



Vermont Department of Public Safety

## ***DIVISION OF FIRE SAFETY***

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[firesafety.vermont.gov](http://firesafety.vermont.gov)

# OPERATION MANUAL

**DFS T3 Hot Box**

**Sprinkler Demonstration &  
Fire Extinguisher Training Trailer**



**READ THIS MANUAL ENTIRELY BEFORE OPERATING THIS TRAILER**

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## EQUIPMENT OVERVIEW

The "Hot Box" is a new multi-use fire sprinkler and fire extinguisher live fire demonstration trailer. This trailer is used as a fire sprinkler demonstration unit and a fire extinguisher training unit all rolled into one.

This mobile unit is used for educating the public to properly use fire extinguishers and contains a residential sprinkler system that can be used to demonstrate how a home sprinkler system works during a fire.

This unit is also used for hands-on environmentally friendly fire extinguisher training with live fire. The extinguisher training includes an LP Gas burner hydro tank and special training fire extinguishers that can be recharged with onboard tap water.



**Special Note** - This unit **should not** be used to teach young kids under the AGE OF 12 – The Division of fire safety and the National Fire Protection Association (NFPA) believe that children should not be trained in how to operate portable fire extinguishers.

Teaching children to use portable fire extinguishers runs counter to NFPA messaging to get out and stay out if there is a fire. Furthermore, children may not have the maturity or the strength to operate a portable fire extinguisher properly or decide whether or not a fire is small enough to be put out by the extinguisher.

## **SURREY "HOT BOX" Sprinkler Demonstration & Fire Extinguisher Training Trailer Unit Specifications:**

### **GENERAL**

VIN: 1R9BU1012BT522007  
YEAR of Manf. : 2011  
PLATE: VT S892

Length-OAL 14' 8"  
Length of box 11' 2"

Width-OAW 6' 9"  
Width of box 5' .0

Height-OAH 9'.0"  
Height Equipment room 6' 5"

Gross Weight 1,790#

### **LP GAS SYSTEM**

Dual 20" LP gas tanks  
Remote Burner Control (Dead Man Switch)  
Emergency shut off gas valve at LP tanks Gas  
bottle cover {hard plastic}

### **BURN AREA**

Sprinkler Demonstration area 4'X5' All Aluminum  
Tread Plate Rear water tank bum chamber is  
2'X4'X1" ATP  
With Stainless Steel Burner  
Stainless Steel Curtin Rod  
Sprinkler fire box (steel trash can) Windows 4'X4'  
sides Window 4'x5' rear  
Stainless Steel gas burner 24'x12'(submersible)  
Gas Igniter's (1) long and (1) short

### **ELECTRICAL**

Dual Deep Cycle Batteries Heavy Duty battery  
boxes  
Heavy duty aluminum battery tray  
interior dome light with wall switch  
Charger for batteries

### **ICC LIGHTS**

Bargeman 7- way trailer plug ICC lights on box as  
required Running lights on fenders.

### **FRAME and HITCH**

4" frame  
safety chains and 2" coupler

### **WATER SYSTEM**

Dual 40 gal fresh water tanks  
Dual High Pressure/High Out-put 12 volt water  
pumps City water hook up for tank fill  
Spigot for wash down of burn chamber  
3" water dump valve for burn chamber

### **BURN ROOM**

Roadside window hinged  
Curb side and rear window is removable Lexan  
windows.  
Aluminum window frames (welded)  
Smoke removal does not require power vent  
assistance.  
14'X14" roof vent  
Thermometer to display internal temperatures  
during training and demonstrations.

### **EQUIPMENT ROOM**

¾" Aspenite® Floor (water resistant) 030 screw-  
less aluminum exterior  
V nose design  
ATP corner moldings  
Plywood interior walls  
Fire Code rated wall between the equipment room  
and the burn chamber.  
Steel Hat post 16" on center RV Door (28")  
Dead bolt lock with flush handle Both keyed alike

### **OTHER ITEMS**

Table  
3- water can extinguishers  
Static Display Extinguishers  
Display items  
T shirts and paper to burn  
Handouts

**PROGRAM SET UP CHECK LIST****GENERAL SET UP****READ THIS MANUAL ENTIRELY BEFORE OPERATING THIS TRAILER**

NEVER ALLOW ANYONE TO OPERATE THIS UNIT WITHOUT FIRST READING THIS MANUAL AND BECOMING FULLY PROFICIENT WITH ITS PROPER SAFE USE, CARE.






