



## USER TRAINING WORKBOOK

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# **FireQuick Products, Inc.**

## **Disclaimer and Limitation of Liability**

### **Intent**

The purpose of this workbook is as a training aid, specifically designed to educate potential *FireQuick Flare System* users in the appropriate and safe handling and function of each device in the FireQuick product line. The Manufacturer, Firequick Products, Inc. or its approved Distributors, if any, should be consulted for training and for information on use of this workbook as a training aid.

### **Disclaimer**

The manufacturer and/or distributor, to the extent they may be involved in assisting with the training process, are strictly limited to the intent above. The information provided by such parties, as well as the content of this workbook is in no way intended to instruct in proper or specific field application of the FireQuick product or to act as a guide to backfiring or use of control or prescribed burning or other professional firing operations.

### **Limitation of Liability**

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Location of training: \_\_\_\_\_

Training Coordinator: \_\_\_\_\_  
*Name* \_\_\_\_\_ *Title* \_\_\_\_\_

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# **PRODUCT LINE INTRODUCTION**

# Product Line Introduction

The FireQuick Flare Systems product line is comprised of several incendiary flares, flare launcher systems and accessories. FireQuick flares are used for remote ignition; specifically backfiring, control burning or prescribed burn operations. An overview of the current line is as follows:

## INCENDIARY FLARES (Current configurations)



◀ 2.5" Flare

▼ Original Stubby I Flare



## Retired Flares

The FireQuick **2.5" Flare**, the original Stubby Flare (Stubby I) and Dual Stubby are no longer produced. However, since they may still be found in use in the field, their use and safety are covered in this manual.

The 2.5" Flare is 6.5" (16.5cm) tall in comparison to the Big Shot Flare which is shorter at 4.25" (10.8cm) high.

The **Original Stubby (Stubby I)** has no marking on the cap which distinguishes it from the Stubby II.

The **Dual Stubby (Stubby II)** is a Launch or Throw flare and has been replaced by the **Launch Only Stubby**.

## LAUNCHER SYSTEMS

Over the years there have been several configurations of the FireQuick Launcher. The Launcher III is the current model available for sale. The Launcher I and Launcher II are still viable in the field and are pictured below and service on these launchers is available. Earlier versions (not pictured here) are considered to have exceeded their safe life period and should be removed from the field. If in doubt, contact Firequick Products, Inc. for clarification.

### Launcher I (Below)

- Fires Hotshot flares



### Launcher II (Below)

- Fires Launch-able Stubby flares and Hotshot flares
- Barrel adapter included
- # 6 or 7 cartridge OK



### Launcher III - Current Series

- Fires the Launch-able Stubby flares and the Hotshot flares (with adapter in place)
- Barrel adapter included
- # 6 cartridges recommended. **DO NOT use #7 cartridges!**



## **Accessory Products**

Launcher Cylinders

Launcher Holsters

Industrial Loads (cartridges)

Speed Loaders

Training Materials



## HOTSHOT FLARES



## **Hot Shot Flare**

The Hot Shot is a mechanically launched, remote ignition device. The flare is ignited and fired from a FireQuick launcher using a 22-caliber industrial firing load.

**The Hot Shot flare is NEVER to  
be lit and thrown by hand!**



### **1. Product Specifications**

- a. Size: 1" diameter x approx. 3" long (2.5 cm x 7.6 cm).
- b. Weight: 1.4 oz. (38.5 g).
- c. Effective Range: 300-350 feet (90 – 107 m).
- d. Fuse delay: approximately 1-3 seconds to ignition.
- e. Sprays 4000°F (2200°C) material, typically in a spinning pattern.
- f. Little or no residual material after burning.

### **2. Field Applications**

- a. Effectively creates fire in light flash to medium fuels.
- b. Very effective component in backfiring operations.
- c. Popular device for prescribed burn activities.
- d. High performance fire-starting alternative to signal or road flares.
- e. Start fires a safe distance from the user.
- f. Allows placement of flare across ravines, rivers, and other hazards.
- g. Create fire in high humidity conditions.
- h. Ability to create fire pattern over a large area by high launch firing.



### 3. Loading and firing the Hotshot Flare

- a. The Hotshot flare may be launched from any FireQuick Launcher. A #6 cartridge is generally recommended for Hotshots to avoid damage to the flare upon firing. Follow the guidelines for your launcher configuration.
- b. The wearing of hearing and eye protection is required when firing Hot Shot flares. Other personnel in the firing area should also wear hearing and eye protection. The use of Nomex or other fitted protective gloves is recommended.
- c. Before launching flares:
  - i. Prepare your equipment in advance.
    - 1) Insure that your launcher is clean and operable.
    - 2) Dry-fire the launcher to insure cylinder rotation.
    - 3) If using a dual-flare launcher (the Launcher II or III), insert the Hot Shot adapter into the barrel and fully engage threads until you obtain a tight fit.



#### d. Preparing to launch:

- i. Remove empty cylinder from the launcher (Launcher I or II) or swing open the cylinder on the Launcher III.
- ii. Load the cylinder with 22-caliber Winchester / Powers / CCI industrial loads.
  - 1) Number 6 “purple” loads are recommended for use with the all FireQuick Launchers when firing Hotshot flares.



- 2) Number 7 "gray" loads may be used to achieve longer distance in the Launcher I or II, although some damage to the fired end of the flare may occur. Your launcher will also experience more wear with constant use of # 7 loads. **DO NOT use # 7 "gray" loads in the Launcher III; you will damage the cylinder mechanism and void your warranty.** You will not experience distance degradation using the #6 cartridges in the Launcher III.
  - 3) Number 5 "red" loads are acceptable alternatives, but will result in less firing distance than the higher loads.
  - 4) Number 4 "yellow" loads or lower are not recommended, as the flares may not light at all or notable disintegration in distance will be experienced.
- 
- iii. Replace cylinder in launcher (I or II) or swing cylinder back into place (Launcher III). Test rotate cylinder to verify cylinder-lock is engaged (LI and II only).
  - iv. Do not place your finger on the trigger until you are ready to fire the launcher.
  - v. Determine desired placement of flare before firing.
  - vi. The Hot Shot flare is loaded cap-end first. With the barrel pointing away from you and others, insert the flare into the launcher.
    - 1) Approximately 1" of the flare will extend out of the barrel when the flare is properly placed. The flare may be a tight fit, press firmly to insure it is fully inserted.



▲ Loading the Launcher I



◀ Loading Launcher II or III



◀ Proper loaded position of Hotshot in Dual-flare Launcher II or III

e. Firing the flare:

i. Point the launcher toward your target, holding it at a 0°-30° angle above shoulder level. This provides for maximum range and will help insure the flare lights once it is on the ground.

- 1) Fired at a 0°-30° angle above shoulder level, you can expect the flare to travel 300-350 feet (90-107m).
- 2) Flares fired at a higher angle may ignite before they are on the ground. This can be an intentionally effective method in flash fuels.



- 3) Flares fired at a lower angle may hit the ground before reaching your target and can potentially ricochet, caution should be exercised.
- ii. Cock the hammer back after announcing your intended firing and pull the trigger once. Simply pulling the trigger in the double-action mode, eliminating the need to cock the hammer, will also fire the launcher.



#### 4. Field Care and Safety Considerations

- a. Flares should be kept packaged when not in use.
  - i. Reduces risk of damage to flare.
  - ii. Integrity of flare is imperative for use in launcher.
- b. Keep flares dry.
  - i. The Hot Shot is hermetically sealed to reduce risk of moisture damage.
  - ii. Exposure to high moisture may cause flare to swell, impairing fit into the launcher.
  - iii. Wet flares can be allowed to dry and test fired (if they fit into the launcher).
- c. Protect the flare caps from damage or penetration.
  - i. **Never intentionally remove a Hotshot flare cap. The start powder released is static sensitive and will adhere to your clothing and skin.**
  - ii. If a Hot Shot cap has been penetrated, there is risk of loose internal start-powder escaping from the flare.
    - 1) The flare may not light if adequate amounts of start-powder have been lost.
    - 2) Loose start powder may foul the launcher.
    - 3) Loose powder is friction and static sensitive and may pose a fire hazard.
  - iii. Dispose of damaged Hot Shot flares as described later in this Work Book.

- d. Do not place or use flares near flammable liquids or unintended heat sources.
- e. Do not allow smoking within 50 feet (15m) of flares.
- f. Before firing, plan your “exit strategy”
  - i. What will I do if I place the flare in an undesirable location?
  - ii. What will I do if the flare ignites in the barrel?
    - 1) Typically, the pressure created by an adequate 22-caliber load will expel the flare. A weak or dud load that does not expel the flare is extremely unlikely to penetrate the cap and cause ignition.
    - 2) In many years of rigorous manufacturer testing and customer field use, there has only been one reported case of the flare igniting in the barrel.
    - 3) In the unlikely event this occurs, the correct response is to immediately discard the launcher by throwing it away from your self and others.
- g. Hot Shot flares are intended ONLY for launch. **NEVER light a Hot Shot flare by hand.** There is inadequate delay in the fuse and you will not be able to discard flare before ignition occurs. **The potential for injury is extremely high!**
- h. Do not use the Hot Shot flare in any other firing or launching device that has not been designed and tested by FireQuick Products, Inc. specifically for use with this FireQuick product.
- i. NEVER, under any circumstances, fire a Hot Shot flare in a confined or closed space.
- j. If flares you have staged for use become involved in a fire, evacuate the area immediately.
  - i. Move upwind and determine your best course of action.
  - ii. Follow the fire management procedures detailed in the Storage and Transport section of this Work Book.

## 5. Potential Field Failures

FireQuick flares have an intended 95% ignition rate, so field failures are relatively uncommon.

- a. If a Hotshot flare does fail, the most common failures include:
  - i. Launcher fires and flare travels expected distance but does not light.
    - 1) Bad igniter set fails to ignite core.
    - 2) Back-end of flare disengages, snuffing igniter. More common with # 7 cartridge use.
  - ii. Flare expels from launcher and travels a very short distance, may or may not light.
    - 1) Weak cartridge.
    - 2) Improperly loaded flare.

- iii. Flare does not light or expel from the launcher.
  - 1) Dud cartridge; fire the next cartridge (industrial load) to confirm.
  - 2) Firing pin is damaged.
    - a) Remove the flare and cylinder. Dry fire the launcher and watch to insure firing pin is visible during action.
    - b) Remove bad cartridges and replace with new, reload and fire.
- b. Other firing failures may relate to the launcher. Refer to the Launcher section of this workbook for review.
- c. When a flare fails after launch and ignition:
  - i. Do not approach the flare if there is other fire near the flare.
  - ii. Do not approach the flare until several minutes have elapsed after firing.
  - iii. Do not attempt to reuse an expelled flare if there is ANY disruption or distortion of the flare body or cap.
  - iv. Dispose of failed flares as described in later in this Work Book.



## STUBBY FLARES



## 1.5" Stubby Flare

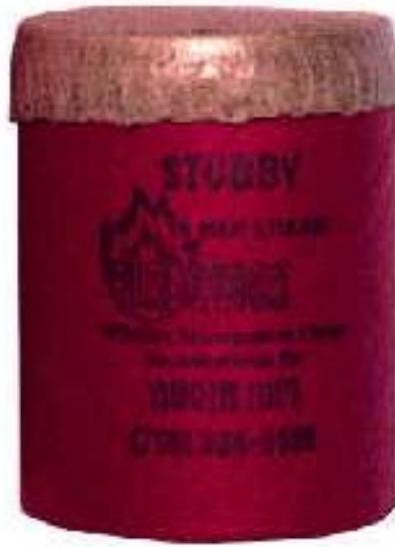
**Important Note:** Stubby flares have evolved over the years from a hand-throw only flare to a launch-or- throw flare and now finally to a launch-only flare. All Stubby flares are the same size and look very similar. They can be distinguished by the marking on the cap. It is important that you pay close attention to which flare you are using to avoid unexpected performance results and possible injury.

### Original Stubby Flare (Stubby I)

The original Stubby (Stubby I) is a hand-throw-only flare, manufactured from 1999 through 2002.

Manufacture of the hand-throw-only Stubby flare was discontinued beginning with the 2003 fire season. It is unlikely that these flares still remain in the field.

The original hand-throw only Stubby does NOT have any marking on the cap. This is how you can identify this older flare. They were also boxed in larger boxes of 48 versus the current packaging which contains 12 flares per box. Due to the age of these flares if you do find one in the field it may not light and if it does you may experience inconsistent burn results or behavior. Exercise caution and only attempt to light older flares in a clear and safe environment.



**It is imperative that the original Stubby NOT be used in a launcher.** It is not designed for launch and may ignite or burst immediately upon firing putting the user at risk.

### Dual Stubby (Stubby II)

The Stubby II was introduced to the field late in the 2002 fire season and was configured to allow the user to hand-light and throw the flare or launch it with a FireQuick Dual-flare Launcher (II or III). The Stubby II cap is stamped with the identification marking which reads, "FireQuick Launch or Throw Stubby."

