5.1 Firing Equipment

Put the flame of the fusee at the base of the vegetation
- It will ignite and carry fire in the fuel bed more effectively
- Use the wand not your back

 Fusees
- Used to ignite fine fuels
  - Grass
  - Forest litter
- Characteristics
  - Light weight
  - Portable
  - Produces a 2-4” flame
  - Suitable for small projects
  - Readily available
  - Available in 5 to 30 minute burn times
  - Wands can be assembled
  - Not the same as road flares; do not burn as hot or as long
  - Classified as a flammable solid

 Hand Firing Devices

 Drip Torch
- Characteristics
  - Capable of handling most firing operations
  - Used to ignite all fuel types
    - Forest litter
    - Grass
    - Brush
    - Ladder fuels
    - Heavy fuels
  - Easily Carried on engines and utility vehicles
5.1 Firing Equipment
June 14, 2018

Know your torch

2 Safety Features
- Fuel Trap: prevents flashback into the tank
- Check Valve: (in the tank cover) 2nd level of protection against flashback

Liquid fuel device
- Fill only ¾ full
- 2 parts diesel fuel
- 1 part gasoline
- Fuel classified as a combustible liquid

In ideal condition and used correctly, a drip torch can last up to 1 hour or 1 mile

Possible problems
- Defective vent
- Improper mix
- Poor gasket seal

Fuel may "spurt" out of spout in hot conditions or if the torch is over fueled.
Always manage the drip torch
- While in use
- Setting down the torch
- While re-fueling

The Terra Torch requires separate and specific training prior to use.
5.1 Firing Equipment

June 14, 2018

Terra Torch (cont.)

- Trailer mount
- Skid Mount

Used when other ignition devices are ineffective
- Range up to 100 feet
- Requires specialized training
- Requires crew of 2 to 3 personnel

Fuel is a mixture of alumagel/surefire and gasoline
- Dispenses fuel under pressure through a hand held nozzle
- Classified as a flammable liquid

Radiant heat
- Additional PPE for thermal protection

Mixing Fuel

Hand Thrown Flares

- 4 inch and 2 inch Flares
- Used in all fuel types
- Follow manufacturer’s recommendations for use

Characteristics
- Fuse burn time 30 to 40 seconds
- Flare burn time 10 seconds at 4,000°F
- Ignited material covers 15 to 25 foot diameter
- Classified as a flammable solid

“Big Shot”

“Chubba”

“Stubby”
5.1 Firing Equipment

Hand Thrown Flares “Chubbie”
- Characteristics
  - Fuse burn time 10 to 15 seconds
  - Flare burn time 5 seconds at 4,000°F
  - Ignited material covers 5-6 foot diameter
  - Classified as a flammable solid

Hand Thrown Flares “Stubby”
- Characteristics
  - Hand thrown or launched with Fire Quick II and III
  - Fuse burn time 10 to 15 seconds
  - Flare burn time 5 seconds at 4,000°F
  - Ignited material covers 5-6 foot diameter
  - Classified as a flammable solid

Hand Thrown Flares (cont.)

IGNITION DEVICES USED WITH AIRCRAFT

Helitorch
- Used in all fuel types
  - Can ignite fuels with high fuel moisture
  - Capable of burning standing fuel and continuous ground fuels

Helitorch (cont.)
- Produces large amounts of fire in a short period
5.1 Firing Equipment

June 14, 2018

- Requires less time to initiate than a helitorch
- To be effective, requires light fuels

Dispersal rates can be varied by:
- Aircraft speed
- Altitude
- Machine dispersal rate