ITS ALSO A GOOD IDEA TO HAVE FIRE DEPARTMENT PERSONNEL DO A FEW PRACTICES TO LEARN THE TECHNIQUES, AND GET FAMILIARIZED WITH OPERATING THE EQUIPMENT. THIS SHOULD BE DONE BEFORE ANY TRAINING THE PUBLIC.

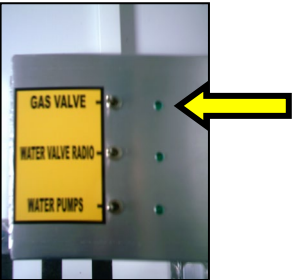


- Locate the trailer to take best advantage of the site and control of the students.** Leave enough room from surrounding buildings and combustibles, also the make sure there is enough space at the site to not interfere with traffic.
- After unhooking from truck, Level the trailer using tong jack and wood blocking.** Use the level to make sure the trailer is level.
- Secure the wheels with wheel chocks.**
- Unlock the trailer using the keys in the lock box.**  
**NOTE > the combo is the plate number. Replace keys and relock the box.**
- Place traffic cones/barricades to restrict motor vehicle access.**
- Set up props or display. Inspect the hot box and make sure all systems are operating properly.**
- Make sure you have an adequate supply of lesson handouts or pamphlets to distribute to students.**
- Make sure you have enough staff to safely conduct the program.** A minimum of 3 staff members are needed: A control person, a safety person and an instructor.
- Next set up for one of the two types of demos you are performing.**

# FIRE EXTINGUISHER PROGRAM SET UP

TO USE THE DFS HOT BOX FOR HANDS ON FIRE EXTINGUISHER TRAINING. FOLLOW THE SET UP AND OPERATING INSTRUCTIONS LISTED BELOW

## SET UP for Fire Extinguisher Demo or Practical

Step		Description
1		<p><b>MAKE SURE THE BATTERIES ARE FULLY CHARGED, AND THE WATER TANKS inside the trailer ARE FULL.</b></p>
2		<p><b>REMOVE THE FIRE BOX FLOOR AND THE 2 REMOVABLE LEXAN WINDOWS AND PUT THEM IN A SAFE PLACE LIKE INSIDE THE FRONT MECHANICAL ROOM AREA OF THE UNIT.</b></p> <p><b>FOLD THE HINGED DOOR FORWARD AND LATCH.</b></p>
3		<p><b>FILL THE WATER TANK TO A POINT 1 1/2 TO 2 INCHES OVER THE GAS TUBE/BURNER ASSY</b></p>
4		<p><b>INSTALL THE DEAD MAN BURNER CONTROL SWITCH IN THE SOCKET.</b></p>
5		<p><b>REMOVE THE WHITE COVER FOR THE LP TANKS.</b></p>
6		<p><b>TURN ON LP TANKS AND THE LP CONTROL VALVE. TURN THE YELLOW HANDLED VALVE ON (INLINE WITH THE HOSEING) MAKE SURE THERE ARE NO LEAKS</b></p> <p><b>WARNINGS &gt;</b></p> <ul style="list-style-type: none"> <li>• Other valves are preset, Do not adjust other valves.</li> <li>• NEVER OPEN THE GAS TANK VALVES WITH THE REMOVABLE WINDOWS IN PLACE OR HINGED WINDOW CLOSED,</li> <li>• NEVER OPEN THE GAS TANK VALVES WITHOUT FIRST FILLING THE WATER TANK</li> </ul>





