



Fire Protection Training

Procedures Handbook 4300

TOOLS & EQUIPMENT

TOPIC: Backfire Torch

TIME FRAME: 30 Minutes

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will list and describe the parts, assembly, operation and disassembly of the backfire torch.

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

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

REFERENCES: None

PREPARATION: The backfore torch is used by firefighters to backfire or for firing out vegetation fires. Though used only occasionally, the firefighter must be able to quickly assemble and operate the backfire torch in a safe and proper manner.



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BACKFIRE TORCH

PRESENTATION

APPLICATION

I. DESCRIPTION

A. Definition

1. Backfire torch - a hand-held unpressurized flammable liquid tank with a wick attached at the nozzle designed to burn vegetation
2. Utilized by wildland fire agencies to perform backfire and firing out operations.
3. Know also as drip torch or orchard torch

B. Specifications

1. Weight
 - a. Empty - 5 lbs, 6 oz.
 - b. Full - 16 lbs.
2. Height
 - a. Sealed - 14 inches
 - b. Operational - 23 2/3 inches
3. Capacity
 - a. One and 1/4 gallon capacity
 - b. Do not fill more than 3/4 full to allow for expansion
4. Fuel mix
 - a. Recommend 2 parts diesel to 1 part gasoline

II. COMPONENTS

A. Fuel Tank and Handle

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PRESENTATION	APPLICATION
<ul style="list-style-type: none">B. FuelC. Spout and Nozzle<ul style="list-style-type: none">1. Fuel trap<ul style="list-style-type: none">a. Designed to prevent flame from reaching fuel tankD. GasketE. Tank Lock RingF. Flow PlugG. Wick and Wick HolderH. Air Breather ValveI. Torch Holder and Hold Down Spring<ul style="list-style-type: none">1. Attached to engine <p>III. ASSEMBLY</p> <ul style="list-style-type: none">A. Remove Torch from EngineB. Shake Torch to Mix Fuel and Set Torch Down in Cleared AreaC. Unscrew Lock RingD. Remove and Resecure Flow Plug in RetainerE. Remove Spout from Fuel TankF. Inspect Rubber Gasket and Fuel SupplyG. Set Spout Upright on Torch with Wick Pointing Opposite Handle	<p>Why is there a fuel trap in the spout?</p>

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PRESENTATION	APPLICATION
<ul style="list-style-type: none">H. Screw Lock Ring on Fuel Tank TightlyI. Open Air Vent 3/4 of the Way <p>IV. OPERATION</p> <ul style="list-style-type: none">A. Spread Fuel on Cleared Ground Where Torch Will Be Used, Then IgniteB. Light Torch from Ground FireC. Carry Upright Until Ready for UseD. Tilt Torch Downward When UsingE. May Be Used In a Swinging Motion by Holding with Either Hand or a Progressive Walking MotionF. Watch Where You Spread FireG. Each Droplet of Fuel Should Ignite if Fuel is Mixed Properly <p>V. DISASSEMBLY</p> <ul style="list-style-type: none">A. Extinguish TorchB. Allow Wick to CoolC. Remove Lock RingD. Invert Spout, Put Inside TankE. Replace Lock Ring SecurelyF. Replace Flow PlugG. Close Air Breather Valve <p>VI. CARE AND MAINTENANCE</p> <ul style="list-style-type: none">A. Check Tank<ul style="list-style-type: none">1. Leaks	

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<ul style="list-style-type: none">2. Dents3. Damaged threads4. Proper fuel level (75% full) <p>B. Inspect Condition of Other Components</p> <ul style="list-style-type: none">1. Gasket2. Vent3. Holder4. Spring hold down <p>VII. SAFETY</p> <p>A. Safety Uniform</p> <ul style="list-style-type: none">1. Wear at all times2. Change clothing if fuel spills on them3. Keep torch away from clothing and boots4. Glove may be removed to open breather valve only <p>B. Fueling</p> <ul style="list-style-type: none">1. Do not mix too rich - it may explode upon ignition2. Allow all parts to cool sufficiently prior to handling, refueling or disassembling3. Fuel trap on spout prevents flash-back4. Do not open or fill near<ul style="list-style-type: none">a. Open flameb. Hot sparks or embers	

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<ul style="list-style-type: none">c. Personnel that are smoking5. Light fuel on ground; do not light the wickC. During Use<ul style="list-style-type: none">1. Start at top of hill and work down2. Carry torch by the handle only3. Have escape route planned4. Keep fuel flowing so wick doesn't burn out5. Blow torch out when not in use6. Do not carry lighted torch on the green side of the fire control line	

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BACKFIRE TORCH

SUMMARY:

This torch is used for backfiring or firing out vegetation. Most commonly known as a backfire torch, it contains flammable liquids that are inherently dangerous. By staying proficient on the assembly, use, and safe operation of this tool you will be prepared to operate this firing tool when requested.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).