



# State Firefighters' and Fire Marshals' Association of Texas

Texas Volunteer Firefighters' and Fire Marshals' Certification Board

PO Box 1409 ♦ Manchaca, Texas 78652-1409

www.sffma.org ♦ 512.454.3473 (phone)

## INSTRUCTIONAL SKILLS

### **ROPES FFI-1**

Rope Inspection and Maintenance

**Subject: Preparedness and Maintenance**

**NFPA 1001 4.5.1**

#### **REFERENCE**

Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer's or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise. (4.5.1)

#### **OBJECTIVE**

Trainee shall inspect fire service rope, identify damage and describe the proper procedures for cleaning and storage.

#### **INSTRUCTIONS - procedures for achieving the objective**

You shall demonstrate the proper technique of inspecting fire service rope and verbalizing at least five (5) indicators of damage that are characteristic for the type of rope selected. You shall describe the proper cleaning and storage procedures of the selected rope. You will begin on my instruction to start. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

#### **PREPARATION & EQUIPMENT**

10-25 feet of rope (synthetic/natural)

PPE appropriate for the skill



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## INSTRUCTIONAL SKILLS

### ROPES FFI-1

Rope Inspection and Maintenance

Trainee: \_\_\_\_\_

Department: \_\_\_\_\_

Trainee shall inspect fire service rope, identify damage, and describe the proper procedures for cleaning and storage. (4.5.1)

	POSSIBLE POINTS	TEST	RETEST
a. Inspects rope for damage and <i>verbalizes at least 5 elements of rope degradation</i> (Elements could include: softness, crusty spots, stiffness, brittleness, nicks, cuts, dirt, mildew, heat sears or discoloration, fuzziness, mushy spots, sheath sliding, lumps and/or depressions)	1		
b. Examines the inner component by twisting the rope or feeling for bunching and thinness	1		
c. <i>Verbally explains that they would tag and remove from service any that does not pass inspection</i>	1		
d. <i>Verbally explains cleaning procedures</i>	1		
e. <i>Verbally states that rope needs time to air dry completely</i>	1		
f. <i>Verbally states an additional inspection is necessary after drying</i>	1		
g. <i>Verbally states proper storage of rope</i>	1		
h. Performs skill in a safe and proficient manner, per AHJ	1		
<b>TOTAL POINTS:</b>	<b>8</b>		

**Points needed to pass: 5**

**Evaluator/Candidate Comments:**

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Instructor's Signature

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## INSTRUCTIONAL SKILLS

### ROPES FFI-2

Tying a Bowline Knot to Hoist a Smoke Ejector or Chain Saw

#### **Subject: Fireground Operations**

#### **NFPA 1001 4.3.20**

#### **REFERENCE**

Tie a knot appropriate for hoisting tool, given personnel protective equipment, tools, ropes, and assignment, so that the knots used are appropriate for hoisting tools securely and as directed. (4.3.20)

#### **OBJECTIVE**

Trainee shall tie a bowline knot with a safety on a smoke ejector and chain saw in preparation for hoisting. The trainee shall also describe five (5) potential elements of rope degradation and identify the working, standing, and running sections of the rope.

#### **INSTRUCTIONS - procedures for achieving the objective**

You will select the type and length of rope which will be adequate to meet this skill. You will verbalize five (5) potential elements of rope degradation. You shall demonstrate tying a bowline knot with safety on a smoke ejector or chain saw. I will primarily evaluate the finished product for accuracy by comparing the knot to reference materials. You will also verbally identify the working, standing, and running sections of the rope. The skill will begin on my instruction to start. The skill will end when you state you have completed all the steps. Do you understand these instructions?

#### **PREPARATION & EQUIPMENT**

Adequate length of rope (synthetic/natural)

Smoke ejector Chain saw

PPE appropriate for the skill.