7		<p><b>SWITCH THE GAS VALVE SWITCH TO THE ON POSITION IN THE FORWARD MECHANICAL ROOM. THE GREEN LIGHT WILL COME ON</b></p>
8		<p><b>PRESS AND HOLD THE TRIGGER ON THE DEADMAN SWITCH</b></p> <p><b>THE PERSON GIVING THE INSTRUCTION SHOULD KEEP AN ADDITIONAL ABC LIVE EXTINGUISHER CLOSE BY AS WE ARE DEALING WITH A REAL FIRE.</b></p>
		<p><b>BUBBLES WILL FLOW FROM THE BURRNER</b></p>
9		<p><b>QUICKLY LIGHT THE SUBMERGED BUNER</b></p> <p><b>LIGHT THE LONG REACH PROPANE TORCH FIRST THEN PUT THE LONG REACH TORCH CLOSE TO THE WATER SURFACE.</b></p> <p><b>THEN DEPRESS AND HOLD THE TRIGGER ON THE DEAD MAN SWITCH TO LIGHT THE GAS.</b></p> <p><b>WARNING &gt; KEEP YOUR FACE AND ARMS BACK FROM THE TANK THERE WILL BE A BRIEF FLARE UP WHEN LIGHTING</b></p>
10		<p><b>IN THE EVENT THAT THE GAS DOES NOT LIGHT IMMEDIATELY, RELEASE THE BUTTON ON THE DEAD MAN SWITCH WAIT 5 MINUETS FOR GAS VAPORS TO DISSIPATE.</b></p> <p><b>WARNING &gt; AN EXPLOSION OR FLAIR UP IS POSSIBLE IF THERE IS AN EXSESSIVE BUILD UP OF UNBURNED GAS. USE EXTREME CAUTION</b></p>
		<p><b>TO STOP GAS FLOW at any time SIMPLY RELEASE THE TRIGGER ON THE DEADMAN SWITCH</b></p>
<p><b>YOU ARE NOW READY TO PRESENT THE DEMONSTRATION/ TRAINING. REVIEW PRESENTERS LESSON PLANs</b></p>		

## RECHARGEING FIRE EXTINGUISHERS

THE RECOMMENDED TYPE OF FIE EXTINGHERS TO BE USED ARE WATER MIST TYPE. USE ONLY THE EXTINGHERS SUPPLIED WITH THE HOT BOX.

IT IS NOT NECESSARY TO FILL AND RECHARGE THE EXTINGUISHER FOR EACH TRAINEE AS NORMALLY YOU CAN GET AT LEAST TWO OR THREE USES OF THE EXTINGUISHER BEFORE YOU NEED TO REFILL THE WATER. YOU MAY HOWEVER NEED TO TOP OFF THE AIR CHARGE AFTER EACH USE.

### SETTING UP THE FIRE EXTINGUISHER RECARGING STATION

STEP		DESCRIPTION
1	<p><b>SET UP THE RECARGING STATION</b></p> <p><b>A. SET UP A TABLE</b></p> <p><b>B. SET UP ELECTRICAL CORD TO POWER SOURCE</b></p> <p><b>C. SET UP AIR COMPRESSOR</b></p> <p><b>D. INSTALL FILL HOSE TO A WATER SUPPLY</b></p>	
2		<p><b>FIRST MAKE SURE THE EXTINGUISHER IS FULY DISCHARGED</b></p> <p><b>REMOVE THE HEAD OF THE EXTINGUISHER</b></p>
3		<p><b>FILL THE EXTINGUISHER WITH PLAIN WATER TO THE BOTTOM OF THE FILL TUBE.</b></p> <p><b>THIS ALLOWS SPACE FOR THE AIR CHARGE. USE THE MESUREING STICK IF YOU CAN NOT SEE THE BOTTOM OF THE TUBE.</b></p>
4		<p><b>REINSTALL EXTINGUISER HEAD TIGNTEN HAND TIGHT</b></p>
5		<p><b>USE THE SUPPLIED AIR COMPRESSOR TO CHARGE THE EXTINGUISHER.</b></p>
6		<p><b>PLACE THE RECARGED EXTINGUISHER IN THE LOCATION FOR USE .</b></p>


