



Fire Protection Training

Procedures Handbook 4300

TOOLS & EQUIPMENT

TOPIC: Back Pump

TIME FRAME: 1 Hour

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will be able to describe the uses and identify the parts, care, and maintenance requirements for CDF back pumps.

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- Back pump
- Chalkboard and chalk
- Appropriate visual aids
- Audio visual equipment

REFERENCES: None

PREPARATION:

The back pump is a piece of firefighting equipment which is not considered glorious. But, in areas remote and inaccessible to engines, it can be an excellent fire control resource.



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BACK PUMP

PRESENTATION

APPLICATION

I. CDF BACK PUMPS

Information sheet #1

A. Uses

1. Hot spotting
2. Initial attack on small remote fires
3. Mop-up
4. Back up for initial attack
 - a. Mobile attack
 - b. Hoselay
 - c. Air drops

B. Components

1. Tanks
 - a. Five gallon capacity
 - b. Weighs approximately 48 pounds when filled
 - c. Composition
 - (1) Fiberglass
 - (2) Steel
 - (3) Rubber
 - (a) Collapsible
2. Tank filler
 - a. Top of tank
 - b. Male threads

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PRESENTATION	APPLICATION
<ul style="list-style-type: none">3. Filler cap<ul style="list-style-type: none">a. Vent hole4. Tank strainer<ul style="list-style-type: none">a. Basket perforated with BB size holesb. Designed to remove debris when tank being filled5. Back of tank concave6. Trombone support/handle7. Hose assembly<ul style="list-style-type: none">a. Routes water from bottom of tank to pumpb. Flexible hose for maximum maneuverabilityc. Attached to tank with clamps8. Trombone assembly<ul style="list-style-type: none">a. Positive displacement - piston pump<ul style="list-style-type: none">(1) Consists of<ul style="list-style-type: none">(a) Tips(b) Nozzle(c) Handle(d) Pump barrel or chamber(e) Adjusting nut(f) Check valve – discharge(g) Check valve - suction	

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PRESENTATION	APPLICATION
<p>9. Two adjustable shoulder straps</p> <p>C. Basic Operation</p> <ol style="list-style-type: none">1. Atmospheric pressure exerts downward force on water in tank via vent hose in tank filler cap2. This downward force moves water into and through hose3. As chamber size in trombone is expanded by lengthening stroke, pressure lowers and water fills pump chamber through suction valve in an effort to equalize pressure4. As chamber size in trombone is reduced with shortening or compression stroke, the suction valve closes and the discharge valve opens allowing water to forcefully escape via the nozzle <p>II. CARE AND MAINTENANCE</p> <p>A. Storage</p> <ol style="list-style-type: none">1. On apparatus<ol style="list-style-type: none">a. Securely fastenedb. Hose assembly protected from direct sunlight, chemicals or obstructions2. At station<ol style="list-style-type: none">a. Away from corrosives and acidsb. Out of direct sunlight <p>B. Replace Packing When Worn</p> <p>C. Keep Clean</p> <p>D. Inspect Components for Dents and/or Cracks</p>	

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PRESENTATION	APPLICATION
<p>E. Tighten Hose Assembly Clamps</p> <p>F. Replace Shoulder Straps if Worn or Damaged</p>	

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BACK PUMP

SUMMARY:

The back pump is a versatile and useful tool. It can be used in every phase of wildland fire control operations. Simple in design and operation, it has few moving parts and is easily maintained. Firefighter's need, however, beware that a back pump is deceptively heavy and awkward. Back strains and other injuries can occur if safe lifting and carrying techniques are not employed.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).