It is reasonably likely that the Dual Stubby may still be present out in the field.



## **Launch-Only Stubby (Stubby III)**

The Launch-only Stubby is the latest configuration of Stubby flare and is likely to be in the field for many years. Further change to this flare is not anticipated as of this date. The Launch-only Stubby is packaged in small boxes of 12 flares and cases of 300, the same as the prior Dual-Stubby. The way to distinguish a Launch-only Stubby is by the marking on the cap. Pay close attention every time you use a Stubby flare to insure you have identified it correctly. By definition this flare is intended for launch only and can be used in either the FireQuick Launcher II or III. Like the Hotshot flare, **the Launch-Only Stubby should NEVER be lit by hand**. The single igniter is too short for safe hand-ignition and serious injury may result if attempted.

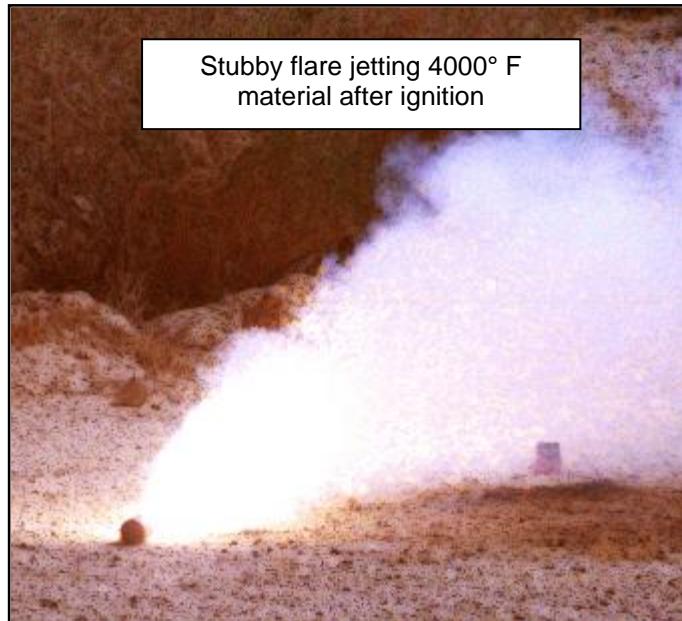


### **1. Product Specifications (all versions of Stubby flares unless otherwise noted)**

- a. Size: 1.5" diameter x 2" high (3.8 cm x 5.1 cm).
- b. Weight: 3 oz. (85 g).
- c. Effective Range:
  - ✓ Approximately 150 feet (45 m) when thrown (Stubby I & II only).
  - ✓ 300-350 feet (90-107 m) launched (Stubby II & III only).
- d. Fuse delay:
  - ✓ 10-15 seconds to ignition when hand-thrown (Stubby I & II only).
  - ✓ 1-3 seconds to ignition when launched (Stubby II & III only).
- e. Sprays 4000°F (2200°C) material 5-6 feet (1.5-2 m) for ~5 seconds.
- f. Little or no residual material after burning.

## 2. Field Applications

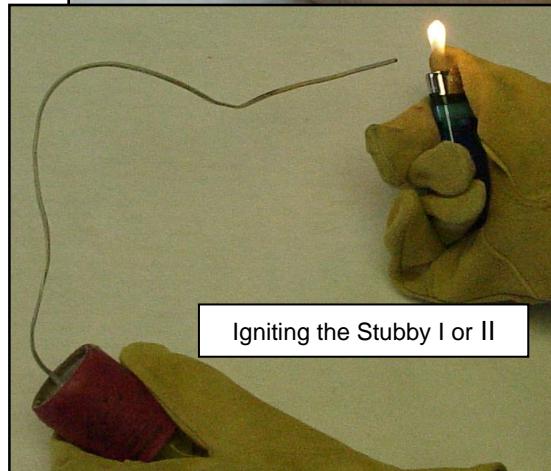
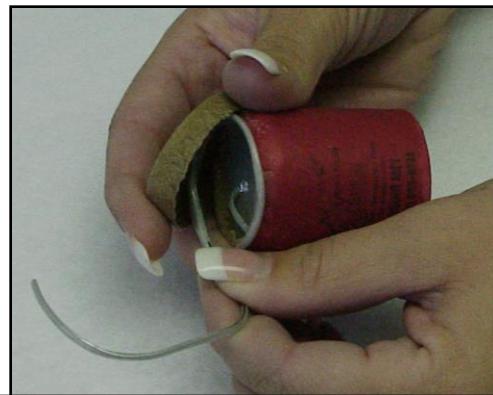
- a. Very effective component in backfiring operations. May be thrown or launched a good distance to create fire safely away from the user.
- b. An effective alternative to the Fusee for fire starting. The flare is rugged and can withstand the rigors of being thrown or launched even in rocky terrain.
- c. Very effective in fuels greater than flash and fuels with low canopy.
- d. Create fire in high humidity conditions or in damp fuels.
- e. May be placed and lit for initiating lines of fire (Stubby I & II only). When launched, allows placement of flare across ravines, rivers, and other hazards.



## 3. Hand lighting the Stubby I or Stubby II flare

**NEVER hand light a Launch-Only Stubby (III)**

- a. When hand lighting, the Stubby may be lit and then thrown, or may be placed in position and then lit.
- b. Use of eye protection and gloves is recommended.
- c. Remove the cap from the flare. You only need to remove enough of the cap to expose the gray igniter cord. Care should be taken with the Stubby II not to puncture the center of the flare as the igniter may be fouled and flammable, static-sensitive start-powder may be released.
- d. Extend the gray igniter cord completely from the flare. Avoid tugging the cord or crimping the cord when extending. Damaged cord may fail to ignite the flare.
- e. Allow a minimum 40-foot (12.2 m) safety zone from flare ignition point.



Igniting the Stubby I or II

- f. When lighting the flare, position the open end of the flare away from yourself and others. Fuse delay is approximately 15 seconds, but variances are possible with chemical functions.
- g. When throwing the flare, determine desired destination of flare before lighting. Once lit, throw the flare immediately to desired location.
- h. When placing the flare rather than throwing, press the flare firmly into the location if possible to avoid travel after lighting. Once the flare is lit, move immediately at least 40 feet (12.2 m) from the flare for safety.

#### 4. Launching the Stubby Flare (Stubby II & III ONLY)

**SAFETY REMINDER:** The Stubby II & III are the ONLY Stubby flares designed for launching. The original Stubby I was not designed for launch and may burst violently if fired from a launcher. This may result in injury to the user or others in the area. Refer back to page 2 & 3 of this section for help identifying each flare.

- d. The wearing of hearing and eye protection is required when firing the Stubby II or III flares. Other personnel in the firing area should also wear hearing and eye protection. The use of Nomex or other fitted protective gloves is recommended.
- e. Before launching flares:
  - i. Prepare your equipment in advance.
    - 1) A FireQuick Launcher II or III is required.
    - 2) Insure that your launcher is clean and operable. Dry fire the launcher to insure cylinder rotation.
    - 3) Remove the Hotshot adapter barrel from the launcher if it is in place.
- f. Preparing to launch:
  - i. Remove empty cylinder from the launcher II or swing out the cylinder from the launcher III.
  - ii. Load the cylinder with 22-caliber Winchester / Olin industrial loads.
    - 1) # 6 (purple) or # 7 (gray) loads can be used when firing from the Launcher II. You may experience a slight loss of range using a number 6.
    - 2) **DO NOT use the # 7 cartridge in the Launcher III, you will damage the cylinder mechanism and void the warranty.** You will not experience distance loss in the Launcher III with a # 6 cartridge.



- iii. Replace or swing the cylinder into place. Test rotate cylinder (Launcher II only) to verify cylinder-lock is engaged.
- iv. Do not place your finger on the trigger until you are ready to fire the launcher.
- v. Determine desired destination of the flare before firing.

- vi. NEVER place an uncapped flare in the launcher.
  - vii. The Stubby II & III flares are loaded cap-end first. With the barrel pointing away from you and others, insert the flare into the launcher.
- 1) Approximately  $\frac{1}{4}$  to  $\frac{1}{2}$ " of the flare will extend out of the barrel when the flare is properly seated. The flare may be a tight fit, press firmly to insure it is fully inserted.



◀ Proper loaded and seated position of Stubby in FireQuick dual flare Launcher.

g. Firing the flare:

- i. Point the launcher toward your target, holding it at about a  $0^\circ$ -  $30^\circ$  angle above shoulder level. This provides for maximum range and will help insure the flare lights once it is on the ground.
  - 1) Fired at a  $30^\circ$  angle from shoulder level, you can expect the flare to travel 300-350 feet (90-107m).
  - 2) Flares fired at a higher angle may ignite before they are on the ground. This can be an intentionally effective method in flash fuels.
  - 3) Flares fired at a lower angle may hit the ground before reaching your target and can potentially ricochet, caution should be exercised.
- ii. Cock the hammer back after announcing your intended firing and pull the trigger once. Simply pulling the trigger in the double-action mode, eliminating the need to cock the hammer, will also fire the launcher.

## 5. Field Care and Safety Considerations

- a. Flares should be kept packaged when not in use.
  - i. Reduced risk of core or igniter damage.
- b. Keep flares dry.

- i. Damp Stubby flares that are dried thoroughly are likely to ignite.
- ii. If the igniter set has gotten wet, the start powder will be fouled and the flare will not light.
- c. Protect flare caps from damage or penetration. Keep flares capped until ready to use.
  - i. Exposed igniter cord substantially increases the likelihood of accidental ignition.
    - 1) Igniter cord lights at much lower temperature than the flare core (800°F/ 525°C). The cord will light with a match. Once lit, the flare cannot be manually extinguished. Retreat immediately at least 40 feet (12.2 m) for safety.
    - 2) Igniter cord is pressure, friction, and spark sensitive and can be ignited by a sharp blow if struck between two hard surfaces.
  - ii. **NEVER uncap a flare you intend to launch.** The Stubby II & III have a central ignition source for launch ignition. If penetrated before firing, loose start powder may be lost from the flare.
    - 1) Loss of initial start powder may disable the flare from igniting if launched, however a Stubby II is likely to still perform when hand lit.
    - 2) Loose powder is friction and static sensitive and may pose a fire hazard.
- d. Store uncapped Stubby flares away from other flare inventory.

**REMEMBER:** One goes – they all go!

- e. NEVER light a flare in a confined or closed space for any reason.
- f. **NEVER uncap and light a Launch-only Stubby flare by hand.** The single igniter is too short for safe hand-ignition and serious injury may result if attempted.
- g. **NEVER** use the Stubby flare in any firing or launching device that has not been designed and tested by FireQuick specifically for use with this FireQuick product.
- h. Do not place or use flares near flammable liquids or unintended heat sources.
- i. Do not allow smoking within 50 feet (15 m).
- j. Before lighting or launching flares, plan your “exit strategy”
  - 1) Where is the designated safety zone?
  - 2) What will I do if I drop the flare or place the flare in an undesirable location?
  - 3) What will I do if I create an early ignition situation?
- k. If flares staged for use become involved in a fire, evacuate the area immediately.
  - i. Move upwind, and then determine your best course of action.
  - ii. Follow the fire management procedures detailed in the Storage and Transport section of this workbook.

## **6. Potential Field Failures**

FireQuick flares have an intended 95% ignition rate, so field failures should not be excessive. If a Stubby flare does fail, the most common failures include:

- a. When hand lighting a hand-throw Stubby flare:
  - i. Igniter cord lights but fails to burn completely up to the flare.
    - 1) Igniter cord is probably damaged (external to flare).
  - ii. Igniter lights & burns to flare, but core material (flare) does not ignite.
    - 1) Firing transition in igniter set is damaged (internal to flare).
    - 2) Delay train fails to transition to main core (internal to flare).
- b. When launching a launch-capable Stubby flare with a FireQuick dual-flare launcher:
  - i. Launcher fires and flare travels expected distance but does not light.
    - 1) Bad igniter set fails to ignite or transition to delay train.
    - 2) Delay train fails transition to main core.
    - 3) Igniter disengages from flare.
  - ii. Flare expels from launcher and travels a short distance, may or may not light.
    - 1) Weak cartridge (industrial load).
    - 2) Improperly loaded flare.
  - iii. Flare does not light or expel from the launcher after pulling trigger.
    - 1) Dud cartridge; prepare to launch and fire the next cartridge to confirm.
    - 2) Firing pin is damaged.
      - a) Remove the flare and the cylinder. Dry fire the launcher and watch to insure firing pin is visible during action.
      - b) Remove bad cartridges and replace with new. Reload and fire.
- c. Other firing failures may relate to the launcher. Refer to the Launcher section of this workbook for review.
- d. When a flare fails after ignition:
  - i. Do not approach the flare if there is other fire near the flare.
  - ii. Do not approach the flare until several minutes have elapsed after firing.
  - iii. Do not attempt to reuse or relight the flare, as the fused time delay has been compromised.
  - iv. Dispose of the flare as described in Section 9 of this workbook.



