



Fire Protection Training

Procedures Handbook 4300

TOOLS & EQUIPMENT

TOPIC: Four Cell Headlamp

TIME FRAME: 30 Minutes

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will be able to identify, list and describe the use, care and maintenance of the four cell headlamp.

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- Screwdriver
- Headlamp with batteries
- Cardboard strip
- Bulbs
- Emery cloth
- Information sheets

REFERENCES: None

PREPARATION: Fighting wildland fires at night is difficult under the best of conditions. Fighting fire at night without light greatly increases the degree of difficulty. The four cell headlamp provides hand free illumination and increases the safety of nighttime operations.



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FOUR CELL HEADLAMP

PRESENTATION	APPLICATION
<p>I. TERMINOLOGY</p> <p>A. Batteries</p> <ol style="list-style-type: none">1. Dry cell2. Size D3. Four required <p>B. Battery case top with contact prongs</p> <p>C. Battery Case</p> <ol style="list-style-type: none">1. Metal2. Plastic <p>D. Head Strap</p> <ol style="list-style-type: none">1. Elastic2. Adjustable <p>E. Toggle Switch</p> <ol style="list-style-type: none">1. "On" and "Off" switch <p>F. Electrical Cord</p> <ol style="list-style-type: none">1. Approximately 48" long <p>G. Belt Clip</p> <ol style="list-style-type: none">1. Attach to belt2. Secure in pocket <p>H. Locking Clip</p> <ol style="list-style-type: none">1. Secures top in closed position	<p>Information sheet #1</p>

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PRESENTATION	APPLICATION
<ul style="list-style-type: none">I. Lens<ul style="list-style-type: none">1. Clear glass or plastic to protect bulbJ. Reflector<ul style="list-style-type: none">1. Surrounds bulb to increase illuminationK. Bulb<ul style="list-style-type: none">1. 5 volt2. .15 amp3. G.E. #502L. Spare Bulb Clip<ul style="list-style-type: none">1. Located adjacent to the bulb2. Holds one spare bulbM. Helmet Mounting Bracket<ul style="list-style-type: none">1. Facilitates tight fit of headlamp to the safety helmet2. Provides up and down adjustment for headlampN. Focusing Ring<ul style="list-style-type: none">1. Allows size of light beam to be adjusted to better focus on work site <p>II. HEADLAMP DONNING SEQUENCE</p> <ul style="list-style-type: none">A. Insert Fresh Batteries in Case<ul style="list-style-type: none">1. Two with terminal up2. Two with terminal downB. Test Headlamp Prior to Mounting on Helmet	

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PRESENTATION	APPLICATION
<ul style="list-style-type: none">1. If not functioning<ul style="list-style-type: none">a. Inspect to see batteries properly positionedb. Replace batteriesc. Remove lens and lens ring to see that bulb is properly seatedd. Replace bulb2. When headlamp functions proceed to step CC. Mount the Headlamp on the Front of the Safety Helmet<ul style="list-style-type: none">1. Centered on helmet2. Adjustment strap secured under clips on safety helmet3. Adjustment strap pulled tightD. Route Battery Case and Electrical Cord<ul style="list-style-type: none">1. Down the back2. Beneath the outer garment3. Prevents snaggingE. Secure the Battery Case<ul style="list-style-type: none">1. With clip to belt or2. In a rear pocketF. Adjust Light<ul style="list-style-type: none">1. Up and down to maximize light on work object2. Turn focusing ring clockwise or counter clockwise to	

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PRESENTATION	APPLICATION
<ul style="list-style-type: none">a. Intensify light -narrow beamb. Disperse light - wide beam <p>III. MAINTENANCE AND INSPECTION</p> <p>A. Inspection:</p> <ul style="list-style-type: none">1. Check batteries and bulb<ul style="list-style-type: none">a. Batteries in properlyb. Bulb and spare bulb functioning properly2. Check electrical cord<ul style="list-style-type: none">a. Damaged or frayed3. Keep electrical contact prongs on inside of case bent slightly outward4. Check and see that all contacts are clean and free of corrosion, and are tightly screwed on.5. Check switch for proper operation6. Check elastic head strap<ul style="list-style-type: none">a. Replace if damaged, stretched, or parts missing7. Clean lens inside and out8. Clean out battery case with warm water and baking soda<ul style="list-style-type: none">a. Turn upside down and air dry9. Place cardboard strip between the batteries and the contact prongs prior to storage	<p>Use emery cloth to clean</p>

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PRESENTATION	APPLICATION
<ul style="list-style-type: none">a. Prevents discharge during storageb. Prevents discharge if headlamp accidentally turned on <p>10. Wrap electric cord and head strap around the battery case neatly prior to storage</p> <p>11. Discard old batteries</p> <ul style="list-style-type: none">a. Do not burnb. Do not litter	

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FOUR CELL HEADLAMP

SUMMARY:

Four cell headlamps are essential in terms of safety and productivity during night wildland fire operations. These devices require minimum care and problems are generally easy to diagnose and repair.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).