

Read the [Introduction](#) for more information on these standards, including where to direct comments, questions, and recommendations. As new items are introduced, current items are discontinued, and/or health and safety issues arise, these standards will be revised to provide updated information. Sort by Update Date to view recent changes.

## Shroud – Face & Neck, Wildland Firefighter's

NFES Status

Active

NFES #

001274

Category

PPE

Updated

Mon, 05/01/2017 - 12:00

Storage and Shelf Life Checks

None

## Initial Inspection/Disposal Criteria

1. Inspect for holes, cuts, tears, or torn seams. Inspect for color change (yellow to white/pink) caused by exposure to heat. Dye sublimation is the result of heat baking the dye out of the fabric. Areas of fabric with dye sublimation do not affect the performance of the shirt. Charring (hard brittle fabric that will then form a hole) in association with sublimation will decrease the performance of the fabric and the item should be disposed of.
2. Return to stock if item has no damage, is clean and in unused condition.
3. Refurbish if item can be laundered and is repairable.
4. Dispose of item if not economical to repair.

## Refurbishing Procedures

### **A. Cleaning - DO NOT USE BLEACH TO CLEAN FABRIC.**

1. Follow the cleaning procedures described in the publication, [Nomex®- Aramid Fiber -Laundering Guide \(H71603\)](#).

Additional information can be obtained by calling DuPont at 1-800-453-8527 or by writing:

DuPont Advanced Fibers Systems

Chestnut Run Plaza

Laurel Run Building

Wilmington, DE 19880-0705

2. Abbreviated washing procedures from above publication:

- a. “Garments of NOMEX® should be washed separately from other articles to avoid contamination with lint of flammable fibers.”
  - b. “Tests show that formulations designed for use at a temperature of 140 °F (60 °C) or less – such as high-surfactant, low-alkalinity products - adequately clean NOMEX® and provide the best fabric color retention.”
  - c. “For heavily stained and oily garments of NOMEX®, a higher temperature wash formula may be required for adequate cleaning.”
  - d. “Garments made of NOMEX® must be adequately rinsed to remove residual wash chemicals.”
  - e. “In some instances, tumble dry conditioning is the only finishing necessary for garments of NOMEX®.”
  - f. “...dry cleaning is an alternative method of removing heavy soil and may be preferable to repeated high-temperature washing.”
3. If items are taken to vendor laundry facilities for refurbishment; ensure that they receive a copy of this refurbishment standard. The laundry facility must satisfy both--the requirements as set by the manufacturer specification and the agreement made with the local agency.

## **Nomex® Clothing Exposed to Poison Oak/Ivy/Sumac**

### **RESEARCH**

At the request of the National Support Cache Refurbishing Standards Committee, MTDC researched the practicality of laundering Nomex firefighting clothing that has been contaminated with urushiol oil (the allergen to which the body reacts) from poison oak/ivy/sumac exposure. Current cache practices range from normal washing procedures to disposal of shirts and pants that have known urushiol contamination.

A search of on-line sources didn't produce any special care instructions beyond normal laundering. Some examples:

- “All clothing should be laundered, and everything else that may be contaminated with urushiol should be washed thoroughly.” American Academy of Dermatology.
- “...be sure to wash your clothing promptly with detergent...” Mayo Clinic.
- “Washing clothes with ordinary laundry soap will remove urushiol.” Missouri Department of Conservation.

A phone conversation with Daniel Boelman, RN, BSN, Customer Service Manager with Zanfel Laboratories, Inc. also indicated no special treatment beyond normal laundering. (Zanfel produces a commercially available poison oak/ivy cream). Mr. Boelman recommended using vinyl gloves when handling contaminated clothing.

On 11/17/2008 the Forest Service filed a SAFENET Supplemental Corrective Action concerning poison oak reactions experienced by firefighters during the 2008 fire season in California. In that posting, it is recommended that “All clothing and equipment should be laundered immediately ...A degreaser was recommended for helping to remove urushiol from clothing and equipment.”

### **RECOMMENDATION**

MTDC recommends that fire clothing contaminated with urushiol oil be cleaned following normal Nomex laundering procedures. Extra care should be exercised when handling the contaminated clothing. Clearly labeled plastic bags should be used to separate contaminated clothing from other returned clothing. Commercial laundry

personnel should wear long sleeves and vinyl gloves when handling contaminated clothing and dispose of any bags used for transporting the clothes to the laundering facility. As an extra precaution, supply cache and laundry workers could apply an over-the-counter skin-barrier product that contains bentoquatam (such as Ivy Block or Stokoguard) before handling contaminated clothing. Bentoquatam helps prevent urushiol from penetrating the skin. After exposure, workers' clothes should be washed and gloves disposed of.

## **B. Repair**

1. Mend holes, cuts, tears, burns, and torn seams by darning, patching, or by duplicating the original item.
2. Replace damaged hook and pile fasteners with tape of same length, width, and quality.

## **C. Testing for Performance**

1. Inspect items after laundering to ensure all foreign matter and stains have been removed. If items fail second inspection spot treat problem areas or remove item from service.
2. Test all replacement hook and pile fasteners after repairing.

## **D. Repackaging**

1. Lay the Shrouds with inside up, fold both sides towards middle, and fasten hook and pile fasteners.
2. Recommended 20 EA in NFES #008064 carton (10" x 8" x 6").

## **Shelter – Practice, Large, Complete, M2002**

NFES Status

Active

NFES #

002799

Category

PPE

Updated

Mon, 05/01/2017 - 12:00

Storage and Shelf Life Checks

None

## **Initial Inspection/Disposal Criteria**

1. Inspect the following:
  - a. Shelter
    - i. Unfold practice fire shelter and inspect for tears, ripped seams, punctures.
  - b. Polyvinyl Bag
    - i. Inspect the bag for cracks or tears.