## CHUBBIE FLARES



# Chubbie Flare

The Chubbie flare is a mid-size incendiary remote ignition device that is manually lit and hand-thrown by the user. Lightweight, compact and extremely rugged, this baseball size flare is easy to carry and easy to throw. The average user can obtain good range tossing the flare either over-hand or under-hand. The flare can also be placed by hand and lit rather than throwing.

The Chubbie exhibits high-performance ignition capability in a variety of fuels and proves the perfect partner to the Stubby and Big Shot flares.

## 1. Product Specifications

- a. Size: 2.5" diameter x 2" high (6.4 cm x 5.08 cm).
- b. Weight: 8 oz. (227 g).
- c. Effective Range: Approximately 100 feet (30.5 m), dependent on throwers ability.
- d. Fuse delay: ~15 seconds to ignition.
- e. Energetically sprays 4000°F (2200°C) material 8-10 feet (2.4- 3.0 m) for ~10 seconds.
- f. Continues to burn at a lower temperature until consumed.
- g. Little or no residual material after burning.



## 2. Field Applications

- a. A good choice for use in everything from flash to moderately heavy fuels and most fuel conditions.
- b. Lightweight and compact nature makes it an excellent option for packing into areas with heavier fuels where launching is not the best option.
- c. The Chubbie flare is rugged and can withstand the rigors of a hard ground landing.
- d. Can be used in gunnysacks to catch & ignite high brush canopy.
- e. Enables safe ignition without hiking into difficult terrain positions.
- f. Attach multiple flares to difficult-to-ignite fuels (trees).
- g. Can daisy-chain effectively to create continuous fire where needed.

## 3. Safe Use of the Chubbie Flare

- a. Eye protection and gloves recommended.
- b. Remove the cap from the flare by puncturing or pulling the cap from the flare body. Full removal of the cap is not required.
- c. Pull the gray igniter cord out of the top of the flare until it is fully extended. Avoid having crossovers in the cord as this will cause a jump in the ignition trail and reduce delay time.



- d. Determine desired placement of the flare before lighting.
- e. Allow a minimum 40-foot (12 m) safety zone for flare ignition.
- f. The cord on the Chubbie is long in order to allow for adequate ignition delay.
  - i. Looping cord as shown before lighting will avoid “cord whip” and accidental ignition of nearby flash fuels. Remember not to allow the cord to cross itself or you may seriously reduce the ignition delay.
- g. Manually light the igniter cord, holding the open end of the flare away from yourself and others.
- h. Immediately throw the flare to the desired location.
  - i. Failure to discard the flare immediately after ignition of the gray cord may result in the flare igniting in your hand and potentially serious injury.
    - 1) If this happens, do not panic – Throw the flare away from yourself and others.

Note: The flare may be placed where fire is desired prior to lighting. When placing the flare, embed it into the terrain if possible in order to avoid flare travel once it is ignited. Extend the cord out straight from the flare to eliminate cross-over. Once the flare is lit, move immediately at least 40 feet (12 m) from the flare for safety.



#### 4. Field Care and Safety Considerations

- a. Flares should be kept packaged when not in use.
  - i. Reduced risk of moisture damage to flare.
  - ii. Reduced risk of igniter damage.
  - iii. Reduced risk of damage to the core.
- b. Keep flares dry.
  - i. Firequick flares that have been penetrated by liquid are more likely to fail.
  - ii. Wet flares can be thoroughly air-dried and tested for performance capability.
- c. Protect the flare caps from damage or penetration and keep flares capped until ready for use.
  - i. Exposed igniter cord substantially increases the likelihood of accidental ignition.
    - 1) Igniter cord lights at much lower temperature than the flare core (800°F/ 525°C). The cord will light with a match. Once lit, the flare cannot be manually extinguished. Retreat immediately at least 40 feet (12.2 m) for safety.
    - 2) Igniter cord is pressure, friction, and spark sensitive and can be ignited by a sharp blow if struck between two hard surfaces.
    - 3) Store uncapped flares away from other flare supplies.

- d. NEVER light a flare in a confined or closed space for any reason.
- e. Do not set or use flares near flammable liquids or unintended heat sources.
- f. Do not allow smoking within 50 feet (15m).
- g. Before lighting flares:
  - i. Decide where to place the flare – where you want to create fire.
  - ii. Prepare your equipment in advance.
  - iii. Plan your “exit strategy”
    - 1) What will I do if the flare ignites while I am holding it?
    - 2) What will I do if I drop the flare?
    - 3) What will I do if I place the flare in an undesirable location?
    - 4) Where is the designated safety zone?
- h. If flares that you have staged for use become involved in a fire, evacuate the area immediately.
  - i. Move upwind and then determine your best course of action.
  - ii. Follow the procedures detailed in the Storage and Transport section of this workbook for managing flare inventory fires.
- i. Chubbie flares are intended for use as described in this section only. **DO NOT** insert Chubbie flares into any firing or propulsion device not designed, built, tested, and qualified by Firequick Products, Inc. for such purpose.

## 5. Potential Field Failures

FireQuick flares have an intended 95% ignition rate; few field failures should occur if flares have been properly maintained. When a Chubbie flare does fail consider:

- a. Potential Chubbie flare failures may include:
  - i. Igniter lights but fails to burn completely up to the flare.
    - 1) Igniter cord may be damaged (external to flare).
  - ii. Igniter lights and burns up to the flare, but core material (flare) does not ignite.
    - 1) Transition in igniter set is damaged (internal to flare).
    - 2) Igniter package fails (internal to flare).
- b. When a flare fails after ignition:
  - i. Do not approach the flare if there is other fire near the flare.
  - ii. Do not approach the flare until several minutes have elapsed since initial lighting.
  - iii. Do not attempt to relight the flare as the fuse delay has been compromised.
  - iv. Dispose of the flare as described in the Flare Disposal section of this workbook.



## BIG SHOT FLARES



**NOTE:** The Big Shot Flare replaces the 2.5" FireQuick Flare. You will learn in this section how to distinguish the Big Shot flare and how it varies from its predecessor. All users should familiarize themselves with this section before using the Big



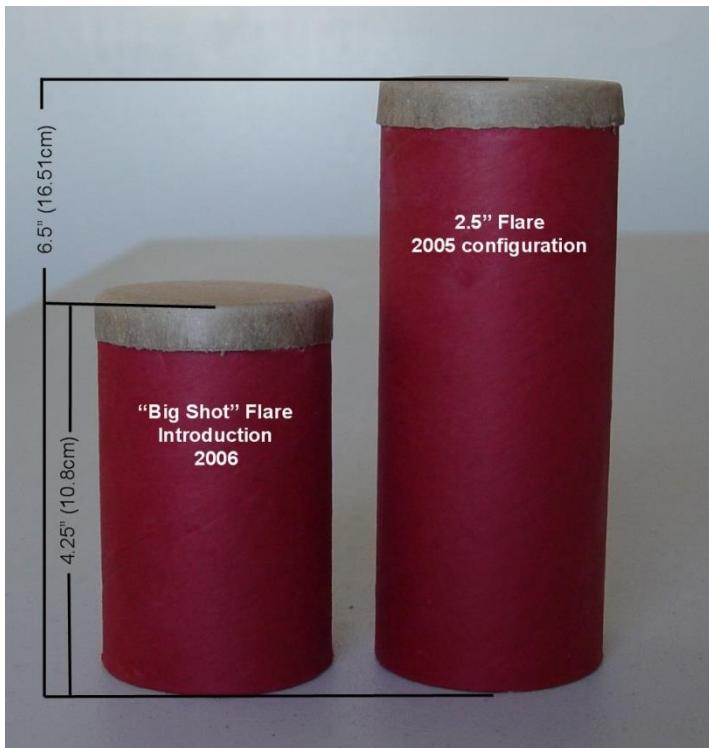
## CAUTIONARY NOTICE REGARDING THE OLD

### 2.5" FLARES

- 1. The 2.5" flare is no longer in production. It has been replaced by the Big Shot Flare. Because of prior sales, the 2.5" flare may still be found in the field for some time.**
- 2. This flare was last manufactured in 2006. At a minimum of 9 years old and due to the nature of the ignition assembly that is a part of the flare, it is not considered safe to use as of the date of this printing.**
- 3. During testing, these aged flares demonstrate (if they ignite) extremely unpredictable and potentially dangerous behaviors; most specifically erratic and highly energetic travel.**
- 4. Dispose of the flares as detailed in Section 9 of this workbook.**
- 5. Contact the manufacturer if you are unsure or unable of implementing disposal procedures.**

# Big Shot Flare

The Big Shot flare is an incendiary remote ignition device that is manually lit and hand-thrown by the user. This is the largest Firequick flare exhibiting the greatest fire power in the Firequick flare line.



You can distinguish the Big Shot flare from its predecessor, the 2.5" flare, by the size. Both flares are 2.5" in diameter, but the Big Shot is a shorter flare. The Big Shot is 4.25" (10.1 cm) high while the 2.5" flare is 6.5" (16.5 cm) high.

While more compact and lighter weight, enabling greater ease in carrying and throwing, the Big Shot flare demonstrates improved performance compared to the earlier 2.5" flare.

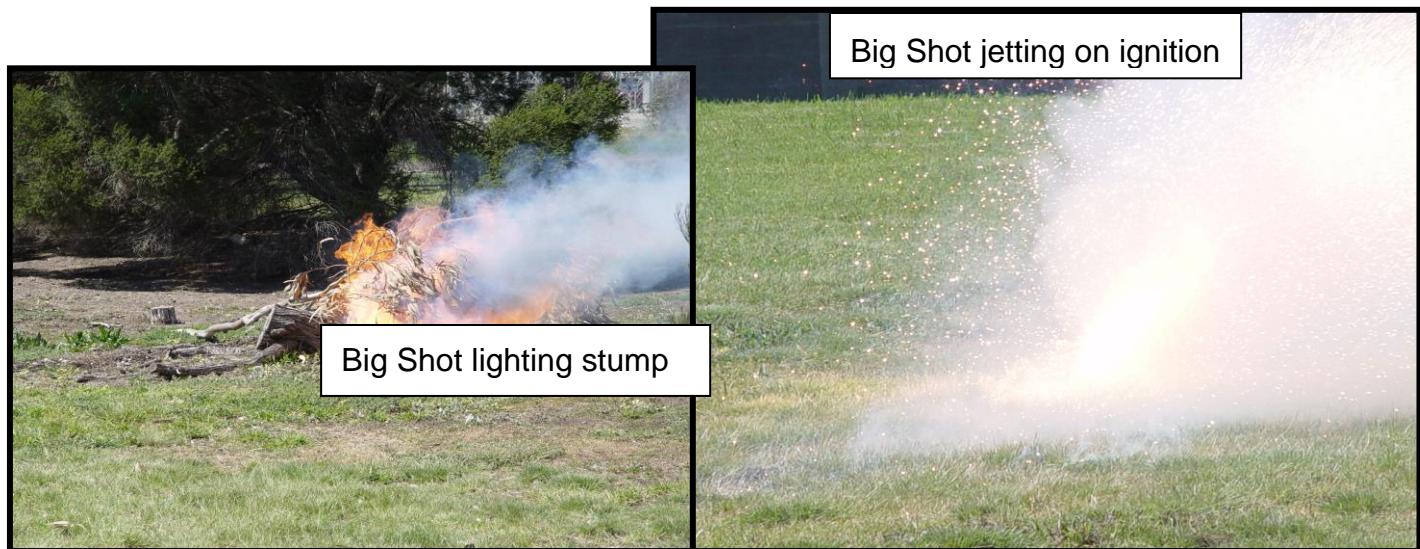
## 1. Product Specifications

- a. Size: 2.5" diameter x 4.25" high (6.4 cm x 10.8 cm).
- b. Weight: 12 oz. (340 g).
- c. Effective Range: Approximately 100 feet (30.5 m), dependent on thrower's ability.
- d. Fuse delay: 20-30 seconds to ignition.
- e. Sprays 4000°F (2200°C) material 15-25 feet (4.5-7.5 m) for 10 seconds.
- f. Continues to burn at a lower temperature for up to 5 minutes.
- g. Little or no residual material after burning.



## 2. Field Applications

- a. The best choice for difficult fuels in ravines or steep territory.
- b. The Big Shot flare is rugged and can withstand the rigors of a hard ground landing.
- c. Very effective in all fuels, particularly heavy or wet fuels.
- d. Effectively creates fire in medium canopy fuels.
- e. Often used in gunnysacks to catch & ignite high canopy.
- f. Operates in all weather conditions, including high humidity.
- g. Enables safe ignition into difficult terrain positions.
- h. Attach multiple flares to ignite difficult-to-ignite fuels (trees).
- i. Used effectively on slash piles.



## 3. Safe Use of the Big Shot Flare

- a. Eye protection and gloves recommended.
- b. Remove the cap from the flare. Partial removal is adequate.
- c. Pull the gray igniter cord out of the top of the flare until it is fully extended. Avoid having crossovers in the cord as this will cause a jump in the ignition trail and reduce delay time.
- d. Determine desired placement of the flare before lighting.
- e. Allow a minimum 40-foot (12 m) safety zone for flare ignition.





f. Manually light the igniter cord, holding the open end of the flare away from yourself and others.

g. Immediately throw the flare to the desired location.

