

# NFPA 1002

## Aerial Performance Skill Sheets



## Practical Skills Checklist:

#	Objective	Reference	Task	<input checked="" type="checkbox"/>
1.	6.1.1	Preventative Maintenance (Aerial Device)	Perform the visual and operational checks on the systems and components	<input type="checkbox"/>
2.	6.2.1	Position Aerial Apparatus for Deployment	Maneuver and position an aerial apparatus	<input type="checkbox"/>
3.	6.2.2	Stabilize an Aerial Apparatus	Stabilize an aerial apparatus, given a positioned vehicle and the manufacturer's recommendations	<input type="checkbox"/>
4.	6.2.3	Maneuver and Position an Aerial Device	Maneuver and position the aerial device from each control station	<input type="checkbox"/>
5.	6.2.4	Emergency Lower & Bed	Lower an aerial device using the emergency operating system	<input type="checkbox"/>
6.	6.2.5	Operate a Master Stream	Deploy and operate an elevated master stream	<input type="checkbox"/>
			<b>Pass/Fail</b>	<input type="checkbox"/>



## Skill #1 - Preventative Maintenance (Aerial Device)

### 1002 Aerial (2017 Edition)

#### Objective: 6.1.1

Perform the visual and operational checks on the systems and components specified in the following list in addition to those specified in 4.2.1, given a fire department aerial apparatus, and policies and procedures of the jurisdiction, so that the operational readiness of the aerial apparatus is verified.

**Tasks:** You will conduct the routine tests, inspections and servicing of the aerial device components on an apparatus equipped with an aerial device. **(6.1.1)**

Read to candidate prior to evaluation.

**Performance Conditions:** The candidate will use Department inspection forms - or - will make up inspection sheet to record details of the inspection. Read to candidate prior to evaluation.

**Setting:** Fire Hall or Training Area

**Tools/Equipment:** Apparatus equipped with an aerial device, hand tools, department SOPs

**Attainment Standard:** Successful completion of all elements/steps.

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
<b>1. Inspection/Service/Documentation</b>					
<b>The ability to use hand tools</b> Recognize system problems <ul style="list-style-type: none"> <li>- Correct any deficiency noted according to policies and procedures</li> </ul>	<b>Cable Systems (if applicable)</b> <ul style="list-style-type: none"> <li>• Chains or cables are properly installed and aligned and have correct tension</li> <li>• Cables, pulleys, winches are free of damage</li> <li>• Cables for signs of corrosion, broken strands, excessive wear, stretching and damaged end connections</li> <li>• Sheaves, guards, guides and any other surfaces that come in contact with the</li> <li>• Cable are in good condition</li> </ul> <b>Aerial device hydraulic systems</b> <ul style="list-style-type: none"> <li>• Level of hydraulic fluid</li> <li>• Hydraulic hoses, tubing, and connections are free of chafing, kinks, or leaks</li> <li>• Hydraulic cylinders have no visible damage or fluid leaks Slides and rollers</li> </ul>				

## Skill #1 continued

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
	<ul style="list-style-type: none"> <li>• Slides are clean and free of obstructions</li> <li>• Proper lubrication</li> </ul>				
<b>1. Inspection/Service/Documentation</b>					
	<p><b>Stabilizing systems</b></p> <ul style="list-style-type: none"> <li>• Check for any signs of visible damage or scoring on the sliding beams or hydraulic pistons</li> <li>• Stabilizer warning lights are clean and not visibly damaged</li> <li>• If required, manual lockpins are present and sufficiently secured</li> <li>• Note any elongation or cracks to the lockpin holes</li> <li>• Stabilizer pads are in place and in good condition</li> </ul> <p><b>Aerial device safety systems</b></p> <ul style="list-style-type: none"> <li>• Check all system components for visible damage</li> </ul> <p><b>Breathing air systems</b></p> <ul style="list-style-type: none"> <li>• Adequate air supply in the storage cylinders</li> <li>• Inspect cylinders, gauges, regulator, hoses and tubing and air connections for damage or excessive wear</li> <li>• If possible check the operation of the low-air warning devices</li> <li>• Air lines that run through the boom are properly installed and have no chafing, wear or damage</li> </ul> <p><b>Communication systems</b></p> <ul style="list-style-type: none"> <li>• Inspect system components for visible damage</li> <li>• Test system for proper operation</li> </ul> <p><b>Correct deficiencies</b></p> <ul style="list-style-type: none"> <li>• Correct field-maintainable system problems according to local SOP's</li> </ul> <p><b>Documentation</b></p> <ul style="list-style-type: none"> <li>• Document inspection and note repairs/servicing as per local SOP's</li> </ul>				
<b>PASS/FAIL</b>					

## Skill #2 - Position Aerial Apparatus for Deployment

### 1002 Aerial (2017 Edition)

#### Objective 6.2.1

Maneuver and position an aerial apparatus, given an aerial apparatus, given an aerial apparatus, an incident location, a situation description, and an assignment, so that the apparatus is positioned for correct aerial device deployment.