- ii. Inspect Velcro pull strip for damage.
  - c. Case
    - i. The M-2002 Practice Fire Shelter Carrying Case is orange in color.
    - ii. Inspect for cuts, tears, torn seams or flap.
    - iii. Ensure that an M-2002 instruction sheet and a folding instruction are in the Use Instructions Pocket on the front.
    - iv. Check that there are two belt clips and that they are in working condition.
  - d. Liner
    - i. Inspect the plastic liner for cracks or tears.
2. Return to stock if item is in new condition and does not require refurbishment.
  3. Refurbish by patching rips or tears. Velcro strips on bag can be replaced if damaged or missing.
  4. Dispose of practice fire shelter if damage is extensive and cannot be recycled.

## Refurbishing Procedures

### A. Cleaning

1. Clean the Shelter Package with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

### B. Repairs

1. Repair as needed and economically feasible.
2. Replace Use Instructions with M-2002 Use Instructions, English/Spanish and/or Folding Instructions with M-2002 Folding Instructions if missing or damaged.
3. Replace belt clips and polyvinyl bag if missing or damaged.
4. Mark each shelter as Practice Only shelter.

### C. Testing for performance

- None

### D. Repackaging

1. 10 each of NFES [#002679](#), [#002798](#), [#002799](#) in NFES #008059 carton (24" x 12.5" x 10").
2. All other items, local cache option.

## Shelter – Practice, Large (Shelter Only), M2002

NFES Status  
Active

NFES #  
002798  
Category  
PPE  
Updated  
Mon, 05/01/2017 - 12:00  
Storage and Shelf Life Checks  
None

## Initial Inspection/Disposal Criteria

1. Inspect the following:
  - a. Shelter
    - i. Unfold practice fire shelter and inspect for tears, ripped seams, punctures.
  - b. Polyvinyl Bag
    - i. Inspect the bag for cracks or tears.
    - ii. Inspect Velcro pull strip for damage.
  - c. Case
    - i. The M-2002 Practice Fire Shelter Carrying Case is orange in color.
    - ii. Inspect for cuts, tears, torn seams or flap.
    - iii. Ensure that an M-2002 instruction sheet and a folding instruction are in the Use Instructions Pocket on the front.
    - iv. Check that there are two belt clips and that they are in working condition.
  - d. Liner
    - i. Inspect the plastic liner for cracks or tears.
2. Return to stock if item is in new condition and does not require refurbishment.
3. Refurbish by patching rips or tears. Velcro strips on bag can be replaced if damaged or missing.
4. Dispose of practice fire shelter if damage is extensive and cannot be recycled.

## Refurbishing Procedures

### A. Cleaning

1. Clean the Shelter Package with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

### B. Repairs

1. Repair as needed and economically feasible.
2. Replace Use Instructions with M-2002 Use Instructions, English/Spanish and/or Folding Instructions with M-2002 Folding Instructions if missing or damaged.
3. Replace belt clips and polyvinyl bag if missing or damaged.
4. Mark each shelter as Practice Only shelter.

## C. Testing for performance

- None

## D. Repackaging

1. 10 each of NFES #[002679](#), #[002798](#), #[002799](#) in NFES #008059 carton (24" x 12.5" x 10").
2. All other items, local cache option.

## Shelter – Practice (Shelter Only), M-2002

NFES Status

Active

NFES #

002679

Category

PPE

Updated

Mon, 05/01/2017 - 12:00

Storage and Shelf Life Checks

None

— *PRACTICE ONLY* —

## Initial Inspection/Disposal Criteria

1. Inspect the following:
  - a. Shelter
    - i. Unfold practice fire shelter and inspect for tears, ripped seams, punctures.
  - b. Polyvinyl Bag
    - i. Inspect the bag for cracks or tears.
    - ii. Inspect Velcro pull strip for damage.
  - c. Case
    - i. The M-2002 Practice Fire Shelter Carrying Case is orange in color.
    - ii. Inspect for cuts, tears, torn seams or flap.
    - iii. Ensure that an M-2002 instruction sheet and a folding instruction are in the Use Instructions Pocket on the front.
    - iv. Check that there are two belt clips and that they are in working condition.
  - d. Liner
    - i. Inspect the plastic liner for cracks or tears.
2. Return to stock if item is in new condition and does not require refurbishment.
3. Refurbish by patching rips or tears. Velcro strips on bag can be replaced if damaged or missing.
4. Dispose of practice fire shelter if damage is extensive and cannot be recycled.

# Refurbishing Procedures

## A. Cleaning

1. Clean the Shelter Package with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

## B. Repairs

1. Repair as needed and economically feasible.
2. Replace Use Instructions with M-2002 Use Instructions, English/Spanish and/or Folding Instructions with M-2002 Folding Instructions if missing or damaged.
3. Replace belt clips and polyvinyl bag if missing or damaged.
4. Mark each shelter as Practice Only shelter.

## C. Testing for performance

- None

## D. Repackaging

1. 10 each of NFES #[002679](#), #[002798](#), #[002799](#) in NFES #008059 carton (24" x 12.5" x 10").
2. All other items, local cache option.

## [Shelter – Practice - Complete, M2002](#)

NFES Status

Active

NFES #

002678

Category

PPE

Updated

Mon, 05/01/2017 - 12:00

Storage and Shelf Life Checks

None

## Initial Inspection/Disposal Criteria

1. Inspect the following:
  - a. Shelter
    - i. Unfold practice fire shelter and inspect for tears, ripped seams, punctures.
  - b. Polyvinyl Bag
    - i. Inspect the bag for cracks or tears.
    - ii. Inspect Velcro pull strip for damage.
  - c. Case
    - i. The M-2002 Practice Fire Shelter Carrying Case is orange in color.
    - ii. Inspect for cuts, tears, torn seams or flap.
    - iii. Ensure that an M-2002 instruction sheet and a folding instruction are in the Use Instructions Pocket on the front.
    - iv. Check that there are two belt clips and that they are in working condition.
  - d. Liner
    - i. Inspect the plastic liner for cracks or tears.
2. Return to stock if item is in new condition and does not require refurbishment.
3. Refurbish by patching rips or tears. Velcro strips on bag can be replaced if damaged or missing.
4. Dispose of practice fire shelter if damage is extensive and cannot be recycled.