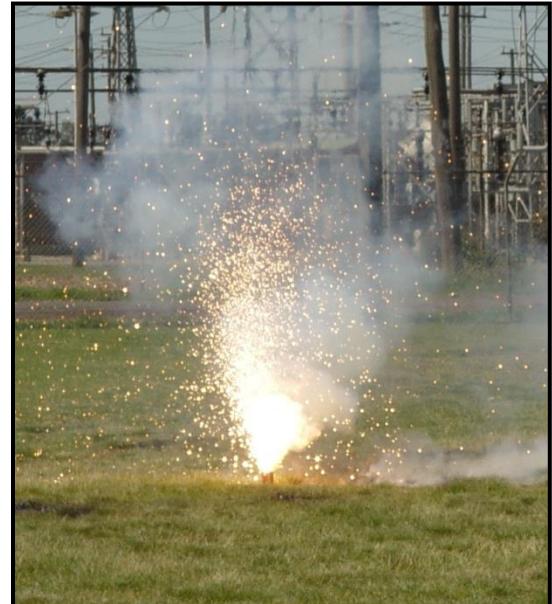
i. Failure to discard the flare immediately after ignition of the gray cord may result in the flare igniting in your hand and potentially serious injury.

1. If this happens, do not panic – Throw the flare away from yourself and others.

Note: The flare may be placed where fire is desired prior to lighting. When placing the flare, embed it into the terrain if possible in order to avoid flare travel once it is ignited. Extend the cord out straight from the flare to eliminate cross-over. Once flare is lit, move immediately at least 40 feet (12 m) from the flare for safety.

#### 4. Field Care and Safety Considerations

- a. Flares should be kept packaged when not in use.
  - i. Reduced risk of moisture damage to flare.
  - ii. Reduced risk of igniter damage.
  - iii. Reduced risk of damage to core.
- b. Keep flares dry.
  - i. Big Shot flares that have been penetrated by liquid are more likely to fail.
  - ii. Wet flares may be thoroughly air-dried and tested for performance.
- c. Protect the flare caps from damage or penetration and keep flares capped until ready for use.
  - i. Exposed igniter cord substantially increases the likelihood of accidental ignition.
    1. Igniter cord lights at much lower temperature than the flare core (800°F/ 525°C).
    2. Igniter cord is pressure, friction, and spark sensitive.
    3. Store uncapped flares away from other flare supplies.
- d. NEVER light a flare in a confined or closed space for any reason.



- e. Do not set or use flares near flammable liquids or unintended heat sources.
- f. Do not allow smoking within 50 feet (15m).
- g. Before lighting flares:
  - i. Decide where to place the flare – where you want to create fire.
  - ii. Prepare your equipment in advance.
  - iii. Plan your “exit strategy”
    - 1. What will I do if the flare ignites while I am holding it?
    - 2. What will I do if I drop the flare?
    - 3. What will I do if I place the flare in an undesirable location?
    - 4. Where is the designated safety zone?
- h. If flares you have staged for use become involved in a fire, evacuate the area immediately.
  - i. Move upwind and then determine your best course of action.
  - ii. Follow the procedures detailed later in the Storage and Transport section of this Work Book for managing flare inventory fires.
- i. Big Shot flares are intended for use as described in this section only.  
**DO NOT insert Big Shot flares into any firing or propulsion device not designed, built, tested, and qualified by Firequick Products, Inc. for such purpose.**

## 5. Potential Field Failures

FireQuick flares have an intended 95% ignition rate; few field failures should occur if flares have been properly maintained. When a Big Shot flare does fail consider:

- a. Most common Big Shot flare failures include:
  - i. Igniter lights but fails to burn completely up to the flare.
    - 1. Igniter may be damaged (external to flare).
  - ii. Igniter lights and burns up to the flare, but core material (flare) does not ignite.
    - 1. Transition in igniter set is damaged (internal to flare).
    - 2. Igniter package fails (internal to flare).
- b. Less common Big Shot failures may include:
  - i. Igniter set expels from flare before core ignites (loud pop is audible).
    - 1. This may occur if gas buildup in flare does not expel adequately through intended channel. If core has not ignited before expulsion of igniter, the flare is a dud.

- c. When a flare fails after ignition:
  - i. Do not approach the flare if there is other fire near the flare.
  - ii. Do not approach the flare until several minutes have elapsed after initial lighting.
  - iii. Do not attempt to relight the flare as the fuse delay has been compromised.
  - iv. Dispose of the flare as described later in this Work Book.





## RECEIVING FIREQUICK FLARES

# RECEIVING FIREQUICK FLARES

All FireQuick packages should be inspected for damage immediately upon receipt. Packaging and inspection considerations for each flare are detailed in this section.

## 1. HOTSHOT FLARE

### a. Standard Packaging

- i. 10 Hotshot flares per box.
- ii. 40 boxes (400 flares) per case.



### b. Receiving Hot Shot Flares

- i. Inspect case packaging for damage.
- ii. Inspect for any sign of water or fluid contact.
- iii. If damage is suspected, open case and inspect individual flare boxes.
- iv. If boxes are crushed, cut or penetrated, open effected boxes and inspect individual flares.
  - 1) Caps and plugs should be intact. If a cap has been penetrated there is risk of loose internal start-powder being expelled from the flare. Do not remove the cap. Place the flare in a container (zip-lock bag recommended) and hold flare for disposal. Loose start-powder should be disposed of in a fire safe manner.
  - 2) Flares should be round. Visually inspect flare for distortion of cylindrical shape. Minor distortion can be ignored, as long as the distortion will not prevent insertion of the flare into the launcher.
  - 3) If flare has been crushed or penetrated, hold flare for disposal.
  - 4) If Hot Shot flares have gotten wet, simply allow the flares to dry and test launch a reasonable sample for ignition in a safe location. If flares fail to ignite, or will not fit in the launcher, hold back for disposal.

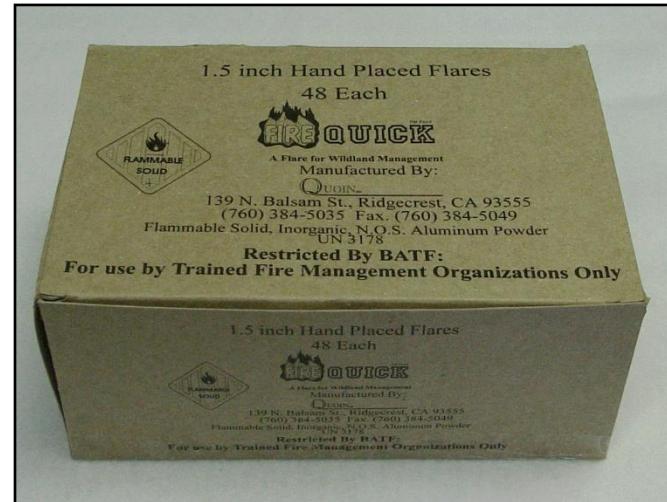
## 2. STUBBY FLARES

### STUBBY I & II FLARES (Original Stubby I flare – hand-throw only)

**NOTE:** The original Stubby I & II flares are no longer produced. However, since they may still be found in the field, their packaging information is provided.

#### a. Standard Packaging

48 Stubby flares per box.



### STUBBY II FLARE (Launch or Throw Stubby) →

#### a. Standard Packaging

- 12 Dual Stubby flares per box.
- 25 boxes (300 flares) per case.



### STUBBY III FLARE (Launch Only Stubby)

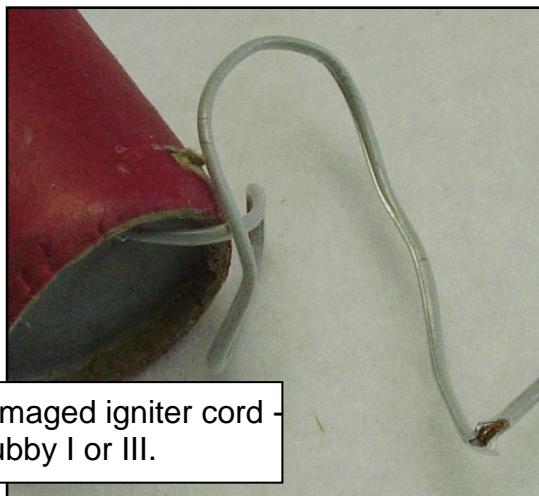
#### a. Standard Packaging

- 12 Dual Stubby flares per box.
- 25 boxes (300 flares) per case.



## b. Receiving Stubby Flares

- i. Inspect packaging for crushed or damaged boxes.
- ii. Inspect for any sign of water or fluid contact.
- iii. If damage is suspected, open box and inspect individual flares.
  - 1) Caps and bottoms should be intact. If a cap has been removed or damaged:
    - a) Remove cap and inspect the igniter cord on hand-throw Stubbies (I & II).
      - (i) If the igniter cord sleeve has been cut or damaged, do not issue to field.
    - b) On the Stubby II & III, inspect the covered igniter in center of flare for puncture or damage.
      - (i) If damage to the igniter tape cover is evident, a Stubby II flare can be tested for ignition by hand lighting and throwing but should NOT be fired from a launcher. Stubby III flares should be set aside for disposal – do NOT attempt to light. If loose start powder is evident, treat flare with caution – loose powder is friction sensitive and may pose a fire hazard.



Damaged igniter cord - Stubby I or III.



Stubby II or III damage to igniter cover. (Igniter cord removed for clarity)

- 2) Flares should be round. Visually inspect flare for distortion of cylindrical shape. Minor distortion can be ignored. Stubby II flares that no longer fit in the launcher are likely to still be good for hand throwing.
- 3) Shake flare to determine if core material is loose or broken. Minor loose particles are not a problem. Flares with major breaking or cracking may not ignite safely or may permit water damage and should be held back for disposal.



- 4) If Stubby I flares have gotten wet, simply allow the flares to dry and test a reasonable sample for ignition in a safe location. Chances are, the flare is still good. If a Stubby II or III flare has gotten wet, there is more likelihood of the ignition start powder being fouled. Try drying the flares thoroughly and testing them for ignition. If flares fail to ignite, hold back for disposal.

### 3. BIG SHOT AND CHUBBIE FLARES



#### a. Standard Packaging – Big Shot Flares

- i. 50 each Big Shot flares to a case.
- ii. Flares may be purchased individually if desired.



#### b. Standard Packaging – Chubbie Flares

- i. 75 each Chubbie flares to a case.
- ii. Flares may be purchased individually if desired.

**c. Receiving Big Shot or Chubbie Flares**

- i. Inspect case package for damage.
- ii. If damage is apparent, open case and inspect individual flares for damage.
  - 1) Caps and aluminum bottoms should be intact. If a cap has been removed or damaged:
    - a) Remove cap and inspect igniter cord.
    - b) If igniter cord has been cut or damaged, do not issue to the field.
  - 2) Flares should be round. Visually inspect flare for distortion of cylindrical shape. Minor distortion can be ignored if the core unit is intact.
  - 3) If flare appears to have been disfigured, shake flare to determine if core material is loose or broken. Minor loose particles are not a problem. Flares with major breaking, cracking may not ignite safely, may separate during ignition, or may permit water damage and should be held back for disposal.
  - 4) If Big Shot or Chubbie flares have gotten wet, allow the flares to dry and test a reasonable sample for ignition in a safe location. If flares fail to ignite, hold back for disposal.



# **FLARE STORAGE AND TRANSPORT**

# FLARE STORAGE / SAFETY / TRANSPORT

(Applies to all FireQuick flares)

## Field Storage and Safety

1. Maintain controlled access to flares.
2. Maintain flares in a cool, dry environment.
3. Protect exposed caps from damage or impact.
4. Do not store flares near flammable liquids or other flammable products.
5. Keep storage area free of spark or heat sources.
6. Do not allow smoking within 50 feet (15 m) of storage area.
7. Plan storage to allow for open burn-off of flares if accidental ignition occurs.
8. In case of smoke or fire in storage area:
  - a. Evacuate the area immediately, proceed upwind and assess the situation from a safe distance.
  - b. Remove containers from the area, if possible without risk.
  - c. Never attempt to remove flares if flare packaging is burning or if any sign of flare ignition is obvious.
  - d. If the flares or flare containers are burning, remove all personnel from the area, secure the scene and remain up-wind.
  - e. In the case of a small fire, attempt to extinguish by using dry chemical, CO<sub>2</sub>, sand, earth, flooding quantities of water, fog or regular foam.
  - f. In the case of a large fire, attempt to extinguish by using flooding quantities of water, fog or regular foam.
  - g. In the case of massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from the area and let the fire burn.



## CAUTION:

If using water to extinguish a flare fire, it is important to use FLOODING quantities. A burning flare produces superheated calcium sulfide (CaS), which reacts with water to produce hydrogen sulfide gas (H<sub>2</sub>S), hazardous to humans. Substantial quantities of water must be used to minimize fumes.