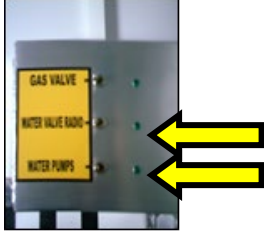



**IT MAY BE NECESSARY TO TOP OFF THE AIR PRESSURE IN THE EXTINGUISHERS BETWEEN EACH STUDENT.**



# SPRINKLER DEMO PROGRAM SET UP

TO USE THE DFS HOT BOX FOR SPRINKLER DEMO TRAINING FOLLOW THE SET UP AND OPERATING INSTRUCTIONS LISTED BELOW

## SETTING UP THE SPRINKLER DEMO

STEPS		DESCRIPTION
1		<p>MAKE SURE THE BATTERIES ARE FULLY CHARGED, AND THE WATER TANKS (inside the trailer) ARE FULL. TURN OFF GAS AND REMOVE THE DEAD MAN SWITCH</p>
2		<p>INSTALL THE FIRE BOX FLOOR AND THE REMOVABLE LEXAN WINDOWS. OPEN THE HINGED LEXAN WINDOW DOOR THE TRAILER IS EQUIPPED WITH A OPEN REUSABLE SPRINKLER HEAD THAT HAS A MODIFIED PATTERN, THERE IS NO NEED TO REPLACE THE HEAD.</p>
3		<p>PREPARE THE TRASH CAN BY USING INDIVIDUAL SHEETS OF NEWSPAPER CRUMPLED UP AND PACKED IN TO BALLS. USE ENOUGH TO MOUND UP THE BALLS IN THE TRASH CAN. PLACE THE TRASH CAN AND PLACE INSIDE PLACE T SHIRT OR FABRIC ON THE HANGER</p>
4		<p>SWITCH THE WATER PUMPS AND WATER VALVE RADIO SWITCHES TO THE ON POSITION IN THE FORWARD MECHANICAL ROOM. THE GREEN LIGHTS WILL COME ON</p>
5		<p>TAKE OUT THE REMOTE-CONTROL KEY FOB SWITCH</p>
6		<p>USING THE LONG REACH PROPANE TORCH, LIGHT THE PAPER IN THE TRASH CAN CLOSE THE FOLDING WINDOW/DOOR ON THE LEFT SIDE OF THE TRAILER.</p>
7		<p>LET FIRE BUILD, WHEN THE FIRE HAS RAISED THE TEMPERATURE TO APPROXIMATELY 150 DEGREES THEN PRESS THE BUTTON ON THE KEY FOB REMOTE TO START PUMPS AND WATER FLOW AFTER THE WATER HAS PUT OUT THE FIRE YOU CAN PRESS THE BUTTON ON THE KEY FOB REMOTE AGAIN TO STOP WATER FLOW OPEN THE LARGE LEXAN DOOR, PUT THE LID ON THE TRASH CAN TO SMOTHER ANY SMOLDERING PAPER AND TO PREVENT ANY FLARE UPS.</p>

**UNIT CLEAN UP****WHEN YOU ARE DONE FOR THE DAY**

- **THE UNIT SHOULD BE DRAINED AND CLEANED AS SOON AS POSSIBLE AFTER YOU FINISH THE DEMONSTRATIONS.**
- **TURN OFF**
  - **GAS**
  - **ALL SWITCHES INSIDE THE TRAILER.**
- **DRAIN THE TANK. IN THE BURN ROOM THE DRAIN VALVE HANDLE IS AT THE CENTER REAR OF THE TRAILER JUST BELOW THE FRAME. PULL TO OPEN PUSH TO CLOSE  
NOTE: THE PROPANE WHEN BURNED DOES ADD A MILD ACID TO THE WATER.**
- **REMOVE AND CLEAN THE FLOOR PANEL DRAIN AND WASH OUT THE HOLDING TANK AND THE INSIDE OF THE BURN ROOM AND WINDOWS. YOU SHOULD WIPE IT OUT WITH OLD TOWELS TO DRY IT. ESPECIALLY THE LEXAN WINDOWS.**
- **THE OUTSIDE SHOULD ALSO BE WASHED AND WIPED DOWN AS SOON AS POSSIBLE TO ELIMINATE WATER SPOTTING.**
- **RETURN ALL ITEMS TO THEIR PROPER STORAGE LOCATIONS IN THE CONTROL ROOM**
- **LOCK UP THE TRAILER**
- **REPORT ANY PROBLEMS TO DFS PUBLIC EDUCATION SECTION**
- **FILL OUT PROGRAM REPORT**

## Trainers Preparation Information

This section contains critical information to implement a successful program. It is important to adhere to as much of the documented information as possible, even though you have your own style of facilitation, and your own special anecdotes. Use these to customize and personalize the program; however, make sure they do not affect the program timing or outcomes.

### **Facilitation Suggestions for Conducting the Program**

Know the program. Take the time to read the guide and to make notes as to what you want to do during your program time to provide for the best outcome and transfer of knowledge to the students.

**Set up the lesson.** Take time to properly set up the program by reviewing who you are, the ground rules and addressing other pertinent information.

**Observe your audience.** When you notice that a group is not paying attention or does not understand how to do the activity, stop and ask questions to refocus them.