## Refurbishing Procedures

### A. Cleaning

1. Clean the Shelter Package with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

### B. Repairs

1. Repair as needed and economically feasible.
2. Replace Use Instructions with M-2002 Use Instructions, English/Spanish and/or Folding Instructions with M-2002 Folding Instructions if missing or damaged.
3. Replace belt clips and polyvinyl bag if missing or damaged.
4. Mark each shelter as Practice Only shelter.

### C. Testing for performance

- None

### D. Repackaging

1. 10 each of NFES [#002679](#), [#002798](#), [#002799](#) in NFES #008059 carton (24" x 12.5" x 10").
2. All other items, local cache option.



# Shelter – Fire, Large Size, Complete, M2002

NFES Status

Active

NFES #

000975

Category

PPE

Updated

Sun, 05/01/2022 - 12:00

Storage and Shelf Life Checks

None

## Initial Inspection/Disposal Criteria

1. Inspect the following:

a. Shelter – **Do not open polyvinyl liner for inspection.**

- i. Large size fire shelters were not produced until after 2006, so [NWCG Equipment Advisory 22-03](#) does not apply.
- ii. Check to ensure that the bag has been modified to include small slits under the pull tabs as per [NWCG Equipment Advisory 21-01](#). Retro fitted bags will have an orange dot sticker on the bag. New bags will have the slits and no sticker.
- iii. Inspect polyvinyl bag for cuts, puncture, or torn seams. If the bag has any anomaly that may affect the integrity of the bag or the shelter, remove shelter from service.
- iv. Inspect that the red pull rings are unbroken and the quick-opening tear strip is sealed to the bag the entire length and is unbroken. Dispose of shelters with damaged or missing red tear strip.
- v. Look through bag at the shelter for tears in shelter material along seams. If any tears are evident in the shelter material or polyvinyl bag, or if significant gray discoloration of the interior of the polyvinyl bag has obscured interior inspection, remove shelter from service and dispose.
- vi. Further inspection should include identifying PVC bags which have unreinforced yellow pull tabs. Per [Cache Memo #07-4](#) “Polyvinyl Bag Retrofit” Some shelters may have a glued webbing reinforcement visible on the PVC bag yellow pull strap. Any shelter lacking webbing reinforcement (glued or stitched) should be removed from service.
- vii. Fire shelters lacking any label inside of the PVC bag should be removed from service.

b. Carrying Case

- i. Inspect for cuts, tears, torn seams or flaps.
- ii. Ensure that M-2002 Use Instructions (English on one side, Spanish on the other) are in the Use Instructions pocket on the front.
- iii. Check for two belt clips and ensure they are working properly.

c. Liner

- i. Inspect the polyvinyl liner for cracks or tears.
- ii. Return to stock if item shows no sign of use.
- iii. Refurbish, clean only.

- iv. Dispose of item if any damage. Any doubt as to the condition to the shelter, REMOVE FROM SERVICE.
- ii. Return to stock if item is new or like new, passes inspection, and does not require refurbishment.
- iii. Refurbish if item passes inspection but light cleaning is required.
- iv. Dispose of item if it fails inspection.
  - a. Shelters that show signs of damage can be used as practice shelters. Clearly identify each as PRACTICE ONLY. This item may be used for practice when clearly marked as practice only.

## Refurbishing Procedures

### A. Cleaning

**Do not open polyvinyl liner for refurbishment.**

1. Clean the Shelter, Case, and Liner with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

### B. Repair

- None

### C. Testing for performance

- None

### D. Repackaging

1. 10 each of NFES #[000925](#), #[000975](#), #[000926](#), #[000973](#) in NFES #008059 carton (24" x 12.5" x 10").
2. 100 each of NFES #[000927](#) in suggested NFES #002006 carton (23" x 19" x 10").

Reference

[T&D Tech Tips Fire Shelter inspection Guide and Rebag Direction](#)

[What's New with the New Generation Fire Shelter](#)

[Cache Memo #04-1 "New Generation Fire Shelter Retrofit Plan"](#)

[Cache Memo #07-4 "Polyvinyl Bag Retrofit"](#)

[Cache Memo #09-3 "Re-Bagging New Generation Fire Shelters"](#)

[Fire Shelter and Personal Protective Equipment Subcommittee](#)

## Shelter – Fire, Large (Shelter Only), M2002

NFES Status

Active

NFES #

000973

Category

PPE

Updated

Sun, 05/01/2022 - 12:00

Storage and Shelf Life Checks

None

## Initial Inspection/Disposal Criteria

1. Inspect the following:
  - a. Shelter – **Do not open polyvinyl liner for inspection.**
    - i. Large size fire shelters were not produced until after 2006, so [NWCG Equipment Advisory 22-03](#) does not apply.
    - ii. Check to ensure that the bag has been modified to include small slits under the pull tabs as per [NWCG Equipment Advisory 21-01](#). Retro fitted bags will have an orange dot sticker on the bag. New bags will have the slits and no sticker.
    - iii. Inspect polyvinyl bag for cuts, puncture, or torn seams. If the bag has any anomaly that may affect the integrity of the bag or the shelter, remove shelter from service.
    - iv. Inspect that the red pull rings are unbroken and the quick-opening tear strip is sealed to the bag the entire length and is unbroken. Dispose of shelters with damaged or missing red tear strip.
    - v. Look through bag at the shelter for tears in shelter material along seams. If any tears are evident in the shelter material or polyvinyl bag, or if significant gray discoloration of the interior of the polyvinyl bag has obscured interior inspection, remove shelter from service and dispose.
    - vi. Further inspection should include identifying PVC bags which have unreinforced yellow pull tabs. Per [Cache Memo #07-4](#) “Polyvinyl Bag Retrofit” Some shelters may have a glued webbing reinforcement visible on the PVC bag yellow pull strap. Any shelter lacking webbing reinforcement (glued or stitched) should be removed from service.