FireQuick flares have a self-contained source of oxygen. Once flares are ignited, most will burn underwater. Flooding a flare fire with water may cool other flares to limit the spread of fire.

## **Issuing and Security**

1. Tight physical control of the product is required.
  - a. Issue is restricted by ATF to “properly trained firefighting organizations”.
2. Beware of unqualified agents requesting live material.
3. Report any missing, lost or stolen flares immediately to the Manufacturer. This is a mandatory requirement. This product can be subverted to a destructive purpose. Federal regulations dictate reporting of missing hazardous materials.

## **Demobilization and Transport**

- 1) FireQuick flares are designated by the US Department of Transportation (DOT) as Flammable Solids, Class 4.1, UN3178. As such, they must be transported following applicable DOT regulations.
- 2) To move or ship flares by common carrier within the United States, flares must be packed and labeled as designated by the Federal Hazardous Materials Regulations (HMR), 49 CFR (Code of Federal Regulations) Parts 172 & 173. The original flare case packaging provided is in accordance with applicable regulations. If ANY part of the original packaging is removed, damaged, or otherwise altered, you must repackage or remark in order to ship. It is your responsibility to meet the DOT regulations for shipping. Call the Manufacturer for guidance if needed.
  - a) You must be properly certified to ship hazardous materials in order to provide FireQuick flares to a common carrier for shipping. You must also use only HAZMAT certified carriers. You cannot ship under Manufacturer's hazardous materials shipping certification.
  - b) FireQuick flares do not qualify for ORMD (misc. hazardous materials) in any quantity.
- 3) To move or ship flares by agency or personal vehicle:
  - a) Maintain flares in the original case shipping containers. Seal containers prior to transit.
  - b) FireQuick flares qualify to ship as a Limited Quantity and therefore are not subject to regular labeling or placarding requirements.
  - c) A manifest of flares and quantities should be maintained by the driver.
  - d) Flares should be transported directly and without delay to their storage destination.
  - e) Carry a dry chemical, CO<sub>2</sub>, water or foam extinguisher in the vehicle.
  - f) Do not transport unnecessary passengers.
  - g) In case of smoke or fire:
    - i) Evacuate vehicle, move upwind and assess situation.
    - ii) Isolate vehicle for ½ mile (800 m) if possible.
    - iii) Only remove containers if it is possible without risk.
    - iv) Follow firefighting measures described under flare storage.

## **Interior Storage and Safety**

- 1) Maintain controlled access to flares, locked storage is recommended.
- 2) Maintain flares in a cool, dry environment at temperature less than 150°F.
- 3) Protect exposed caps from damage or impact.
- 4) Do not store flares near flammable liquids or other flammable products.
- 5) Keep storage area free of spark or heat sources.
- 6) Do not allow smoking within 50 feet (15 m) of storage area.
- 7) Plan storage so that exit from the area would not be impaired if flares were to be accidentally ignited.
- 8) Plan storage so as to minimize spread to other key areas of facility.
- 9) In case of smoke or fire in storage area:
  - a) Evacuate the area immediately, call for help, and assess the situation from a safe distance.
  - b) Remove all personnel from the area and secure the scene.
  - c) Remove containers from the area if it is possible to do so without risk.
  - d) If flare packaging is burning, but flares have not ignited, immediately attempt to extinguish the fire using dry chemical, CO<sub>2</sub>, sand, earth, flooding quantities of water or regular foam.
  - e) If the flares have ignited, evacuate all personnel from the space.
    - i) All efforts made to rescue persons or protect property must be weighed against the possibility that you could become part of the problem. Remember, these flares burn at 4000°F (2200°C).
    - ii) If using water to extinguish a flare fire it is important to use FLOODING quantities. A burning flare produces superheated calcium sulfide (CaS), which reacts with water to produce hydrogen sulfide gas (H<sub>2</sub>S). This gas is hazardous to humans. Substantial quantities of water must be used to minimize fumes.
      - (1) Hydrogen sulfide gas smells like rotten eggs.
      - (2) The gas rapidly fatigues the sense of smell so you should not rely on the smell to determine the presence of gas.
      - (3) The gas is heavier than air, may travel along the ground, and distant ignition is possible.
    - iii) FireQuick flares have a self-contained source of oxygen. Once flares are ignited, they will burn underwater. Flooding a flare fire with water may cool other flares to limit the spread of fire.
  - f) If you decide to fight a fire involving the flares, the following approach is recommended:
    - i) In the case of a small fire, attempt to extinguish using dry chemical, CO<sub>2</sub>, sand, earth, flooding quantities of water, fog or regular foam.
    - ii) In the case of a large fire, attempt to extinguish using flooding quantities of water, fog or regular foam.
    - iii) In the case of massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from the area and let the fire burn.



# FIREQUICK FLARE DISPOSAL

# FLARE DISPOSAL

The information contained herein provides guidance that adheres to California and Federal regulations. Individual state requirements should be checked and adhered to for the appropriate state.

1. Disposing of FireQuick flares when required is not complicated.
  - a. **NEVER** throw a whole or partial flare away in the regular trash.
  - b. Recommended procedures should be followed closely to insure the safety of the operator as well as the environment.
  - c. FireQuick flares, in whole, are a hazardous waste due to potential flammability. When properly dismantled and prepared for disposal, the constituent materials do not require any special reporting, nor are there disposal site restrictions.
  - d. If you have large quantities of flares to dispose of, call the manufacturer for instruction.
2. Flares are typically dispositioned for disposal either due to damage or because the flare is a "dud". A dud flare is one that has failed to ignite or burn when fired in the field.
  - a. Damaged flares:
    - i. Flare has been crushed or broken.
    - ii. Flare has significant cracking of the core material.
    - iii. An internal part of the flare has become loose.
    - iv. The flare cap has been damaged and there is evidence of damage to the igniter cord or the safety fuse.
    - v. Flare has been saturated and it is evident that core material has been compromised.
  - b. Dud flares:
    - i. Igniter has failed and core material did not ignite.
    - ii. Incomplete burning of igniter cord or safety fuse.
    - iii. Initial ignition failed to burn flare significantly.
    - iv. Igniter set detached from flare during ignition and core material was not ignited.
3. It is appropriate to hold flares for batch disposal if convenient.
  - a. Always treat flares held for disposal as though they could ignite; follow the same safe storage instructions described in the Storage and Transport section of this workbook.
  - b. Flares held for disposal should be stored in non-flammable containers clearly marked as hazardous waste (flammable) and stored separately from other flare inventory.
  - c. Flares that have any igniter cord or fuse exposed should be protected so that there is no risk of ignition.

4. When preparing for disposal:

- a. NEVER conduct disposal activities indoors, in case of accidental ignition.
- b. ALWAYS have an appropriate extinguishing device close at hand.
- c. IF POSSIBLE, ground yourself for increased safety when conducting dismantling activities.
- d. DO NOT take short cuts!

5. Disposal Procedure:

a. **Hot Shot Flares**

Hot Shot flares must be disposed of by physical destruction.

- i. Completely immerse the flare in water and allow flare to soak for a minimum of 2 hours (longer if time allows). **Work with the flare while wet, as dry core dust is static sensitive and can be combustible.**
- ii. Using a rubber mallet on a not-static surface such as wood, crush the wet flare into small (less than 1") pieces, being careful not to smash the igniter cord. Keep any residual core dust distant from any potential spark hazard.
- iii. Once the igniter set can be removed, pull it loose from the core and burn it off in a safe location.
- iv. Mix the crushed core with equal parts of sand, seal in a bag, and dispose of with regular waste. Residual paper waste can be thrown out like regular trash.



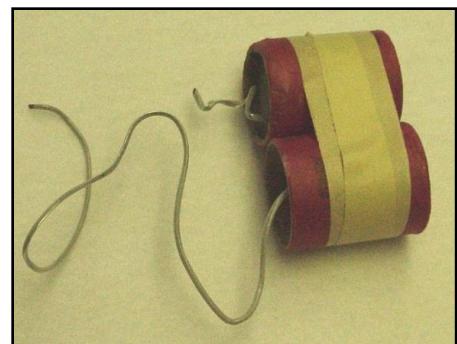
◀ Crush flare core using rubber mallet

Remove igniter assembly ▶



## b. Original Hand-throw Stubby I Flares

- i. Inspect flare for evidence of exposed igniter cord. Flares with igniter cord still protruding from the core material may be destroyed by fire or by inerting the flare through physical destruction.
- ii. To burn the flare off, leave any remaining igniter cord intact. Tape the flare for disposal to a good flare and ignite the good flare following the general operating procedures for Stubby flares described in this work book.
  - 1) Any residual materials left after burning may be swept up and disposed of with regular waste.
- iii. If burning the flare off is not practical, you may dispose of the flare through a destructive procedure that will inert the flare.
  - 1) First clip the igniter cord off of the flare using a pair of sharp edged wire cutters. The cord should be flush to the core surface after removal.
  - 2) Light the unattached residual igniter cord and allow it to burn out.
- iv. Completely immerse the flare in water and allow it to soak for a minimum of 2 hours (longer if time allows). **Work with the flare while wet, as dry core dust is static sensitive and can be combustible.**
  - 1) Using a rubber mallet on a not-static surface such as wood, crush the wet flare into small (less than 1") pieces, being careful not to smash the igniter cord. Keep any residual core dust distant from any potential spark hazard.
  - 2) Once igniter assembly is visible, remove it and burn it off in a safe area.
  - 3) Mix the crushed core material with equal parts of sand, seal in a bag, and dispose of in regular waste. Residual paper may be thrown out like regular trash.



◀Snip cord close to core



▲Crush flare core using rubber

**c. Launch & Throw or Launch Only Stubby Flare (Stubby II – launch or throw)**

These Stubby flares should be disposed of by physical destruction.

- i. Inspect flare for evidence of exposed igniter cord or an intact central igniter assembly. Flares with igniter cord still protruding from the flare or an igniter assembly intact in the center of the flare must have the igniter assembly removed before destruction.
  - 1) Clip the igniter cord, if exposed, close to the flare core. This cord can be lit with a match and burned off away from other flammables. ▶



- 2) Penetrate the masking tape covering the igniter assembly in the center of the flare. On the launch-or-throw Stubby, remove the sealing washer. ▶



- 3) ◀ Holding over a paper bag or similar non-static container, shake loose start powder out of igniter assembly.

- 4) Mix the start powder with equal parts of sand and dispose of in regular waste.

- 5) Completely immerse the flare in water and allow it to soak for a minimum of 2 hours (longer of time allows). **Work with the flare while wet, as dry core dust is static and can combustible.**

- a) Using a rubber mallet on a not-static surface such as wood, crush the wet flare into small (less than 1") pieces. The core in the inner igniter tube should also be crushed. Keep any residual core dust distant from any potential spark hazard.
  - b) Once the igniter bag becomes visible, remove it and burn it off safely away from other flammables.
- 6) Mix the crushed core material with equal parts of sand, close into a bag and dispose of in regular waste.
    - a) Residual paper may be thrown out like regular trash.



#### d) Big Shot or Chubbie Flare

a) I nspect flare for evidence of exposed igniter cord or an intact central igniter assembly. Flares with igniter cord still protruding from the flare or an igniter assembly intact in the center of the flare must have the igniter assembly removed before full destruction.

(1) Pull the igniter cord away from the flare and clip as close to the core as possible. The removed cord can be lit with a match and burned off away from other flammables. ▶



(2) Completely immerse the flare core in water and allow it to soak for a minimum of 2 hours (longer if time allows). **Work with the flare while wet, as dry core dust is static sensitive and can be combustible.**

(3) The Big Shot and Chubbie flares have an imbedded igniter assembly that has to be broken free from the flare before full destruction. Keep in mind that the igniter cord is impact sensitive and can be ignited by a sharp blow between two hard surfaces. Also keep any residual core dust distant from any potential spark hazard.



(a) ◀Using a rubber mallet on a not-static surface such as wood, crush the wet flare core carefully until you can remove the inner igniter assembly.



b) When the igniter assembly can be removed, pull it out and separate it from the main flare body.▶

- c) The picture below depicts the igniter assembly in a Big Shot. The Chubbie igniter assembly is similar with a cord wrapped around a smaller black tube. Pull the gray igniter cord free from the masking tape and cardboard or black tube.▼



- d) Pull the igniter cord to one side. Use a rubber mallet on a non-sparking soft surface, such as wood, to crush the core sufficiently to pull the igniter bag free. Remember the igniter cord is impact sensitive, so use adequate caution with your tool during this process. Once the igniter bag and cord are removed, burn the igniter off by lighting the cord (NOT the bag) with a match a safe distance from any other flammables. When the bag ignites you can expect a brief spit and bright quick fire, no spraying.►
- 4) Using a rubber mallet on a non-sparking soft surface such as wood, continue to crush the wet flare material in both tubes into small (less than 1") pieces. Keep any residual core dust distant from any potential spark hazard.
- 5) Mix the crushed core material with equal parts of sand, seal in a bag, and dispose of in regular waste. Residual paper may be thrown out like regular trash.