**Engage your audience.** Make feedback and questions a regular part of your technique to keep them involved.

**Provide Positive Reinforcement.** Make sure you provide positive reinforcement to students when activities are done correctly and when they pay attention to what you are teaching them.

**Set up participants to succeed.** Work with the students during activities to allow for a successful result. This allows you to guide, coach or correct before they share with the group.

**Summarize the lesson.** Take the time to summarize each day by recapping the key points of the lesson. Ask participants to share their ideas and give their feedback. Always use praise to show your appreciation for their willingness to be “stretched” to learn a new process and new skills. Thank them for their time and attention.

**Manage your time.** Always begin on time and try to stick to your schedule.

**Ask questions.** And make sure your students feel they can ask questions.

**Create a trusting and non-threatening environment** to make this happen. Also, don't forget to check with your participants regarding their understanding of information. Sometimes simple information can be confusing. Ask if they need clarification.

**Be brief in closing.** Your closing statements should not take too long. You should summarize the lesson by reviewing key points. Make sure there are no outstanding questions or concerns. Leave students with an upbeat impression.

## PRESENTERS LESSON PLANS

### GENERAL FIRE EXTINGUISHER INFO

**SUBJECT : FIRE EXTINGSHURE USE**

**ACTIVITY:** This Presentation is discussion, lecture and activity based

**OBJECTIVE& GOAL:** Students will be able, through lecture and discussion, will understand the importance of fire safety, fundamentals of workplace fire prevention, and Know how to properly use a fire extinguisher.

**BASE STANDARDS**

**NFPA Standard 10    OSHA standard**

**Special Note - This unit should not be used to teach young kids under the AGE OF 12 –**

INTRODUCE yourself.

EXPLAIN to students who you represent and why you are here.

SET the ground rules:

“Please, be respectful, no talking when others are talking. If you have questions or an answer, please raise your hand. If there is a safety issue during this class, we will use two safety commands”.

FREEZE = stay where you are don't move

OUT = get away

Give out the handout book. – Refer to the Book during the lesson

### BASIC CLASS OUTLINE

#### General Information - Purpose of a Fire Extinguisher

- Fire extinguishers are only one element of a complete fire survival plan.
- The use of a fire extinguisher in the hands of a trained adult can be a life and property saving tool.
- Fire extinguishers are meant for putting out small fires or used to help escape from the area, not firefighting large out-of-control fires.
- In many cases, the better and safer decision is to trigger a fire alarm, get yourself to safety and help others to safety, and make sure trained fire protection professionals are notified and on the way.
- It is also important to understand that extinguishers have a discharge time of only 8 seconds to 60 seconds.

#### Fire Classification and Characteristics

##### What is Fire.

- Fire is a chemical exothermic chain reaction that releases light and heat. The dangerous thing about the chemical reactions in fire is the fact that they are self-perpetuating.
- Explain the fire triangle and how an extinguisher attacks on side of the triangle

#### Fire Extinguisher Types and Identification

- Portable fire extinguishers apply an extinguishing agent that will either cool burning fuel, displace or remove oxygen, or stop the chemical reaction so a fire cannot continue to burn.
- There are many different types based on the type of fire they will control

## Assessment of a Fire Situation –A.C.T.

- **A – ASSESS THE SITUATION**
  - Identify the hazards: nature, degree, and auxiliary hazards
  - Determine who is threatened: co-workers, other employees, the public
- **C – CHOOSE YOUR RESPONSE**
  - Select action level
    - Individual action: sound the alarm, extinguish a small contained fire
    - Limited response: involving others as a team
    - Major response: with outside fire and rescue departments
- **T – TAKE ACTION**
  - **SOUND THE ALARM**
    - Warn co-workers and public
    - Call, meet, and direct fire department
    - Report to management
  - **EVACUATE**
    - Evacuation rules: maintain order
    - Do not use elevators; help others

Do not impede firefighters and other responders

## General Procedures for Responding to a Fire and When to Use a Fire Extinguisher

1. SOUND THE FIRE ALARM and call the fire department, if appropriate.
2. IDENTIFY A SAFE EVACUATION PATH before approaching the fire.
3. Do not allow the fire, heat, or smoke to come between you and your evacuation path.
4. SELECT the appropriate type of fire extinguisher.
5. DISCHARGE the extinguisher within its effective range using the P.A.S.S. technique (pull, aim, squeeze, sweep).
6. BACK AWAY from an extinguished fire in case it flames up again.
7. EVACUATE IMMEDIATELY if the extinguisher is empty and the fire is not out.
8. EVACUATE IMMEDIATELY if the fire progresses beyond the incipient stage.