- vii. Fire shelters with a yellow re-bag label or lacking any label inside of the PVC bag should be removed from service.
2. Return to stock if item is new or like new, passes inspection, and does not require refurbishment.
3. Refurbish if item passes inspection but light cleaning is required.
4. Dispose of item if it fails inspection.
  - a. Shelters that show signs of damage can be used as practice shelters. Clearly identify each as PRACTICE ONLY. This item may be used for practice when clearly marked as practice only.

# Refurbishing Procedures

## A. Cleaning

Do not open polyvinyl liner for refurbishment.

1. Clean the Shelter with a damp cloth.

## B. Repair

- None

## C. Testing for performance

- None

## D. Repackaging

1. 10 each of NFES #[000925](#), #[000975](#), #[000926](#), #[000973](#) in NFES #008059 carton (24" x 12.5" x 10").
2. 100 each of NFES #[000927](#) in suggested NFES #002006 carton (23" x 19" x 10").

## Shelter – Fire, Complete, M2002

NFES Status

Active

NFES #

000925

Category

PPE

Updated

Thu, 06/01/2023 - 12:00

Storage and Shelf Life Checks

None

# Initial Inspection/Disposal Criteria

1. Inspect the following:
  - a. Shelter – **Do not open polyvinyl liner for inspection.**
    - i. Fire shelter manufactured prior to 2006 should be removed from service as per [NWCG Equipment Advisory 22-03](#). This can be determined by either a white or pink colored paper insert label inside of the polyvinyl chloride bag.
    - ii. Check to ensure that the bag has been modified to include small slits under the pull tabs as per [NWCG Equipment Advisory 21-01](#). Retro fitted bags will have a yellow dot sticker on the bag. New bags will have the slits and no sticker.
    - iii. Inspect polyvinyl bag for cuts, puncture, or torn seams. If the bag has any anomaly that may affect the integrity of the bag or the shelter, remove shelter from service.
    - iv. Inspect that the red pull rings are unbroken and the quick-opening tear strip is sealed to the bag the entire length and is unbroken. Dispose of shelters with damaged or missing red tear strip.
    - v. Look through bag at the shelter for tears in shelter material along seams. If any tears are evident in the shelter material or polyvinyl bag, or if significant gray discoloration of the interior of the polyvinyl bag has obscured interior inspection, remove shelter from service and dispose.
    - vi. Further inspection should include identifying PVC bags which have unreinforced yellow pull tabs. Per [Cache Memo #07-4](#) “Polyvinyl Bag Retrofit” Some shelters may have a glued webbing reinforcement visible on the PVC bag yellow pull strap. Any shelter lacking webbing reinforcement (glued or stitched) should be removed from service.
    - vii. Fire shelters lacking any label inside of the PVC bag should be removed from service.

## Carrying Case

- i. Inspect for cuts, tears, torn seams or flaps.
  - ii. Ensure that M-2002 Use Instructions (English on one side, Spanish on the other) are in the “Use Instructions” pocket on the front.
  - iii. Check for two belt clips and ensure they are working properly.
- b. Liner
    - i. Inspect the polyvinyl liner for cracks or tears.
    - ii. Return to stock if item shows no sign of use.
    - iii. Refurbish, clean only.
    - iv. Dispose of item if any damage. Any doubt as to the condition to the shelter: **REMOVE FROM SERVICE.**
2. Return to stock if item is new or like new, passes inspection, and does not require refurbishment.
  3. Refurbish if item passes inspection but light cleaning is required.
  4. Dispose of item if it fails inspection.
    - a. Shelters that show signs of damage can be used as practice shelters. Clearly identify each as **PRACTICE ONLY**. This item may be used for practice when clearly marked as practice only.

# Refurbishing Procedures

## A. Cleaning

## **Do not open polyvinyl liner for refurbishment.**

1. Clean the Shelter, Case, and Liner with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

## **B. Repair**

- None

## **C. Testing for performance**

- None

## **D. Repackaging**

1. 10 each of NFES [#000925](#), [#000975](#), [#000926](#), [#000973](#) in NFES #008059 carton (24" x 12.5" x 10").
2. 100 each of NFES [#000927](#) in suggested NFES #002006 carton (23" x 19" x 10").

### Reference

[T&D Tech Tips Fire Shelter Inspection Guide and Rebag Direction](#)

[What's New with the New Generation Fire Shelter](#)

[Cache Memo #04-1 "New Generation Fire Shelter Retrofit Plan"](#)

[Cache Memo #07-4 "Polyvinyl Bag Retrofit"](#)

[Cache Memo #09-3 "Re-Bagging New Generation Fire Shelters"](#)

[Fire Shelter and Personal Protective Equipment Subcommittee](#)