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## INSTRUCTIONAL SKILLS

### ROPES FFI-2

Tying a Bowline Knot to Hoist a Smoke Ejector or Chain Saw

Trainee: \_\_\_\_\_

Department: \_\_\_\_\_

Trainee shall tie a bowline knot with a safety on a smoke ejector and chain saw in preparation for hoisting. The trainee shall also describe five (5) potential elements of rope degradation and identify the working, standing, and running sections of the rope. (4.3.20)

Smoke Ejector	POSSIBLE POINTS	TEST	RETEST
a. Inspects rope for damage and <i>verbalizes at least 5 elements of rope degradation</i> (elements could include softness, crusty spots, stiffness, brittleness, nicks, cuts, dirt, mildew, heat sears or discoloration, fuzziness, mushy spots, sheath sliding, lumps and/or depressions)	1		
b. Correctly measures rope for desired size	1		
c. Ties bowline on a smoke ejector in preparation for hoisting	1		
d. Ties safety to loop	1		
e. <i>Verbally identifies the working, standing, and running sections</i>	1		
f. Performs skill in a safe and proficient manner, per AHJ	1		
<b>TOTAL POINTS:</b>	<b>6</b>		

**Points needed to pass: 4**

Chain Saw	POSSIBLE POINTS	TEST	RETEST
a. Inspects rope for damage and <i>verbalizes at least 5 elements of rope degradation</i>	1		
b. Correctly measures rope for desired size	1		
c. Ties bowline on a chain saw in preparation for hoisting	1		
d. Ties safety to loop	1		
e. <i>Verbally identifies the working, standing, and running sections</i>	1		
f. Performs skill in a safe and proficient manner, per AHJ	1		
<b>TOTAL POINTS:</b>	<b>6</b>		

**Points needed to pass: 4**

**Evaluator/Candidate Comments:**

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## INSTRUCTIONAL SKILLS

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## INSTRUCTIONAL SKILLS

### ROPES FFI-3

Tying a Figure Eight on a Bight, Ends Alike to Hoist a Ladder

#### **Subject: Fireground Operations**

#### **NFPA 1001 4.3.20**

#### **REFERENCE**

Tie a knot appropriate for hoisting tool, given personnel protective equipment, tools, ropes, and assignment, so that the knots used are appropriate for hoisting tools securely and as directed. (4.3.20)

#### **OBJECTIVE**

Trainee shall tie a figure eight on a bight in preparation for hoisting a ladder. The trainee shall also describe five (5) potential elements of rope degradation and identify the working, standing, and running sections of the rope.

#### **INSTRUCTIONS - procedures for achieving the objective**

You will select the type and length of rope which will be adequate to meet this skill. You will verbalize five (5) potential elements of rope degradation. You shall demonstrate tying a figure eight on a bight, with a safety knot, in preparation for hoisting a ladder. You will verbally identify the working, standing, and running sections of the rope. The skill will begin on my instruction to start. The skill will end when you state you have completed all the identified steps. Do you understand these instructions?

#### **PREPARATION & EQUIPMENT**

1 single section of ladder

An adequate length of rope

PPE appropriate for the skill



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## INSTRUCTIONAL SKILLS

### ROPES FFI-3

Tying a Figure Eight on a Bight, Ends Alike to Hoist a Ladder

Trainee: \_\_\_\_\_

Department: \_\_\_\_\_

Trainee shall tie a figure eight on a bight in preparation for hoisting a ladder. The trainee shall also describe five (5) potential elements of rope degradation and identify the working, standing, and running sections of the rope. (4.3.20)

	POSSIBLE POINTS	TEST	RETEST
a. Inspects the rope for damage and <i>verbalizes at least 5 elements of rope damage</i> . (Elements could include: softness, crusty spots, stiffness, brittleness, nicks, cuts, dirt, mildew, heat sears or discoloration, fuzziness, mushy spots, sheath sliding, lumps and/or depressions.)	1		
b. Correctly measures the rope for desired size	1		
c. Ties a figure eight on a bight and applies to a ladder	1		
d. Ties safety knot to standing part	1		
e. <i>Verbally identifies the working, standing, and running sections</i>	1		
f. Performs skill in a safe and proficient manner, per AHJ	1		
<b>TOTAL POINTS:</b>	<b>6</b>		

**Points needed to pass: 4**

**Evaluator/Candidate Comments:**

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## INSTRUCTIONAL SKILLS

### ROPES FFI-4

Tying a Clove Hitch to Hoist a Charged and Uncharged Hose Line

#### **Subject: Fireground Operations**

#### **NFPA 1001 4.3.20**

#### **REFERENCE**

Tie a knot appropriate for hoisting tool, given personnel protective equipment, tools, ropes, and assignment, so that the knots used are appropriate for hoisting tools securely and as directed. (4.3.20)

#### **OBJECTIVE**

Trainee shall tie a clove hitch and a half hitch to hoist a charged and uncharged hose line. The trainee shall also describe five (5) potential elements of rope degradation and identify the working, standing, and running sections of the rope.