### e) 2.5" Flares

- a) Inspect flare for evidence of exposed igniter cord or safety fuse. Flares with igniter cord or safety fuse still protruding from the flare must have the igniter assembly removed before destruction.
  - (1) Untwist or cut the small silver wire holding the safety fuse to the inner core tube.
  - (2) Pull firmly on the igniter set until it comes loose from the flare.
  - (3) Burn off the igniter set in a safe area.
  - (4) Pull the inner core from the flare and dispose of the outer tube and batting with regular trash.

**(5)** Completely immerse the flare core and the red tube with core in the bottom in water and allow it to soak for a minimum of 2 hours (longer if time allows). **Work with the flare while wet, as dry core dust may be combustible.**

  - (6) Using a rubber mallet on a not-static surface such as wood, crush the wet flare into small (less than 1"). Keep any residual core dust distant from any potential spark hazard.
  - (7) Mix the crushed core material with equal parts of sand, close into a bag and dispose of in regular waste.
  - (8) Residual paper may be thrown out like regular trash.





**FIREQUICK**  
**LAUNCHERS**

# **FireQuick Launchers**

Firequick Products, Inc. currently supports three in-service launchers; the original launcher (Launcher I), the first dual-launcher (Launcher II) and the most recent dual launcher (Launcher III). The Launcher I fires the Hotshot flare only, and the both dual launchers allow the user to fire the Hotshot flare as well as launch-able Stubby flares.

The Launcher I and II are no longer being manufactured and are no longer available for sale, however due to the life expectancy of a properly maintained launcher; they may be in the field for several more years. Therefore, the proper use and handling is covered in this section as well as for the Launcher III. Firequick Products will continue to provide repair services for all launchers.

**All FireQuick launchers have been inspected and confirmed by The United States Bureau of Alcohol, Tobacco and Firearms as “not a firearm as defined in 18 U.S.C. section 921(a)(3)”. This enables Firequick launchers to be purchased without any special permit or license and to be used by all types of fire crews.**

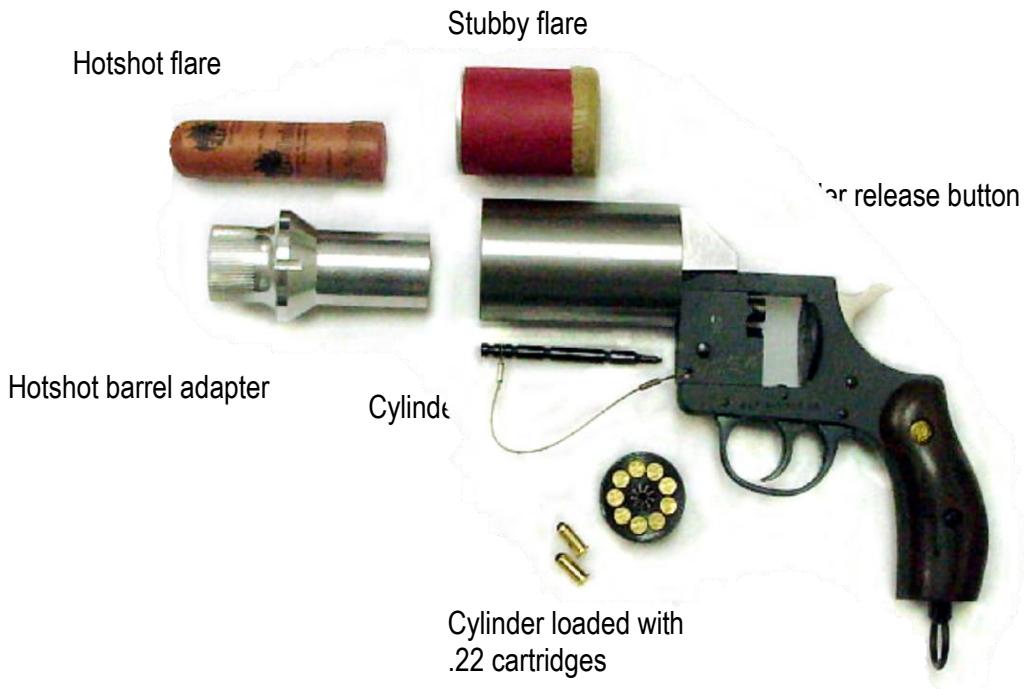
## **IMPORTANT NOTICE**

The FireQuick launchers are to be used ONLY to launch FireQuick flare products. Insertion or use of any other flare or other projectile other than an approved FireQuick launch-able flare OR use of any other cartridge, power load or other form of ammunition other than the recommended Winchester/Olin industrial loads in a FireQuick launcher releases Firequick Products, Inc. of all potential liability, voids user warranty, and may result in serious injury.

## FireQuick Launcher I (Hotshot Launcher)



## FireQuick Dual Launcher II



Cylinder loaded with  
.22 cartridges

# FireQuick Dual Launcher III



## 1. Product Specifications

- a) Firequick Products, Inc. patented design modified Starter Pistol
  - i) New England Firearms base – launcher I & II
  - ii) Alfa base – launcher III
- b) Cast ductile iron frame
  - i) Wood handle grip – launcher I & II
  - ii) Safety orange plastic or rubber grip – launcher III
- c) Stainless steel barrel.
  - i) Dual launcher has an aluminum barrel adapter (included).
- d) Steel cylinder
  - i) 9-round removable with single ejector pin– launcher I & II
  - ii) 6-round swing-out with all-in-one ejector – launcher III
- e) Double action firing sequence
- f) Effective Range:
  - i) Approximately 300-350 feet (90-107 m).
- g) Warranty by manufacturer: 1 year
- h) Routine cleaning and maintenance recommended.
- i) May be transported by air in checked luggage, if properly declared as a firearm.

## **1) Field Applications**

- a) Superior fire-starting performance than other ignition devices available in the field.
- b) Improves safety of crew initiating fire in wild land environment
  - i) Allows the user to create fire a safe distance away, out of the immediate fuel environment.
  - ii) Effectively start fires across rivers, ravines, up embankments, etc.
- c) The FireQuick launchers are to be used **ONLY** to launch FireQuick flare products.
- d) Effectively launch Hot Shot or Launch-able Stubby flares 300-350 feet, (90-107m).

## **2) Field Safety**

- a) Although not a firearm, **always** exercise the same safety precautions with a FireQuick launcher that you would with a handgun.
  - b) Always treat the launcher as though it were loaded. Do not place your finger in the trigger area until you are prepared to fire.
  - c) Always check the cylinder for cartridges when first handling the launcher.
  - d) Never transport or store the launcher in the loaded condition.
  - e) Always wear gloves, hearing, and eye protection when firing a FireQuick launcher.
  - f) Never use any other flare product in the launcher other than a FireQuick flare that has been designed, tested and approved for safe launcher application.
  - g) Exercise all safe use procedures for firing flares described in this Work Book.
- 3) **CAUTION:** If the launcher is fired without a flare in the barrel, a very high-pressure blast will be expelled. Anything within six inches of the front of the barrel may be damaged.

## **4) General Operating Procedure – Launcher I and II**

- a) Hold the launcher in the palm of your hand so that you do not drop the cylinder when you pull the release pin.
- b) Press the cylinder release button and pull the cylinder pin forward, allowing the cylinder to be removed from the launcher.
- c) Load the cylinder with # 6 (purple) industrial loads for the Hotshot flare and # 6 or # 7 loads for the launch-able Stubby flare. The loads are placed in the cylinder nose first. Be sure to press loads in completely against the load face surface. Number 5 loads (red) are acceptable substitutes for the Hotshot flare when number 6 loads are not available. # 5 loads may not penetrate the cap of the launch-able Stubby flare. You will lose distance using #5 loads.

- d) Replace the cylinder in the launcher. When replacing the cylinder, the ratcheted side, or the side that the cartridges load into, faces the rear of the launcher.
- e) Replace the cylinder pin in its slot and assure the pin is locked in place by attempting to remove the pin without pressing the release button.
- f) The launcher is fired by cocking the hammer and then pulling the trigger, or by simply pulling the trigger in the double-action mode.
- g) Once loaded:
  - i) **DO NOT** point the launcher at anything you do not want to destroy.
  - ii) **DO NOT** place your finger on the trigger until you are ready to fire.
- h) When unloading the launcher:
  - i) Remove the cylinder following the instructions listed above.
  - ii) Simply tip the cylinder to remove any unused cartridges into your hand.
  - iii) Use your cylinder pin to push out spent cartridges.
- i) It is recommended that you carry a spare cylinder with you in the field if you are using a Launcher I or II. This will prevent delay or inability to fire in case of a cylinder-related problem.
- j) Follow the safe use instructions presented earlier in this book for safe loading and firing of FireQuick flares.

## 5) General Operating Procedure – Launcher III

- a) Hold the launcher with the cylinder release button facing toward you and your fingers on the back of the cylinder.
- b) Press the cylinder release button and push the cylinder forward, allowing the cylinder to swing out from the launcher.
- c) Load the cylinder with # 6 (purple) industrial loads. **DO NOT** use # 7 (gray) loads in the Launcher III. You will damage the cylinder assembly and void the warranty. You will not experience distance loss in this launcher with a # 6 load.
  - i) The loads are placed in the cylinder nose first. Be sure to press loads in completely against the load face surface. Number 5 loads (red) are acceptable substitutes for the Hotshot flare when number 6 loads are not available. You will lose a small amount of distance using #5 loads.
- d) Push the cylinder firmly back in place. You will hear a definite click when the cylinder is properly in place.
- e) Assure the cylinder is in place by trying to push it out from the rear of the launcher without pressing the cylinder release pin.
- f) The launcher is fired by cocking the hammer and then pulling the trigger, or by simply pulling the trigger in the double-action mode.



- g) Once loaded:
  - i) **DO NOT** point the launcher at anything you do not want to destroy.
  - ii) **DO NOT** place your finger on the trigger until you are ready to fire.
- h) To unload the launcher:
  - i) Swing the cylinder out following the instructions above.
  - ii) Tip the launcher toward the grip to remove unspent cartridges into your hand.
  - iii) Press the cylinder pin firmly with your finger to eject all spent cartridges from the cylinder.
    - (1) If spent cartridges are difficult to remove, use an implement to more firmly press the cylinder pin. DO NOT hit the pin to attempt to remove cartridges. If you bend the pin your cylinder may not rotate properly during future firings.
  - i) Follow the safe use instructions presented earlier in this book for safe loading and firing of FireQuick flares.

## 6) Field Care:

- a) Regular maintenance and cleaning is recommended. Increase your cleaning regimen if you regularly use # 7 cartridges. DO NOT use # 7 cartridges in the Launcher III.
  - i) Always check the cylinder and insure the launcher is unloaded before beginning any maintenance or cleaning.
  - ii) Clean your launcher using a regular gun cleaning kit.
  - iii) Inspect your launcher as you clean. Check the launcher for worn parts, cracks, or other signs of excessive wear.
  - iv) Don't disassemble your launcher too far. For regular cleaning, limit disassembly to pulling the cylinder pin and removing the cylinder (launcher I and II). The Launcher III does not require any dismantling for routine cleaning.
  - v) Keep the barrel free from paint build-up by cleaning with Acetone and a stiff brush.
  - vi) Use gun solvent (Hoppe's #9 or similar) and wire brush to clean powder residue from cylinder openings. Loading and unloading industrial loads will be easier.
  - vii) Use gun solvent (Hoppe's #9 or similar) and a pipe cleaner to clean the gas port that leads from the cylinder area through the pistol block and into the barrel. Insert the cleaner as far as possible and rotate to remove possible buildup. This helps prevent blow-back of gases when firing rounds.
    - (1) An indicator that the gas port is fouled is evidence of "expanded" cartridge casings in the cylinder after firing. This is most common with the # 7 rounds.
  - viii) After cleaning, lubricate the launcher with gun oil before storing.
- b) Keep your launcher protected in a case or pouch to reduce risk of damage or unnecessary wear.
- c) Always store your launcher in the unloaded condition.

## **7) Standard Packaging**

- a) Launchers are packaged individually.
- b) The Launcher III comes in a plastic case and external cardboard box for shipping.
- c) Multiple launchers may be contained in larger shipping containers.



## **8) Receiving Launchers**

- a) Inspect packaging for damage.
- b) Open package and inspect launcher for damage.
- c) Insure all launcher components are present. The Launcher III comes with a Hotshot Barrel Adapter.
- d) Swing out the cylinder on the Launcher III and make sure cylinder rolls easily on its pin.
- e) Dry fire the launcher to insure the cylinder is rotating properly.
- f) Re-install the cylinder, re-oil launcher or wipe with an oily rag and replace in original packaging or some other protective gear.
- g) Damaged launchers should be returned to the manufacturer (Firequick Products, Inc.) for inspection and repair. Launcher repair forms are available at our website at [firequick.com](http://firequick.com).