## **Shelter – Fire (Shelter Only), M2002**

NFES Status

Active

NFES #

000926

Category

PPE

Updated

# Initial Inspection/Disposal Criteria

1. Inspect the following:
  - a. Shelter – **Do not open polyvinyl liner for inspection.**
    - i. Fire shelters manufactured prior to 2006 should be removed from service as per [NWCG Equipment Advisory 22-03](#). This can be determined by either a white or pink colored paper insert label inside of the polyvinyl chloride bag.
    - ii. Check to ensure that the bag has been modified to include small slits under the pull tabs as per [NWCG Equipment Advisory 21-01](#). Retro fitted bags will have a yellow dot sticker on the bag. New bags will have the slits and no sticker.
    - iii. Inspect polyvinyl bag for cuts, puncture, or torn seams. If the bag has any anomaly that may affect the integrity of the bag or the shelter, remove shelter from service.
    - iv. Inspect that the red pull rings are unbroken and the quick-opening tear strip is sealed to the bag the entire length and is unbroken. Dispose of shelters with damaged or missing red tear strip.
    - v. Look through bag at the shelter for tears in shelter material along seams. If any tears are evident in the shelter material or polyvinyl bag, or if significant gray discoloration of the interior of the polyvinyl bag has obscured interior inspection, remove shelter from service and dispose.
    - vi. Further inspection should include identifying PVC bags which have unreinforced yellow pull tabs. Per [Cache Memo #07-4](#) “Polyvinyl Bag Retrofit” Some shelters may have a glued webbing reinforcement visible on the PVC bag yellow pull strap. Any shelter lacking webbing reinforcement (glued or stitched) should be removed from service.
    - vii. Fire shelters with a yellow re-bag label or lacking any label inside of the PVC bag should be removed from service.
  2. Return to stock if item is new or like new, passes inspection, and does not require refurbishment.
  3. Refurbish if item passes inspection but light cleaning is required.
  4. Dispose of item if it fails inspection.
    - a. Shelters that show signs of damage can be used as practice shelters. Clearly identify each as PRACTICE ONLY. This item may be used for practice when clearly marked as practice only.

## Refurbishing Procedures

### A. Cleaning

**Do not open polyvinyl liner for refurbishment.**

1. Clean the Shelter with a damp cloth.

### B. Repair

- None

## C. Testing for performance

- None

## D. Repackaging

1. 10 each of NFES #[000925](#), #[000975](#), #[000926](#), #[000973](#) in NFES #008059 carton (24" x 12.5" x 10").
2. 100 each of NFES #[000927](#) in suggested NFES #002006 carton (23" x 19" x 10").

## Liner – Fire Shelter, M2002, Carrying Case

NFES Status

Active

NFES #

000928

Category

PPE

Updated

Mon, 05/01/2017 - 12:00

Storage and Shelf Life Checks

None

## Initial Inspection/Disposal Criteria

1. Inspect the following:
  - a. Shelter – **Do not open polyvinyl liner for inspection.**
    - i. Inspect polyvinyl bag for cuts, puncture, or torn seams. If the bag has any anomaly that may affect the integrity of the bag or the shelter, remove shelter from service.
    - ii. Inspect that the red pull rings are unbroken and the quick-opening tear strip is sealed to the bag the entire length and is unbroken. Dispose of shelter with damaged or missing red tear strip.
    - iii. Look through bag at shelter for tears in shelter material along seams. If any tears are evident in the shelter material or polyvinyl bag, or if significant gray discoloration of the interior of the polyvinyl bag has obscured interior inspection, remove shelter from service and dispose.
    - iv. Further inspection should include identifying PVC bags which have unreinforced yellow pull tabs. Per [Cache Memo #07-4](#) "Polyvinyl Bag Retrofit" Some shelters may have a glued webbing reinforcement visible on the PVC bag yellow pull strap. Any shelter lacking webbing reinforcement (glued or stitched) should be removed from service.



- v. Fire shelters with a yellow re-bag label or lacking any label inside of the PVC bag should be removed from service.
  - b. Carrying Case
    - i. Inspect for cuts, tears, torn seams or flaps.
    - ii. Ensure that M-2002 Use Instructions (English on one side, Spanish on the other) are in the “Use Instructions” pocket on the front.
    - iii. Check for two belt clips and ensure they are working properly.
  - c. Liner
    - i. Inspect the polyvinyl liner for cracks or tears.
    - ii. Return to stock if Item shows no sign of use.
    - iii. Refurbish, clean only. iv. Dispose of item if any damage. Any doubt as to the condition to the shelter, REMOVE FROM SERVICE.
2. Return to stock if item is new or like new, passes inspection and does not require refurbishment.
  3. Refurbish if item passes inspection but light cleaning is required.
  4. Dispose of item if it fails inspection.
    - a. Shelters that show signs of damage can be used as practice shelter. Clearly identify each as PRACTICE ONLY, This item may be used for practice when clearly marked, as practice only.

## Refurbishing Procedures

### A. Cleaning

**Do not open polyvinyl liner for refurbishment.**

1. Clean the Shelter, Case, and Liner with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

### B. Repair

- None

### C. Testing for performance

- None

### D. Repackaging

1. 10 each of NFES [#000925](#), [#000975](#), [#000926](#), [#000973](#) in NFES #008059 carton (24” x 12.5” x 10”).
2. 100 each of NFES [#000927](#) in suggested NFES #002006 carton (23” x 19” x 10”).

## Helmet – Safety, Plastic, w/Chin Strap

NFES Status

Active

NFES #

000109

Category

PPE

Updated

Thu, 03/01/2018 - 12:00

Storage and Shelf Life Checks

Yes

Storage and Shelf Life Procedure

Inspect annually for service life compliance.

## Initial Inspection/Disposal Criteria

**Note: National Incident Support Caches consider helmets a consumable item. Helmets returned to caches removed from their original packaging will be considered used and will not be refurbished or reissued. Helmets that have been issued but not removed from their original packaging will be subject to the Wildland Firefighter's Helmet Serviceability Guide and Inspection process below to determine serviceability.**

### 1. Wildland Firefighter's Helmet Serviceability Guide:

- a. Has it been more than 10 years since the helmet's date of manufacture (DOM)? If yes then remove from service. If it is less than 10 years since DOM, inspect the helmet.
- b. Helmet is less than 10 years from DOM: Inspect the helmet using inspection criteria in #2. Does the helmet pass inspection? If yes, return to stock. If no, remove from service.