**Tasks:** In this exercise you will safely and correctly position your apparatus for aerial device deployment. You will be given an assignment and description of the simulated emergency. All other factors are as you see here (at the simulated emergency scene). **(6.2.1)**

Read to candidate prior to evaluation.

**Performance Conditions:** Position apparatus properly based on the information supplied and structure used.

**Setting:** Training area or simulated emergency scene with structure at least 10 m tall

**Tools/Equipment:** Apparatus equipped with an aerial device, crew to act as spotters

**Attainment Standard:** Successful completion of all elements/steps.

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
<b>1. Positioning</b>					
The ability to determine a correct position for the apparatus	<ul style="list-style-type: none"> <li>• Fire building conditions identified</li> <li>• Weather and wind conditions considered</li> <li>• Position apparatus as per fire department SOP's</li> <li>• Position outside collapse zone of building</li> </ul>				
<b>2. Maneuver Apparatus</b>					
Maneuver apparatus into that position	<ul style="list-style-type: none"> <li>• Placement provides the best climbing angle and allows for adequate extension</li> <li>• Surface condition chosen for maximum stability and level</li> </ul>				

## Skill #2 continued...

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
<b>3. Obstacles</b>					
Avoid obstacles to operations	<ul style="list-style-type: none"> <li>• Electrical hazards identified</li> <li>• Ground and overhead obstructions identified</li> </ul>				
<b>PASS/FAIL</b>					



## Skill #3 - Stabilize an Aerial Apparatus

### 1002 Aerial (2017 Edition)

#### Objective: 6.2.2

Stabilize an aerial apparatus, given a positioned vehicle and the manufacturer's recommendations, so that power can be transferred to the aerial device hydraulic system and the device can be deployed.

**Tasks:** Your task is to use the on-board hydraulic system to safely and properly stabilize a pre-positioned aerial apparatus according to manufactures' recommendations and your Department's SOP's. **(6.2.2)**  
Read to candidate prior to evaluation.

**Performance Conditions:** Correctly stabilize the apparatus so it is ready to raise the aerial device.

**Setting:** Training area or simulated emergency scene with structure at least 10 m tall.

**Tools/Equipment:** Apparatus equipped with an aerial device, crew to act as spotters.

**Attainment Standard:** Successful completion of all elements/steps.

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
<b>1. Transfer Power</b>					
Ability to transfer power from the vehicle's engine to the hydraulic system	<ul style="list-style-type: none"> <li>Chock wheels</li> <li>Deploy traffic safety devices as per local SOP's</li> <li>Engage the power take-off (PTO) system</li> </ul>				
<b>2. Stabilize Apparatus</b>					
Operate vehicle stabilization devices	<ul style="list-style-type: none"> <li>Clear path for stabilizer deployment</li> <li>Place stabilizer pad beneath stabilizer boot</li> <li>Raise the apparatus to its working position, as per manufacturer's instructions</li> <li>Lock stabilizers in place</li> </ul>				
<b>PASS/FAIL</b>					

## Skill 4 - Maneuver and Position an Aerial Device

### 1002 Aerial (2017 Edition)

#### Objective: 6.2.3

Maneuver and position the aerial device from each control station, given an incident location, a situation description, and an assignment, so that the aerial device is positioned to accomplish the assignment.

**Tasks:** You will operate the aerial device from all control positions as directed by an evaluator. You will have to maneuver to at least two separate locations on the structure where the simulated emergency is located. **(6.2.3)**

Read to candidate prior to evaluation.

**Performance Conditions:** Correctly use aerial controls and good operating practices to position the aerial device as directed.

