream for 1 minute, adjust nozzle.

Time: 7:00 minutes

11. Lower an aerial device using the emergency operating system so that the aerial device is safely lowered to its bedded position. (Simulated emergency)

Reference: NFPA 1002, 2017 Edition, 6.2.4

Condition: Given an aerial apparatus and a situation that would require emergency action (i.e., loss of power, engine failure), 2-firefighter team (operator and assistant).

Competence:

- Notify Incident Command of situation, loss of apparatus.
- Activate auxiliary system as per manufacture recommend.
- Raise, retract, rotate, and lower aerial device to bedded position using auxiliary system.
- Lift outriggers using auxiliary system.

Time: 15:00 minutes