### 2. Inspection

The shell should be inspected routinely for dents, cracks, nicks, gouges, and any damage that might reduce protection. Any helmet that shows signs of worn or damaged parts should be removed from service immediately.

The shell material may be degrading if the shell becomes stiff, brittle, faded, or appears dull or chalky. With further degradation, the shell's surface may flake or delaminate. A hardhat should be replaced at the first sign of any of these conditions.

1. Compress the shell from both sides about 1 inch with your hands and release the pressure without dropping the shell. The shell should return to its original shape quickly, exhibiting elasticity. Compare the elasticity with that of a new shell. If the shell being tested does not have as much elasticity as the new shell, or if the shell cracks, it should be replaced immediately.
2. Inspect the suspension system closely for cracks, cut or frayed shell straps, torn headband or size adjustment slots, loss of pliability, or other signs of wear. Remove and replace any suspension that is damaged.
3. Inspect for cracks, chips in shell, scuff marks and discoloration, and if so dispose of.
4. Ensure that all attachment clips are present (chin strap, headlamp, liner, neck and face shroud).
5. Inspect for markings, drawings or labels, if any dispose of.

6. All certification labels (ANSI, etc.) must be present in helmet, if not dispose of.  
See also: [Inspection Guidelines: From Your Hardhat: Inspection and Maintenance 0267 2331](#). Missoula, MT: U.S. Department of Agriculture, Forest Service, Missoula Technology and Development Center. 4p.
7. Return to Stock if helmet complies with the *Wildland Firefighter's Helmet Serviceability Guide* and passes initial inspection.
8. Refurbish helmet if it complies with the *Wildland Firefighter's Helmet Serviceability Guide* the passes initial inspection but requires cleaning and or repair.
9. Dispose of helmet if it fails inspection or the *Wildland Firefighter's Helmet Serviceability Guide*.

## Refurbishing Procedures

### A. Cleaning

- Wash with soap and water, rinse, and air dry.

### B. Repair

1. Replace with new liner and new chin strap.
  - Bullard helmet (NFES #007287) use liner NFES #002025 – [Bullard Personal Protective Equipment](#)
  - Mine Safety Appliances (MSA) helmets (NFES #000109) use liner NFES #007036 – [MSA Safety Equipment](#)
2. Attach front 2 suspension clips to helmet to ensure proper fit.
3. Add or replace reflective strips.
4. Add or replace Velcro strips
5. Velcro strips 1½” x 2¼” and placed at center at rear of helmet and 9½” around curvature of helmet on each side.
6. The adhesive used shall be approved by the manufacturer for use on the helmet.

### C. Testing for performance

- None

### D. Repackaging

- Local cache option.

Reference

**Velcro available from:**

Textrol Systems Inc.,  
435 Meadow Lane, Carlstadt, NJ 07072  
Phone: 800-624-8746  
Part #193973 (Part B-male)

Image

ETC helmet serviceability guide showing action needed.

## Helmet – Cap Style, Yellow, Bullard 911C

NFES Status

Active

NFES #

007287

Category

PPE

Updated

Thu, 03/01/2018 - 12:00

Storage and Shelf Life Checks

Yes

Storage and Shelf Life Procedure

Inspect annually for service life compliance.

## Initial Inspection/Disposal Criteria

**Note: National Incident Support Caches consider helmets a consumable item. Helmets returned to caches removed from their original packaging will be considered used and will not be refurbished or reissued. Helmets that have been issued but not removed from their original packaging will be subject to the Wildland Firefighter's Helmet Serviceability Guide and Inspection process below to determine serviceability.**

1. Wildland Firefighter's Helmet Serviceability Guide:
  - a. Has it been more than 10 years since the helmet's date of manufacture (DOM)? If yes then remove from service. If it is less than 10 years since DOM, Inspect the helmet.
  - b. Helmet is less than 10 years from DOM: Inspect the helmet using inspection criteria in #2. Does the helmet pass inspection? If yes, return to stock. If no, remove from service.
2. Inspection

The shell should be inspected routinely for dents, cracks, nicks, gouges, and any damage that might reduce protection. Any helmet that shows signs of worn or damaged parts should be removed from service immediately.

The shell material may be degrading if the shell becomes stiff, brittle, faded, or appears dull or chalky. With further degradation, the shell's surface may flake or delaminate. A hardhat should be replaced at the first sign of any of these conditions.

1. Compress the shell from both sides about 1 inch with your hands and release the pressure without dropping the shell. The shell should return to its original shape quickly, exhibiting elasticity. Compare the elasticity with that of a new shell. If the shell being tested does not have as much elasticity as the new shell, or if the shell cracks, it should be replaced immediately.
2. Inspect the suspension system closely for cracks, cut or frayed shell straps, torn headband or size adjustment slots, loss of pliability, or other signs of wear. Remove and replace any suspension that is damaged.
3. Inspect for cracks, chips in shell, scuff marks and discoloration, and if so dispose of.
4. Ensure that all attachment clips are present (chin strap, headlamp, liner, neck and face shroud).
5. Inspect for markings, drawings or labels, if any dispose of.
6. All certification labels (ANSI, etc.) must be present in helmet, if not dispose of.  
See also: Inspection Guidelines: [From Your Hardhat: Inspection and Maintenance 0267 2331](#). Missoula, MT: U.S. Department of Agriculture, Forest Service, Missoula Technology and Development Center. 4p.
7. Return to Stock if helmet complies with the *Wildland Firefighter's Helmet Serviceability Guide* and passes initial inspection.
4. Refurbish helmet if it complies with the *Wildland Firefighter's Helmet Serviceability Guide* the passes initial inspection but requires cleaning and or repair.
5. Dispose of helmet if it fails inspection or the *Wildland Firefighter's Helmet Serviceability Guide*.