## How to Operate Fire Extinguisher

### Step 1: Know What Kind of Fire It Is (Fire Classification)

There are different types of fires (these are also called fire classifications). And it's important to know what type of fire you're trying to put out so that you can be sure to use the right type of fire extinguishers.

### Step 2: Get the Right Type of Fire Extinguisher

Once you know the type of fire, check to see if you have the right kind of fire extinguisher to put out that fire. The easiest way to tell the type or types of fires that a fire extinguisher can put out is to look at the label on the fire extinguisher. It will tell you what type of fire (or fire class) the fire extinguisher can safely put out.

### **Step 3: The A- PASS Method for Using a Fire Extinguisher**

There's a simple, method you can follow to use a fire extinguisher properly. The fire extinguisher steps are known as PASS, and each letter in the word PASS (P, A, S, and S) stands for the first word of each step.

We added an A to the method to remind you to always sound the alarm and call the fire department, first.

#### **Alarm**

- Sound the alarm

Use the building alarm system or your voice to yell FIRE.

Call 911 for assistance.

Now you can decide if you can use an extinguisher. If you decide to use an extinguisher

#### **Pull the Pin...**

**Aim** at the base of the fire.

#### **Squeeze the top handle.**

This will cause the fire extinguisher to begin working.

#### **Sweep from side to side.**

Continue extinguishing the fire until the fire is completely out. After the fire appears to be out, back away from an extinguished fire but watch the area in case the fire breaks out again.

DO NOT TURN YOUR BACK ON THE FIRE AREA - you may need to repeat the use of the extinguisher.

### **When Not to Fight a Fire**

#### **Step 4: When to Quit Fighting the Fire and Evacuate**

When you're actively fighting the fire, you should remember there may be cases when you'll have to give up, quit fighting the fire, and evacuate the fire area for your own safety.

Here are some reasons to quit fighting a fire and to evacuate immediately:

- The fire is spreading too quickly
- The fire could block your only exit
- The fire is too large
- The fire is so hot you can't get close enough to fight it effectively (10-15 feet)
- You've had to get down on your knees and/or crawl because you can't see well otherwise, because of high temperatures, or because of smoke

### **Maintenance, Testing and Inspection**

The requirements for fire extinguishers are contained in NFPA® 10, Standard for Portable Fire Extinguishers.

#### **BASIC REQUIREMENTS:**

- Monthly visual inspections.
- Annual maintenance check.
- Twelve (12) year hydrostatic test.
- Six (6) year tear down maintenance.
- Extinguishers must be promptly recharged or replaced if used.

Live fire - Hands on Training with the Hot Box

# HOW TO USE A FIRE EXTINGUISHER

**SUBJECT :** FIRE EXTINGSHURE USE - Hands on Training

**ACTIVITY:** This Presentation is activity based

**OBJECTIVE:** Students will be able, through hands-on practice, practice the actions to take while using a fire extinguisher to extinguish a small live fire.

## BASE STANDARDS

NFPA standard 10      OSHA standard

**Special Note - This unit should not be used to teach young kids under the AGE OF 12 –**

## BASIC CLASS OUTLINE

### Hands-on Practice Session staffing

There should be 3 people involved.

Controller – the person who controls the Deadman switch and watches the fire. Stops gas flow when the student properly demonstrates the method

Safety/ lighter – the person who staffs the standby live extinguisher and acts as a safety observer this person also uses the lighter to start the gas on fire.

Instructor – who walks in with the students and watches the students.

## HOW TO USE A FIRE EXTINGUISHER

The instructor should show students how to complete the A-PASS method step by step before allowing students to practice. Be sure to use an appropriate training area with plenty of space.

