



Fire Protection Training

Procedures Handbook 4300

HANDTOOLS

TOPIC: McLeod

TIME FRAME: 30 Minutes

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will identify, describe the basic use, care, maintenance, and safety precautions associated with the McLeod.

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- McLeod with guard
- Vise
- Wooden blocks
- Gloves
- File with a handle and a guard

REFERENCES:

- Wildland Firefighting, Clayton, Day, McFadden, Chapter 6
- IFSTA, Ground Cover Firefighting Practices, 2nd Edition, Chapter 1

PREPARATION:

The McLeod is used both in wildland firefighting, as a scraping tool and in structure fires in the overhaul stage. It is important that you as a firefighter know the uses of the McLeod and the safety precautions associated with it.



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MCLEOD

PRESENTATION	APPLICATION
<p>I. PARTS AND NOMENCLATURE</p> <ul style="list-style-type: none">A. Wooden HandleB. Metal ShankC. Metal Head<ul style="list-style-type: none">1. Hoe on one side2. Rake on other sideD. Rivet <p>II. BASIC USE - THE METAL HEAD IS RELATIVELY HEAVY TO PROVIDE THE USER WITH MAXIMUM MECHANICAL ADVANTAGE DURING SCRAPING, CUTTING, GRUBBING AND DIGGING OPERATIONS.</p> <ul style="list-style-type: none">A. Scraping - The McLeod May be Utilized to Scrape Grass and Medium Native Vegetation Down to Mineral Soil.<ul style="list-style-type: none">1. Obtain secure footing2. Extend head of McLeod outward from the body to full arms length with scraping edge down.3. Pull head of the tool back toward the feet of the user while exerting sufficient downward force to remove the vegetation.B. Cutting - The McLeod May be Utilized to Cut and Clear Light Brush. (Less Than 1" in Diameter)	<p>Instructor to display a McLeod Information sheet #1</p> <p>Demonstrate proper scraping motion</p>

4315.6

Page 2



Fire Protection Training

Procedures Handbook 4300

MCLEOD

PRESENTATION	APPLICATION
<ol style="list-style-type: none">1. Obtain secure footing with feet approximately shoulder width apart.2. With the cutting edge down, locate the striking point on the target limb.3. Take a practice swing to insure an unobstructed striking arc is available.4. Repeat the swing in short sharp downward motions until the limb has been removed.<ol style="list-style-type: none">a. The highest point in the downward arc should be approximately eye level. <p>C. Raking - The McLeod Rake Edge May be Used to Remove Cut Material or to Remove Leaves and Duff. May also be Used to Move Debris in a Structure Fire.</p>	<p>Demonstrate the proper cutting motion</p>
<ol style="list-style-type: none">1. Obtain secure footing.2. Extend head of McLeod outward from the body to full arms length rake side down.3. Pull head of the tool back toward the feet of the user while exerting sufficient downward force to move the debris or the vegetation.	<p>Demonstrate the proper raking motion</p>
<p>D. Digging or Grubbing - The McLeod May be Used to Dig or Grub in the Dirt When a Pulaski is not Available.</p>	<p>Demonstrate the proper digging or grubbing motion</p>

4315.6

Page 3



Fire Protection Training

Procedures Handbook 4300

MCLEOD

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<ol style="list-style-type: none">1. Obtain firm footing with feet approximately shoulder width apart.2. With the cutting/grubbing edge downward, locate a striking point in the dirt.3. Take a practice swing to ensure an unobstructed striking arc is available.4. Tilt blade slightly to concentrate force of swing at corner of McLeod head.5. Repeat the swing in a sharp downward motion until the trench or hole is complete. <p>III. CARE AND MAINTENANCE</p> <p>A. Inspect Tools Before and After Each Use:</p> <ol style="list-style-type: none">1. Handle<ol style="list-style-type: none">a. Smooth<ol style="list-style-type: none">(1) Sand as necessary(2) Do not apply<ol style="list-style-type: none">(a) Linseed oil(b) Waxb. Straight<ol style="list-style-type: none">(1) Place out of service if<ol style="list-style-type: none">(a) Warped(b) Twisted(c) Not properly aligned with headc. Sound	