## Refurbishing Procedures

### A. Cleaning

- Wash with soap and water, rinse, and air dry.

### B. Repair

1. Replace with new liner and new chin strap.
  - Bullard helmet (NFES #[007287](#)) use liner NFES #002025 – [Bullard Personal Protective Equipment](#)
  - Mine Safety Appliances (MSA) helmets (NFES #[000109](#)) use liner NFES #007036 – [MSA Safety Equipment](#)
2. Attach front 2 suspension clips to helmet to ensure proper fit.
3. Add or replace reflective strips.
4. Add or replace Velcro strips
5. Velcro strips 1½” x 2¼” and placed at center at rear of helmet and 9½” around curvature of helmet on each side.

6. The adhesive used shall be approved by the manufacturer for use on the helmet.

## C. Testing for performance

- none

## D. Repackaging

- Local cache option.

Reference

### Velcro available from:

Textrol Systems Inc.,  
435 Meadow Lane, Carlstadt, NJ 07072  
Phone: 800-624-8746  
Part #193973 (Part B-male)

Image

ETC helmet serviceability guide showing action needed.

## Case – Fire Shelter, M2002, Carrying

NFES Status

Active

NFES #

000927

Category

PPE

Updated

Mon, 05/01/2017 - 12:00

Storage and Shelf Life Checks

None

## Initial Inspection/Disposal Criteria

1. Inspect the following:

- a. Shelter – **Do not open polyvinyl liner for inspection.**
    - i. Inspect polyvinyl bag for cuts, puncture, or torn seams. If the bag has any anomaly that may affect the integrity of the bag or the shelter, remove shelter from service.
    - ii. Inspect that the red pull rings are unbroken and the quick-opening tear strip is sealed to the bag the entire length and is unbroken. Dispose of shelter with damaged or missing red tear strip.
    - iii. Look through bag at shelter for tears in shelter material along seams. If any tears are evident in the shelter material or polyvinyl bag, or if significant gray discoloration of the interior of the polyvinyl bag has obscured interior inspection, remove shelter from service and dispose.
    - iv. Further inspection should include identifying PVC bags which have unreinforced yellow pull tabs. Per Cache Memo #07-4 “Polyvinyl Bag Retrofit” Some shelters may have a glued webbing reinforcement visible on the PVC bag yellow pull strap. Any shelter lacking webbing reinforcement (glued or stitched) should be removed from service.
    - v. Fire shelters with a yellow re-bag label or lacking any label inside of the PVC bag should be removed from service.
  - b. Carrying Case
    - i. Inspect for cuts, tears, torn seams or flaps.
    - ii. Ensure that M-2002 Use Instructions (English on one side, Spanish on the other) are in the “Use Instructions” pocket on the front.
    - iii. Check for two belt clips and ensure they are working properly.
  - c. Liner
    - i. Inspect the polyvinyl liner for cracks or tears.
    - ii. Return to stock if Item shows no sign of use.
    - iii. Refurbish, clean only. iv. Dispose of item if any damage. Any doubt as to the condition to the shelter, REMOVE FROM SERVICE.
2. Return to stock if item is new or like new, passes inspection and does not require refurbishment.
  3. Refurbish if item passes inspection but light cleaning is required.
  4. Dispose of item if it fails inspection.
    - a. Shelters that show signs of damage can be used as practice shelter. Clearly identify each as PRACTICE ONLY, This item may be used for practice when clearly marked, as practice only.

## Refurbishing Procedures

### A. Cleaning

**Do not open polyvinyl liner for refurbishment.**

1. Clean the Shelter, Case, and Liner with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

### B. Repair

- None

## C. Testing for performance

- None

## D. Repackaging

1. 10 each of NFES #[000925](#), #[000975](#), #[000926](#), #[000973](#) in NFES #008059 carton (24" x 12.5" x 10").
2. 100 each of NFES #[000927](#) in suggested NFES #002006 carton (23" x 19" x 10").

## Case – Carrying, Fireline Pack, Blue

NFES Status

Active

NFES #

000677

Category

PPE

Updated

Thu, 03/01/2018 - 12:00

Storage and Shelf Life Checks

None

## Initial Inspection/Disposal Criteria

1. Visually inspect fabric for cuts, tears, burns, and areas of abrasions. Inspect seams for breaks in stitching and for areas where the fabric is unraveling into the seams, check all straps and webbing for cuts or excessive wear. Ensure straps are securely attached to the fabric; inspect zippers for broken coils and missing or broken sliders. Ensure they are securely attached to the fabric. Open and close the zippers to ensure a smooth and proper function. Ensure all hardware, buckles and Velcro closures are correctly attached. Inspect all buckles and hardware for cracks or breaks. Fasten and unfasten all buckles and hardware to ensure a smooth and proper function. Ensure all Velcro closures are securely attached.
2. Return to stock if item is clean, free of damage, and in unused condition.
3. Refurbish if item passes inspection, and repair is economically feasible.
4. Dispose of if there's any indelible writing or markings on the item, or if item is beyond economical repair.

## Refurbishment Procedures

### A. Cleaning

- ?CLASS 1 CORDURA (MACHINE WASH OK)



- Allow any mud or loose dirt to dry then remove using a stiff-bristle brush. If stains remain, wash as recommended below.
- Remove light oil and dirt stains by brushing with a solution of warm water and a mild detergent, rinse thoroughly, and hang to dry. “Mild detergents” includes most home laundry detergents that contain no chlorine bleach or added scents.
- For heavier oil or grease, soak in water-soluble biodegradable degreaser for at least 30 minutes, brush with a bristle brush, rinse thoroughly, and hang to dry.
- If machine washing, use only cold water on a gentle cycle and air dry.
- Where no other method is cleaning the fabric, wash with pressure washer set at wide fan, warm water, and only allow nozzle close enough as necessary for cleaning, the further away the better for the fabric.