**Setting:** An apparatus equipped with an aerial device, crew to act as spotters.

**Tools/Equipment:** Apparatus equipped with an aerial device

**Attainment Standard:** Successful completion of all elements/steps.

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
<b>1. Raise</b>					
The ability to raise the aerial device	<ul style="list-style-type: none"> <li>Release the hold-down locks</li> <li>Check intended path of aerial device for obstructions</li> </ul>				
<b>2. Rotate</b>					
Rotate the aerial device	<ul style="list-style-type: none"> <li>Tip/platform front of device is in line with the target</li> </ul>				
<b>3. Extend</b>					
Extend the aerial device	<ul style="list-style-type: none"> <li>Extend until tip/platform is slightly above target</li> </ul>				
<b>4. Position</b>					
Position to a specified location	<ul style="list-style-type: none"> <li>Lower to desired work position</li> </ul>				

## Skill #4 continued

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
<b>5. Lock/Unlock</b>					
Lock the aerial device and Unlock the aerial device	<ul style="list-style-type: none"> <li>As per manufacturer's instructions</li> </ul>				
<b>6. Retract</b>					
Retract the aerial device	<ul style="list-style-type: none"> <li>Raise away from work area</li> <li>Fully retract</li> </ul>				
<b>7. Lower</b>					
Lower the aerial device	<ul style="list-style-type: none"> <li>Rotate device until centered above cradle</li> </ul>				
<b>8. Bed</b>					
Bed the aerial device	<ul style="list-style-type: none"> <li>Lower device into resting position</li> <li>Activate hold-down locks</li> </ul>				
<b>PASS/FAIL</b>					

## Skill #5 - Emergency Lower & Bed

### 1002 Aerial (2017 Edition)

#### Objective: 6.2.4

Lower an aerial device using the emergency operating system, given an aerial device, so that the aerial device is lowered to its bedded position.

**Tasks:** In this task you will lower and bed the aerial device after a simulated failure of the primary hydraulic system. **(6.2.4)**

Read to candidate prior to evaluation.

**Performance Conditions:** Correctly use emergency hydraulic/electrical system to retract and bed the aerial device.

**Setting:** Training area or other safe closed area

**Tools/Equipment:** Apparatus equipped with an aerial device

**Attainment Standard:** Successful completion of all elements/steps.

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
<b>1. Rotate/Position</b>					
The ability to raise the aerial device	<ul style="list-style-type: none"> <li>Personnel removed from the device</li> <li>Activate auxiliary hydraulic pump</li> <li>Operate pump intermittently as per manufacturer's instructions and local SOP's</li> <li>Rotate device until above cradle</li> </ul>				
<b>2. Unlock</b>					
Rotate the aerial device	<ul style="list-style-type: none"> <li>As per manufacturer's instructions</li> </ul>				
<b>3. Retract</b>					
Extend the aerial device	<ul style="list-style-type: none"> <li>Raise away from work area</li> <li>Fully retract</li> </ul>				
<b>4. Lower</b>					
Position to a specified location	<ul style="list-style-type: none"> <li>Lower device into position above cradle</li> </ul>				

**Skill #5 continued...**

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
<b>5. Bed</b>					
Lock the aerial device and Unlock the aerial device	<ul style="list-style-type: none"> <li>• Operate pump intermittently as per SOP's</li> <li>• Activate hold-down locks</li> </ul>				
<b>PASS/FAIL</b>					

## Skill #6 - Operate a Master Stream

### 1002 Aerial (2017 Edition)

#### Objective: 6.2.5

Deploy and operate an elevated master stream, given an aerial device, a master stream device, and a desired flow so that the stream is effective.

**Tasks:** In this task you will be given an assignment to deploy a master stream at a given target. You are responsible for making the required supply connections. Follow your Department's SOP's concerning operating the on-board fire pump (if so equipped). **(6.2.5)**

Read to candidate prior to evaluation.

**Setting:** Training area or simulated emergency scene with structure at least 10 m tall

**Tools/Equipment:** Apparatus equipped with an aerial device and master stream appliance, Adequate water supply from static or pressurized water source; Hoses, couplings and appliances.

**Attainment Standard:** Successful completion of all elements/steps.

Requisite Skill	Elements/Steps	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
<b>Connect a Water Supply</b>					
The ability to connect a water supply to a master stream device	<ul style="list-style-type: none"> <li>Water supply established</li> </ul>				
<b>Control Nozzle</b>					
Control an elevated nozzle manually or remotely	<ul style="list-style-type: none"> <li>Gradual increase in nozzle pressure</li> <li>Nozzle reaction force anticipated and compensated for</li> <li>Aerial device movement is smooth and slow</li> <li>Specific operating guidelines provided by the manufacturer are followed</li> </ul>				
<b>PASS/FAIL</b>					