**Review parts of the extinguisher and demonstrate** the A- PASS Method for Using a Fire Extinguisher

**Alarm** - Sound the alarm

**Pull the Pin...**

**Aim at the base of the fire.**

**Squeeze the top handle.**

**Sweep from side to side.**

After the instructor demonstrates have each student go though the steps with live fire

Make sure the student does not turn their back on the

# HOME FIRE SPRINKLERS

**SUBJECT :** Home Fire Sprinklers

**ACTIVITY:** This Presentation is discussion, lecture, and demonstration of live fire sprinkler activation

**OBJECTIVE:** By the end of the lesson, attendees will appreciate the role of home fire sprinklers in reducing injury, death, and loss from fire and observe a live fire sprinkler activation.

## BASE STANDARDS

NFPA / USFA home sprinkler initiative    NFPA EMAC document    Information from home sprinkler organizations

## BASIC CLASS OUTLINE

### Introduction (3–5 Minutes)

- Greet the participants and thank them for allowing you to speak for 10 minutes. Let them know you are happy to be there.
- Introduce yourself and share your connection to the community.
- Show the crowd the “Good Ol’ Days” images such as:
  - A baby riding in a vintage car seat
  - Airplane passengers smoking cigarettes
  - Hockey players on the ice without helmets
- Remind attendees that safety practices were based on the information people had access to at the time. Confirm that science and technology have brought many advances related to safety since the 1970’s. Fortunately for us, many advances have been made in home fire safety.

For example, the invention of home smoke alarms was a critical lifesaving advancement and many of us couldn’t imagine not having smoke alarms in our homes.
- Let the attendees know that you want to talk with them about another important fire safety advancement :Home Fire Sprinklers

### Body of the Lesson (5–6 minutes)

- **Ask: *If new technology that greatly reduced injury, death, and property loss from home fires became available, would you want to know more?***
- **Share General information** about home fire sprinklers with attendees. **show the** sample fire sprinkler heads.
- **Home fire sprinklers save lives:**
  - – Home fire sprinklers protect lives by keeping fires small. Sprinklers can reduce the heat, flames, and smoke produced in a fire, allowing people more time to escape.
  - Home fire sprinklers only activate when there is a fire. They react quickly and spray water on fire.
  - Home fire sprinklers activate on an individual basis. Only the sprinkler closest to the fire will activate, spraying water on the fire and not the rest of the home.
  - A home fire sprinkler can control or put out a fire with a fraction of the water that would be used by fire department hoses.
  - Accidental sprinkler discharges are rare.



- Home fire sprinklers can be installed in new or existing homes. If you are remodeling or building your home, install home fire sprinklers.
- Home fire sprinklers can dramatically reduce the heat, flames, and smoke produced in a fire. Properly installed and maintained fire sprinklers help save lives.

**Ask: How long to people have to escape a home fire?**

People may have only 1–2 minutes to escape once a smoke alarm sounds. – Home fire sprinklers protect lives by keeping fires small. They reduce heat, flames, and smoke produced in a fire. This gives people more time to escape. This extra time can be critical.

**• Home fire sprinklers save property:**

- Some people are worried about water damage from sprinklers. In reality, sprinklers can reduce the damage to a home that would occur if a large fire broke out.
- Home fire sprinklers activate on an individual basis. Only the sprinkler closest to the fire will activate, spraying water on the fire and not the rest of the home.

**Ask: Which do you think would cause more damage to a home — Water from sprinklers or water used by fire department hoses?**

A home fire sprinkler can control or put out a fire with a fraction of the water that would be used by fire department hoses. – It is common for people to worry about malfunctioning sprinklers but accidental sprinkler discharges are rare.

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**LIVE FIRE DEMO WITH THE HOT BOX**

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- Start the fire in the trash can.
- And as the fire progresses explain what is happening
- LET FIRE BUILD, WHEN THE FIRE HAS RAISED THE TEMPERATURE TO APPROXIMATELY 150 DEGREES THEN PRESS THE BUTTON ON THE KEY FOB REMOTE TO START PUMPS AND WATER FLOW
- AFTER THE WATER HAS PUT OUT THE FIRE YOU CAN PRESS THE BUTTON ON THE KEY FOB REMOTE AGAIN TO STOP WATER FLOW
- OPEN THE LARGE LEXAN DOOR, PUT THE LID ON THE TRASH CAN TO SMOTHER ANY SMOLDERING PAPER AND TO PREVENT ANY FLARE UPS.
- Thank them for allowing you to speak.
- Ask for questions
- Let attendees know you have much more information you can share about home fire sprinklers and other fire safety topics. Share your contact information and invite them to reach out to learn more.

Set up for the next demonstration.