## **LAUNCHER TRANSPORTATION / STORAGE / REPAIR**

### **1) Transportation**

- a) The FireQuick launcher is a tool. It is not a classified hazardous item or a firearm and is not subject to special transport regulations. There are no shipping restrictions on launchers; they may be shipped by common carrier or through the U.S. Post Office.
- b) Insure the launcher is unloaded prior to transport.
- c) The launcher should be cleaned, oiled and packaged or encased for transport.
- d) Launchers may be packaged with flares and/or with cartridges for regular transportation (not shipping) purposes. State and Federal regulations for transport of flares must be adhered to. You should **NEVER** pack flares with your launcher for transport by air. **YOU WILL BE SORRY!** Flares may be moved by air in cargo aircraft only and must be packed, labeled and marked in accordance with CFR 49 and applicable IATA regulations.
- e) When transporting a launcher by air:
  - i) **NEVER** attempt to transport the launcher in carry-on baggage – **YOU WILL BE SORRY!**
  - ii) The launcher must be contained in checked baggage. You should package your launcher as required by the airline you are using.
  - iii) Some airlines may require a locked container for the launcher.
  - iv) Typical requirements require separate packaging for cartridges.
  - v) You should declare the launcher as you would a firearm because of its appearance. The airlines require a declaration form to be completed.

### **2) Storage**

- a) Never store a launcher in the loaded condition.
- b) Launchers should be cleaned, oiled and stored in their original packaging or other protective container when possible. Avoid plastic bags.
- c) Control access to launcher inventory.

### **3) Warranty and Repair**

- a) Apparent launcher failures should be assessed before returning the launcher to the manufacturer for repair.

b) Troubleshooting considerations:

<b>Condition</b>	<b>Likely Problem</b>	<b>Recommendation</b>
Cartridge shells stick in cylinder, will not release with normal force	Over-pressured cartridge	Insure use of #6 cartridge or lower. Powers brand preferred. Call FQ for cylinder modification.
Flare expels, travels a good distance, but does not ignite.	Dud Flare	Test other flares in launcher to assess operation of launcher.
Flare expels, travels a very short distance.	Weak cartridge or improperly loaded flare.	Test other flares in launcher to assess operation of launcher.
Flare does not expel from the launcher.	Dud cartridge.	Fire next industrial load (cartridge).
Flare does not expel from the launcher after several shots.	Firing pin is damaged	Remove cylinder I or II: dry fire launcher and insure firing pin is visible during action. All launchers: observe rear casing of cartridge for evidence of firing pin strike.
Cylinder will not roll.	Burr on cylinder	Remove cylinder (I or II) and lightly sand ratcheted side to remove any burrs. Launcher III, cylinder pin may be bent, swing cylinder out and check.
Trigger catches or does not fire properly.	Launcher is dirty.	Clean launcher thoroughly, dry fire to check trigger operation
Trigger catches or does not fire properly.	Firing pin is damaged or burrs on cylinder.	Follow recommendations above
Cartridge shells are difficult to expel.	Gas port has become fouled with soot. Cartridge over-expands.	Remove cylinder and clean gas port using gun solvent and a pipe cleaner.
Flare is difficult to insert into launcher.	Paint build-up in launcher barrel.	Use a lacquer thinner and small wire brush to clean the barrel.

- c) If a launcher is still failing after troubleshooting:
  - i) Call Manufacturer (Firequick Products) for advice.
  - ii) Return launcher to Manufacturer for warranty repair or repair quotation. Include a filled-out Launcher Repair Form that is found on our Firequick Products website.
  - iii) If you take your launcher to a qualified gunsmith for repair, **DO NOT** have components replaced by a gunsmith unless the parts are specified New England Firearms or Alpha direct replacements. Firequick Products will not warranty these repairs.
  - iv) Prior distributors, including Wildfire Environmental Co. are **NOT** authorized to repair or to broker repairs on Firequick Products Launchers.

**Note:** repair by **ANY** another entity than manufacturer will void your warranty.





## ORDERING AND CONTACT INFORMATION

Please feel free to call the manufacturer with any questions, comments, concerns or great stories about the FireQuick flare systems. Your input guides our development efforts. Our goal is to continually provide professional firefighters with high quality, high performance tools designed specifically for their needs.

**Manufacturer:** **Firequick Products, Inc.**

**Mailing:** **P.O. Box 910  
Inyokern, CA 93527**

**Deliveries:** **1137 Red Rock Inyokern Rd.  
Inyokern, CA 93527**

**Phone:** **760-377-5766**

**Fax:** **760-377-5761**

**Website:** **[firequick.com](http://firequick.com)**

**E-mail:** **[admin@firequick.com](mailto:admin@firequick.com)**

### **TO PLACE AN ORDER, PLEASE CALL PHONE NUMBER ABOVE.**

Firequick Products, Inc. does not currently employ any outside distributors. In the past we used a qualified distributor, Wildfire Environmental Company. We terminated the services of Wildfire in 2010 and at the time they were still holding inventory. As of this printing, any remaining inventory has exceeded the recommended shelf-life and is expired. Be aware that older flares may have a higher failure rate and may exhibit unexpected performance characteristics including high-energy movement beyond the normal safety zone. Exercise caution!





# Large Format Launcher and Flare System

## USER TRAINING WORKBOOK ADDENDUM

Addendum date: May 2022

Supersedes: May 2019

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# Large Format Launcher



**Introduction** - The Firequick Large-Format Launcher (LFL) was designed in response to firefighters' reported need to launch a powerful flare like a Big Shot or Chubbie further than the typical 75-100 ft. throwing range. The result is the new Firequick Products Large-Format Launcher (deemed a non-firearm by BATF&E, letter available on request from Firequick or downloadable at [www.firequick.com](http://www.firequick.com)). Based on an M4 rifle platform that helps the user withstand the recoil from propelling larger flares into the field, the LFL uses .223/5.56 blanks and will launch its corresponding flare approximately 200 ft. The partner flare to the LFL is the yellow Large-Format Flare, created to balance weight, flight and fire performance. It includes a delayed remote ignition, with a simple and reliable design, and an added tension dot on the side of flare to keep the flare from falling easily out of the barrel if the barrel is pointed down.

**Important Note** - While a Big Shot or Chubbie flare with the cap removed, and adequately round-shape will fit and may be fired from the LFL, they are not recommended. They are more expensive due to longer ignition cords, are not designed for use with the LFL, and you will likely see degradation of ignition reliability and distance. In addition, they may easily slide out of the LFL barrel when tilted downward, so they may pose a potential safety hazard. Firequick warranties the performance of the Large-Format Flare in the Large-Format Launcher, and does not implicitly or explicitly warranty the performance of Chubbies or Big Shots fired from the Large-Format Launcher.

**All Firequick launchers have been inspected and confirmed by The United States Bureau of Alcohol, Tobacco and Firearms as “not a firearm as defined in 18 U.S.C. section 921(a)(3)”.** This enables Firequick launchers to be purchased without any special permit or license and to be used by all types of fire crews.

## 1. Product Specifications

- a) Firequick Products, Inc. patented design based on M4 rifle platform.
- b) Aluminum upper receiver, lower receiver, and barrel, with modified steel gas port.
- c) Slam-Fire operation with extended B.A.D. lever instead of an internal trigger-group.
- d) Effective Range
  - i) Approximately 200 feet if aimed for distance, which may be foreshortened if desired by aiming “flat”.
- e) Warranty by Manufacturer: 1 year
- f) Routine Maintenance and Cleaning is highly recommended
- g) May be transported by air in checked luggage, if properly declared similar to a firearm.

## 2. Field Applications

- a) Superior fire-starting performance to other ignition devices available in the field
- b) Improves safety of crew while initiating fire in wild land environment
  - i) Allows the user to create fire from a safe distance away, out of the immediate environment.
  - ii) Effectively starts fires across rivers, ravines, up embankments, etc.
- c) The Firequick Large-Format Launcher should be used ONLY to launch Firequick flare products designed for remote ignition.
- d) Effectively launch Large-Format Flares (yellow tube) approximately 200 ft.

## 3. Field Safety

- 1) Although not a firearm, **always** exercise the same safety precautions with a Firequick launcher that you would with a handgun or rifle.
- 2) Always treat the launcher as though it were loaded. Do not place your finger in the trigger area until you are prepared to fire.
- 3) Always check the chamber for cartridges when first handling the launcher.
- 4) Never transport or store the launcher in the loaded condition.
- 5) Always wear gloves, hearing, and eye protection when firing a Firequick launcher.
- 6) Never use any other flare product in the launcher other than a Firequick flare that has been designed, tested and approved for safe launcher application.
- 7) Exercise all safe use procedures for firing flares described in this Workbook.

**CAUTION:** If the launcher is fired without a flare in the barrel, a very high-pressure blast will be expelled. Anything within six inches of the front of the barrel may be damaged.

#### **4. Standard Packaging**

- a) Launchers are packaged individually.
- b) The Large-Format Launcher is packaged in a soft case and external cardboard box for shipping.

#### **5. Receiving Launchers**

- a. Inspect packaging for damage.
- b. Open package and inspect launcher for damage.
- c. Insure all launcher components are present. The Large-Format Launcher comes standard with 1 modified “blank” 10-round magazine.
- d. Test Slam-Fire operation and dry fire without magazine or any blanks, getting a feel for how much resistance is required to “hang” bolt carrier on the bolt catch. Replace in original packaging or some other protective gear.
- e. Damaged launchers should be returned to the manufacturer (Firequick Products, Inc.) for inspection and repair. Launcher repair forms are available at our website at [firequick.com](http://firequick.com).

#### **6. Transporting Launchers**

- a) The Firequick launcher is a tool. It is not a classified hazardous item or a firearm and is not subject to special transport regulations. There are no shipping restrictions on launchers; they may be shipped by common carrier or through the U.S. Post Office.
  - i) Insure the launcher is unloaded prior to transport.
  - ii) The launcher should be cleaned, oiled and packaged or encased for transport.
  - iii) Launchers may be packaged with flares and/or with cartridges for regular transportation (not shipping) purposes. State and Federal regulations for transport of flares must be adhered to. You should **NEVER** pack flares with your launcher for transport by air. **YOU WILL BE SORRY!** Flares may be moved by air in cargo aircraft only and must be packed, labeled and marked in accordance with CFR 49 and applicable IATA regulations.
  - iv) When transporting a launcher by air: **NEVER** attempt to transport the launcher in carry-on baggage – **YOU WILL BE SORRY!**
  - v) The launcher must be contained in checked baggage. You should package your launcher as required by the airline you are using.

- vi) Some airlines may require a locked container for the launcher.
- vii) Typical requirements require separate packaging for cartridges.
- viii) You should declare the launcher as you would a firearm because of its appearance. The airlines require a declaration form to be completed.

## 7. Storage

- a) Never store a launcher in the loaded condition.
- b) Launchers should be cleaned, oiled and stored in their original packaging or other protective container when possible. Avoid sealed polyethylene bags.
- c) Control access to launcher inventory.

## 8. Warranty and Repair

- a) Apparent launcher failures should be assessed before returning the launcher to the manufacturer for repair.
- b) Troubleshooting considerations:

Condition	Likely Problem	Recommendation
Cartridge difficult to extract from Launcher	Brass fragments or other residue is built up in Launcher	Clean with Hoppe's #9 gun solvent or similar, especially in chamber.
Flare expels, travels a good distance, but does not ignite	Dud Flare	Move on to the next flare carefully following all steps and making sure that the flare is inserted correctly into barrel
Flare travels a very short distance	Weak cartridge or improperly loaded flare	Try next cartridge and check that flare is inserted correctly
Launcher fires immediately after releasing charging handle	Charging handle was not pulled back far enough to engage bolt catch correctly	Drop magazine, empty Launcher clean bolt carrier group with Hoppe's #9 gun solvent, and practice dry firing to feel the slam-fire mechanism catch correctly.

The firing pin does not fire the round, especially the first round or last round in the magazine	M200 blank rounds may need to be tapped to the back of the magazine since there is not a bullet keeping them to the rear of the magazine	Drop magazine and tap the entire magazine towards the back to ensure that all rounds are seated to the rear of the magazine (on an item soft enough to not ignite a primer).
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- c) If a Large-Format Launcher is still failing after troubleshooting, or if the operator has any questions, please contact Firequick Products for advice.
- d) Return Large-Format Launcher to Manufacturer (Firequick Products) for warranty repairs, inspection of problem, or estimate for repair. Please include a filled-out Launcher Repair Request Form, which is found on our Firequick Products website.
- e) If you take your launcher to a qualified gunsmith for repair, do not have components replaced by the gunsmith unless they meet or exceed mil-spec. requirements. Firequick Products will not warranty Launchers repaired by a third party once the repairs have been performed.
- f) Prior distributors, including Wildfire Environmental Co. are not authorized to repair or broker repairs on Firequick Products Launchers.

Note: repair by ANY other entity than Firequick Products will void your warranty and any future claims to actions or recourse.