#### **INSTRUCTIONS - procedures for achieving the objective**

You will select the type and length of rope which will be adequate to meet this skill. You will verbalize five (5) potential elements of rope degradation. You shall demonstrate tying a clove hitch and half hitches on a charged or uncharged hose line. I will primarily evaluate the finished product for accuracy by comparing the knot to reference materials. You will also verbally identify the working, standing, and running sections of the rope. The skill will begin on my instruction to start. The skill will end when you state you have completed the skill. Do you understand these instructions?

#### **PREPARATION & EQUIPMENT**

Adequate length of rope (synthetic/natural)

Charged hose line with nozzle

Uncharged hose line with nozzle PPE appropriate for the skill.





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## INSTRUCTIONAL SKILLS

### ROPES FFI-4

Tying a Clove Hitch to Hoist a Charged and Uncharged Hose Line

Trainee: \_\_\_\_\_

Department: \_\_\_\_\_

Trainee shall tie a clove hitch and a half hitch to hoist a charged and uncharged hose line. The trainee shall also describe five (5) potential elements of rope degradation and identify the working, standing, and running sections of the rope. (4.3.20)

Uncharged Hose Line	POSSIBLE POINTS	TEST	RETEST
a. Inspects rope for damage and <i>verbalizes at least 5 elements of rope degradation</i> (elements could include softness, crusty spots, stiffness, brittleness, nicks, cuts, dirt, mildew, heat sears or discoloration, fuzziness, mushy spots, sheath sliding, lumps and/or depressions.)	1		
b. Correctly measures rope for desired size	1		
c. Folds the nozzle end back over the hose line creating a 4'-5' bight	1		
d. Ties a clove hitch around the tip of the nozzle and hose it is folded against	1		
e. Ties an overhand safety	1		
f. Ties a half hitch on the doubled hose about 1' from the loop end	1		
g. <i>Verbally identifies the working, standing, and running sections</i>	1		
h. Performs skill in a safe and proficient manner, per AHJ	1		
<b>TOTAL POINTS:</b>	<b>8</b>		

**Points needed to pass: 6**

Charged Hose Line	POSSIBLE POINTS	TEST	RETEST
a. Inspects rope for damage and <i>verbalizes at least 5 elements of rope degradation</i> (elements could include softness, crusty spots, stiffness, brittleness, nicks, cuts, dirt, mildew, heat sears or discoloration, fuzziness, mushy spots, sheath sliding, lumps and/or depressions.)	1		
b. Correctly measures rope for desired size	1		
c. Ties a clove hitch on the hose about 1' below the nozzle	1		
d. Ties an overhand safety	1		
e. Passes a bight through the bail and around the handle	1		
f. Ties a half hitch around the nozzle tip	1		
g. <i>Verbally identifies the working, standing, and running sections</i>	1		
h. Performs skill in a safe and proficient manner, per AHJ	1		
<b>TOTAL POINTS:</b>	<b>8</b>		

**Points needed to pass: 6**



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## INSTRUCTIONAL SKILLS

Evaluator/Candidate Comments:

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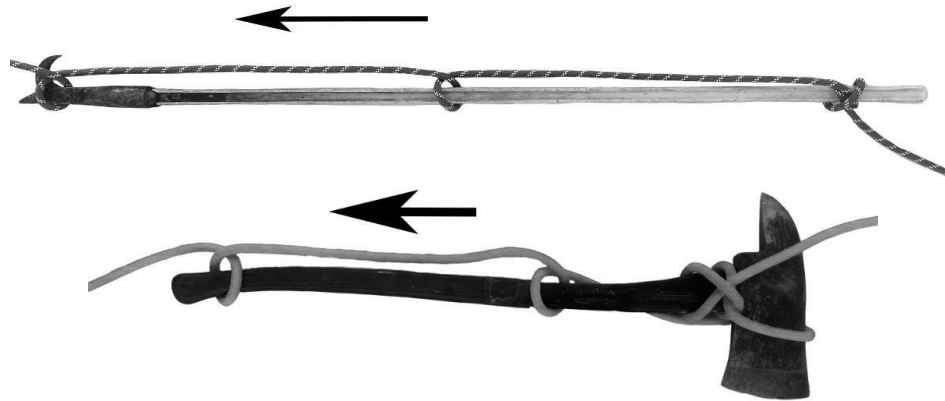
## INSTRUCTIONAL SKILLS

### ROPES FFI-5

Tying Clove Hitch to Hoist a Pike Pole or Axe

**Subject: Fireground Operations**

**NFPA 1001 4.3.20**



### REFERENCE

Tie a knot appropriate for hoisting tool, given personnel protective equipment, tools, ropes, and assignment, so that the knots used are appropriate for hoisting tools securely and as directed. (4.3.20)

### OBJECTIVE

Trainee shall tie a clove hitch and a half hitch on a pike pole and axe in preparation for hoisting. The trainee shall also describe five (5) potential elements of rope degradation and identify the working, standing, and running sections of the rope.

### INSTRUCTIONS - procedures for achieving the objective

You will select the type and length of rope which will be adequate to meet this skill. You will verbalize five (5) potential elements of rope degradation. You shall demonstrate tying a clove hitch and half hitches on a pike pole or axe. I will primarily evaluate the finished product for accuracy by comparing the knot to reference materials. You will also verbally identify the working, standing, and running sections of the rope. The skill will begin on my instruction to start. The skill will end when you state that you have completed the skill. Do you understand these instructions?

### PREPARATION & EQUIPMENT

Adequate length of rope (synthetic/natural)

Pike Pole

Axe

PPE appropriate for the skill



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## INSTRUCTIONAL SKILLS

### ROPES FFI-5

Tying Clove Hitch to Hoist a Pike Pole or Axe

Trainee: \_\_\_\_\_

Department: \_\_\_\_\_

Trainee shall tie a clove hitch and a half hitch on a pike pole and axe in preparation for hoisting. The trainee shall also describe five (5) potential elements of rope degradation and identify the working, standing, and running sections of the rope. (4.3.20)

Pike Pole	POSSIBLE POINTS	TEST	RETEST
a. Inspects rope for damage and <i>verbalizes at least 5 elements of rope degradation</i> (elements could include softness, crusty spots, stiffness, brittleness, nicks, cuts, dirt, mildew, heat sears or discoloration, fuzziness, mushy spots, sheath sliding, lumps and/or depressions.)	1		
b. Correctly measures rope for desired size	1		
c. Ties a clove hitch on the handle of the pike pole leaving enough excess running end to be used as a tagline	1		
d. Ties two more half hitches working towards the pike hook	1		
e. <i>Verbally identifies the working, standing, and running sections</i>	1		
f. Performs skill in a safe and proficient manner, per AHJ	1		
<b>TOTAL POINTS:</b>	<b>6</b>		

**Points needed to pass: 4**

Axe	POSSIBLE POINTS	TEST	RETEST
a. Inspects rope for damage and <i>verbalizes at least 5 elements of rope degradation</i> (elements could include softness, crusty spots, stiffness, brittleness, nicks, cuts, dirt, mildew, heat sears or discoloration, fuzziness, mushy spots, sheath sliding, lumps and/or depressions.)	1		
b. Correctly measures rope for desired size	1		
c. Ties a clove hitch on the handle of the axe near the axe head leaving enough excess running end to be used as a tagline	1		
d. Wraps the rope around the axe head and ties two half hitches working away from the axe head	1		
e. <i>Verbally identifies the working, standing, and running sections</i>	1		
f. Performs skill in a safe and proficient manner, per AHJ	1		
<b>TOTAL POINTS:</b>	<b>6</b>		

**Points needed to pass: 4**

**Evaluator/Candidate Comments:**



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## INSTRUCTIONAL SKILLS

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