Fire Protection Training

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<ul style="list-style-type: none">(1) Free of cracks(2) Free of burnsd. Clean and dry2. Head<ul style="list-style-type: none">a. Free of cracks<ul style="list-style-type: none">(1) If found place out of service(2) Do not paint head<ul style="list-style-type: none">(a) Paint will hide cracksb. Free of burrs or chips<ul style="list-style-type: none">(1) File as necessaryc. Secure<ul style="list-style-type: none">(1) Head is tightly fastened to the handled. Sharp<ul style="list-style-type: none">(1) Cutting and scraping edge properly sharpened<ul style="list-style-type: none">(a) Use a 12" flat mill bastard file(b) Apply even pressure across full width of the cutting and scraping edge(c) Sharpened at 45° angle(d) Cutting and scraping edge even across full width(2) Free of dips or bows	



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MCLEOD

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<ul style="list-style-type: none">(3) Permissible to treat with a rust inhibitor(4) Tool guard in place whenever tool is not in use	
<p>IV. SAFETY PRECAUTIONS</p> <p>A. When Using</p> <ul style="list-style-type: none">1. Maintain 10 foot interval2. Maintain firm footing3. Watch for obstructions<ul style="list-style-type: none">a. Overheadb. Within arc of swing4. Wear gloves and full safety uniform<ul style="list-style-type: none">a. Pay particular attention when gloves are wet5. Do not allow head of tool to get too near body6. Concentrate on impact area to:<ul style="list-style-type: none">a. Prevent ricochet or glancing blowb. Avoid rocks and other hard objectsc. Avoid hazards<ul style="list-style-type: none">(1) Beehives(2) Electrical wires(3) Barbed wire7. Pace yourself8. Use proper tool for the job	

4315.6

Page 6



Fire Protection Training

Procedures Handbook 4300

MCLEOD

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<p>B. When Carrying</p> <ol style="list-style-type: none">1. Grasp at balance point with head forward2. Carry on downhill side3. Carry horizontally (parallel) to the ground4. Sound off when passing another person with "coming through" and wait for that person to yield right of way5. Carry with rake tines toward body and blunt side of tool (between scraping surface and rake) up. <p>C. When Passing</p> <ol style="list-style-type: none">1. Pass handle (butt) first2. At arms length from other person<ol style="list-style-type: none">a. Never toss <p>D. When Grounding Tool</p> <ol style="list-style-type: none">1. Place head of tool flat on ground with handle upright2. Shield the head of the tool to the extent possible<ol style="list-style-type: none">a. Use tool guards whenever practicable3. Place all crew tools in the same area <p>E. When Sharpening</p> <ol style="list-style-type: none">1. Secure tool in vise<ol style="list-style-type: none">a. Utilize wooden blocks orb. Newman tool holder	

4315.6

Page 7



Fire Protection Training

Procedures Handbook 4300

MCLEOD

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<ul style="list-style-type: none">2. Use gloves3. Use file with handle and a file guard in place4. Rest the palm of the hand on the tip of the file<ul style="list-style-type: none">a. Do not wrap the fingers over the tip of the file5. Sharpen in a motion away from the body6. Remove tools from the vise if leaving the area7. Make visual inspection of sharpness, do not run finger across cutting edge <p>F. When Storing</p> <ul style="list-style-type: none">1. Store in a clean, cool, dry area2. Store in a secure area or in the proper compartment3. Separate in-service and out-of-service tools4. Always keep the tool guards in place5. Secure tools properly in tool racks	



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SUMMARY:

The McLeod is arguably the most widely used tool in the Department's inventory. Whether on emergency incidents or in routine station maintenance assignments, the tool is of less value if it is not properly maintained and cared for.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).