## 9. General Operating Instructions

- a) Always wear appropriate protective gear including gloves, eye protection, and ear protection.
- b) General firearm safety rules should be observed. Always keep the barrel of the launcher pointed away from yourself and others.
- c) **The LFL is designed for firing blanks only.** Never use any ammunition or blanks other than Federal, Lake City M200 Mil Spec .223/5.56 NATO blanks (head-stamped LC with year of manufacture) with crimped purple/black tip. Attempting to use or fire live ammunition, other than blanks, through the Large-Format Launcher will cause catastrophic failure of the Launcher, and a high risk of personal injury. Use of unapproved blanks may result in damage to the LFL, and could cause extreme difficulty in removing spent cartridges, risking further damage in the extraction process. Using any cartridges other than the approved Federal, Lake City M200 blank cartridges will void the manufacturer warranty.

- d) Do not install a loaded magazine into LFL until preparing for firing operations. Make sure that bolt is closed before loading magazine. When ready, push magazine firmly into well, feeling it lock into place. Once loaded, **do not pull charging handle until ready to fire**.
- e) Take note of location of magazine release button, because if there is any problem with the bolt, charging handle, or unfired cartridge, the first step is to press the magazine release button, drop the magazine, and clear the chamber before proceeding.
- f) Please note that “dry-fire” practicing the following operation steps of the slam-fire mechanism is recommended without a loaded magazine to build familiarity with using the bolt release lever (trigger to fire) as a release for the slam-fire bolt.
- g) For live firing; load magazine, place yellow, Large-Format Flare in LFL, labeled-end in first. The flare should be seated into the barrel until it rests lightly on the inner barrel (**Do not use excess force**). If any flare has too much resistance going into the barrel, it is probably out of round or the rim is oversized, and may not be used safely in the Launcher. **Do not** force any flare into the barrel that has more than gentle resistance or tension. If a Large-Format Flare requires excess force to seat in barrel, try removing tension dot on side of flare.



- h) Once the flare is loaded and seated in the barrel, begin charging the slam-fire action of the LFL. Only perform this step when you are ready to perform a live firing. Consider the Large-Format Launcher “live” once the charging operation has begun, always keeping it pointed in a safe direction. To perform this action safely;
  - i) Brace the butt-stock of the LFL firmly against your hip, while holding the launcher in a safe firing direction in case of a slip or misfire.
  - ii) While holding the launcher with the serial number facing towards the ground, hold the trigger lever (attached to the bolt catch) against the body of launcher (lower receiver) with your thumb or index finger. While it is pressed in, pull firmly on the charging handle, feeling the bolt “catch” and lock back.



- iii) Once the bolt is locked back on the bolt catch, push the charging handle into its forward latched position (you will hear and feel a click). The trigger lever will now be the trigger/firing mechanism and any sudden shock, vibration, or disturbance may cause it to fire accidentally. Carefully shoulder the LFL and proceed with firing operation by alerting anyone around by yelling "Firing!" and pressing down on the trigger lever. Expect recoil that is similar to a 12-gauge shotgun.
- i) The Large-Format Launcher will propel the yellow Large-Format Flare approximately 200 ft depending on elevation of the barrel. Aiming the barrel about 15-20 degrees **above** "flat" or parallel to the ground. Depending on terrain, wind, and desired performance, this can be altered for maximum range. The Large-Format Flare can be fired "flat" or at 0 degree elevation to decrease landing distance, but increase the burn and forward motion energy on the ground.
- j) Preparing for the next firing operation is very similar. Load the flare, secure the butt-stock against your hip, press the trigger lever, pull the charging handle, which may have a little more resistance as it is now ejecting the spent cartridge, let the bolt "catch", push forward the charging handle, shoulder the LFL, push on the trigger lever to allow the bolt to slam-fire the round, and start over again. If there is any problem, drop the magazine, check the chamber, clearing if necessary, and start over. This keeps the bolt from picking up a second cartridge and trying to slam it into the first.
- k) **Correct order of operating procedures is critical for safety. Never charge (bolt in the open/rear position) the slam-fire bolt before placing a flare in the barrel.** Installing the flare into the barrel is highly dangerous with a charged slam-fire mechanism ready to release. If this condition occurs by accident, do the following:
  - i. Drop the magazine
  - ii. Check the chamber to make sure that there is nothing in the chamber

- iii. Point in a safe direction and release the trigger lever, **starting the firing process over**

This is the only safe way to proceed if mistakenly charged before the flare is loaded.

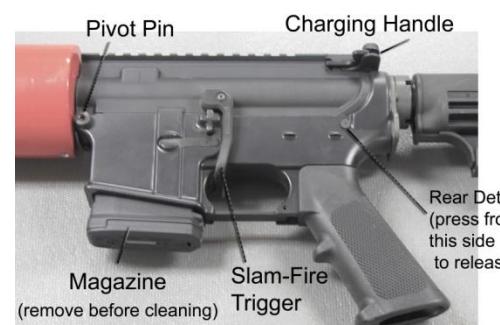
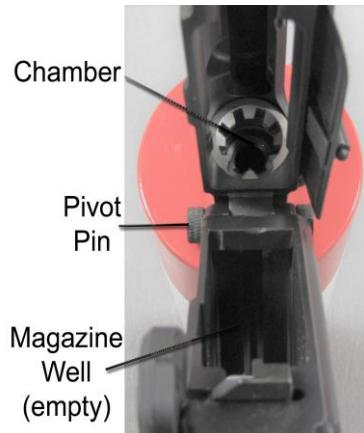
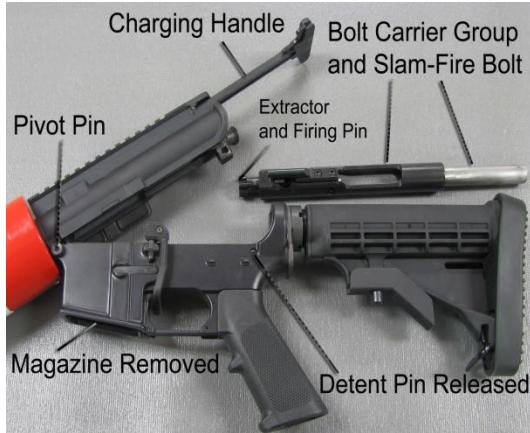
- l) After firing operations are completed, remove the Firequick LFL blank magazine, check that there is nothing in the chamber, gently allow the slam-fire bolt to close, and store the magazine disconnected from launcher.
- m) Regular inspection, cleaning and maintenance should be performed to keep the launcher in good working condition.

## 10. Cleaning

- a) Ensure Launcher is unloaded before beginning any maintenance or cleaning by removing magazine and checking chamber.
- b) Inspect your Launcher for worn components, cracks, or other signs of excessive wear.
- c) Release the rear detent pin (the front detent/pivot pin is not intended to be released).
- d) Release charging handle and remove charging handle, bolt carrier group, and slam-fire bolt together, as a group, in the same action, by pulling back on the charging handle.
- e) Use Hoppe's #9 gun solvent and nylon-bristled receiver brush to clean receiver, bolt carrier group, especially the teeth of the extractor to remove brass and residue, the firing pin, and the slam-fire bolt.
- f) Use gun solvent and 12-gauge bore to clean inside rear of bolt carrier group.
- g) Use gun solvent and .38 bore brush, then .22 bore brush to clean inside of chamber.
- h) For cleaning inside the barrel, including around gas port, use gun solvent and cotton bore mop to clean out residue.
- i) Use a small amount of lubricating oil and lightly coat each area that was cleaned, especially anywhere that solvent was used.
- j) Wipe down launcher with silicone cloth, anywhere accessible inside and out, and reassemble launcher.

- k) Use the Rem Oil Wipes to quickly lubricate the Launcher between cleanings.

### Parts Diagram for Cleaning Operations



## Large Format (LF) Flares



### 1.Specifications:

- Size: 2.5" (63.5 mm.) diameter x 5" (127 mm) high
- Weight: Each flare weighs approx. 12 oz. (.34 kg)
- Range: Approximately 200 ft
- Fuse Delay for Remote Ignition: 1-2 seconds
- Sprays 4000°F material (2200°C) for appx. 5 seconds
- Residual material includes minimal quantities of vermiculite

## **2. Appearance:**

- a) Yellow tube with full metal cap on the bottom and a paper seal on the top.  
The paper seal-end goes in the launcher first. Also, near the bottom, a tension – dot should be applied to keep the flare from falling out of the barrel if tilted down.

## **3. Field Applications**

- a) Very effective component in backfiring operations. May be Launched a good distance to create fire safely away from the user.
- b) Very effective in fuels greater than flash and fuels with low canopy.
- c) Create fire in high humidity conditions or in damp fuels.
- d) Allows Launching of larger flare across ravines, rivers, and other hazards.

## **4. Field Care and Safety Considerations**

- I. Flares should be kept packaged when not in use.
  - i. Reduced risk of core or igniter damage.
- m. Keep flares dry.
  - i. Damp flares that are dried thoroughly are likely to ignite, but may have altered performance
  - ii. If the igniter set has gotten wet, the start powder will be fouled and the flare might not light.
- n. Protect flare caps from damage or penetration. Keep flares capped until ready to use.
  - i. Exposed igniter cord substantially increases the likelihood of accidental ignition.
    - 1) Igniter cord lights at much lower temperature than the flare core (800°F/ 525°C). The cord will light with a match. Once lit, the flare cannot be manually extinguished. Retreat immediately at least 40 feet (12.2 m) for safety.
    - 2) Igniter cord is pressure, friction, and spark sensitive and can be ignited by a sharp blow if struck between two hard surfaces.
  - o. Store uncapped flares away from other flare inventory.

**REMEMBER:** One goes – they all go!

- p. NEVER light a flare in a confined or closed space for any reason.
- q. **NEVER uncap and light a Large-Format Flare by hand.** The single igniter is too short for safe hand-ignition and serious injury may result if attempted.
- r. **NEVER** use the Large-Format Flare in any firing or launching device that has not been designed and tested by Firequick specifically for use with this Firequick product.

- s. Do not place or use flares near flammable liquids or unintended heat sources.
- t. Do not allow smoking within 50 feet (15 m).
- u. Before lighting or launching flares, plan your “exit strategy”
  - 1) Where is the designated safety zone?
  - 2) What will I do if I drop the flare or place the flare in an undesirable location?
  - 3) What will I do if I create an early ignition situation?
- v. If flares staged for use become involved in a fire, evacuate the area immediately.
  - i. Move upwind, and then determine your best course of action.
  - ii. Follow the fire management procedures detailed in the Storage and Transport section of this workbook.

## 5. General Instructions for Use

- a) The Large-Format Launch-Only Flare is intended only for use with the Firequick Products Large-Format Launcher, and should **never** be lit by hand. There is inadequate delay in the igniter to safely dispose of the flare by hand if lit. **DO NOT** break or remove the seal on the end of the flare or attempt use with another device.
- b) Use only **Federal / Lake City M200 5.56/.223 blanks** in the Firequick Large-Format Launcher. Any other cartridge may damage launcher. To verify, look for the “LC” head-stamp and crimped tip with purple/black paint.
- c) **Before** charging the slam-fire mechanism on the launcher, place the flare **labeled-end first** into the barrel. Push the flare using gentle pressure until seated against inner barrel. Do not remove felt tension dot on outside of flare unless trouble-shooting a flare that fits too tightly in the barrel.
- d) Handle the launcher like it is live throughout the slam-fire charging process, **always pointing the launcher in a safe direction**. Once charged, aim 0-15 degrees above “flat” depending on desired performance and distance and release slam-fire trigger mechanism.
- e) The Flare should travel approximately 200 ft. if aimed for optimal distance and travel energetically 25-50 ft. on level ground, while jetting material that burns at approximately 4,000° F. Always plan appropriate safety distances.

## 6. Potential Field Failures:

- a) Firequick flares have an intended 95% ignition rate, so field failures should not be excessive. If a Large-Format Flare does fail, the most common failures include:
  - i) Launcher fires and flare travels expected distance but does not light.

- 1) Bad igniter set fails to ignite or transition to delay train.
  - 2) Delay train fails transition to main core.
  - 3) Igniter disengages from flare.
- ii) Flare expels from launcher and travels a short distance, may or may not light.
    - 4) Weak cartridge (industrial load).
    - 5) Improperly loaded flare.
- iii. Flare does not light or expel from the launcher after pulling trigger.
    - 1) Dud cartridge; prepare to launch and fire the next cartridge to confirm.
    - 2) Firing pin is damaged.
      - a) Remove the flare and the magazine. Dry fire the launcher, re-install magazine with cartridges, and fire the Launcher without a flare.
      - b) Remove cartridges and replace with new. Reload and fire.
- b) Other firing failures may relate to the launcher. Refer to the Launcher section of this workbook for review.
- 
- c) When a flare fails after ignition:
    - iv. Do not approach the flare if there is other fire near the flare.
    - v. Do not approach the flare until several minutes have elapsed after firing.
    - vi. Do not attempt to reuse or relight the flare, as the fused time delay has been compromised.
  - vii. Dispose of the flare as described in Section 9 of this workbook.

**Stay safe and have a great season!**

For questions or updates regarding this flare system, visit [www.firequick.com](http://www.firequick.com), or call:



760-377-5766  
1-855-FPI-FIRE (374-3473)