**DO NOT MACHINE DRY. DO NOT USE BLEACH TO CLEAN FABRIC.**

## **B. Repair**

1. If necessary, replace buckles and hardware.
2. Repair any tears, holes or areas of excessive abrasion if economically feasible.
3. Repair any seams that are worn or that have torn loose.
4. Repair or replace webbing.

## **C. Test for performance**

- Test any buckles, zippers or Velcro that has been replaced for functionality.

## **D. Repackaging**

1. For NFES #[000674](#), insert 2 blue canteen case and blue stuff sack into main compartment. Close all buckles, secure the shoulder yoke. Pack 10 packs per box.
2. For NFES #[001855](#), pack 10 packs per NFES #002030 carton (24” x 16” x 12”).
3. For NFES #[000744](#), pack 20 per local cache carton preference.

## **Case – Carrying, Fire Shelter M2002, PRACTICE ONLY, Orange**

NFES Status

Active

NFES #

002680

Category

PPE

Updated

Mon, 05/01/2017 - 12:00

Storage and Shelf Life Checks

None

# Initial Inspection/Disposal Criteria

1. Inspect the following:
  - a. Shelter
    - a. Unfold practice fire shelter and inspect for tears, ripped seams, punctures.
    - b. Polyvinyl Bag
      - i. Inspect the bag for cracks or tears.
      - ii. Inspect Velcro pull strip for damage.
    - c. Case
      - i. The M-2002 Practice Fire Shelter Carrying Case is orange in color.
      - ii. Inspect for cuts, tears, torn seams or flap.
      - iii. Ensure that an M-2002 instruction sheet and a folding instruction are in the Use Instructions Pocket on the front.
      - iv. Check that there are two belt clips and that they are in working condition.
    - d. Liner
      - i. Inspect the plastic liner for cracks or tears.
  2. Return to stock if item is in new condition and does not require refurbishment.
  3. Refurbish by patching rips or tears. Velcro strips on bag can be replaced if damaged or missing.
  4. Dispose of practice fire shelter if damage is extensive and cannot be recycled.

## Refurbishing Procedures

### A. Cleaning

1. Clean the Shelter Package with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

### B. Repairs

1. Repair as needed and economically feasible.
2. Replace Use Instructions with M-2002 Use Instructions, English/Spanish and/or Folding Instructions with M-2002 Folding Instructions if missing or damaged.
3. Replace belt clips and polyvinyl bag if missing or damaged.
4. Mark each shelter as Practice Only shelter.

### C. Testing for performance

- None

### D. Repackaging

1. 10 each of NFES #002679, #002679, #002798, #002799 in NFES #008059 carton (24" x 12.5" x 10").
2. All other items, local cache option.

# Case – Canteen, Fireline Pack, Blue

NFES Status

Active

NFES #

000675

Category

PPE

Updated

Thu, 03/01/2018 - 12:00

Storage and Shelf Life Checks

None

## Initial Inspection/Disposal Criteria

1. Visually inspect fabric for cuts, tears, burns, and areas of abrasions. Inspect seams for breaks in stitching and for areas where the fabric is unraveling into the seams, check all straps and webbing for cuts or excessive wear. Ensure straps are securely attached to the fabric; inspect zippers for broken coils and missing or broken sliders. Ensure they are securely attached to the fabric. Open and close the zippers to ensure a smooth and proper function. Ensure all hardware, buckles and Velcro closures are correctly attached. Inspect all buckles and hardware for cracks or breaks. Fasten and unfasten all buckles and hardware to ensure a smooth and proper function. Ensure all Velcro closures are securely attached.
2. Return to stock if item is clean, free of damage, and in unused condition.
3. Refurbish if item passes inspection, and repair is economically feasible.
4. Dispose of if there's any indelible writing or markings on the item, or if item is beyond economical repair.

## Refurbishment Procedures

### A. Cleaning

- ?CLASS 1 CORDURA (MACHINE WASH OK)
  - Allow any mud or loose dirt to dry then remove using a stiff-bristle brush. If stains remain, wash as recommended below.
  - Remove light oil and dirt stains by brushing with a solution of warm water and a mild detergent, rinse thoroughly, and hang to dry. "Mild detergents" includes most home laundry detergents that contain no chlorine bleach or added scents.
  - For heavier oil or grease, soak in water-soluble biodegradable degreaser for at least 30 minutes, brush with a bristle brush, rinse thoroughly, and hang to dry.
  - If machine washing, use only cold water on a gentle cycle and air dry.
  - Where no other method is cleaning the fabric, wash with pressure washer set at wide fan, warm water, and only allow nozzle close enough as necessary for cleaning, the further away the better for the fabric.

**DO NOT MACHINE DRY. DO NOT USE BLEACH TO CLEAN FABRIC.**

## B. Repair

1. If necessary, replace buckles and hardware.
2. Repair any tears, holes or areas of excessive abrasion if economically feasible.
3. Repair any seams that are worn or that have torn loose.
4. Repair or replace webbing.

## C. Test for performance

- Test any buckles, zippers or Velcro that has been replaced for functionality.

## D. Repackaging

1. For NFES #[000674](#), insert 2 blue canteen case and blue stuff sack into main compartment. Close all buckles, secure the shoulder yoke. Pack 10 packs per box.
2. For NFES #[001855](#), pack 10 packs per NFES #002030 carton (24" x 16" x 12").
3. For NFES #[000744](#), pack 20 per local cache carton preference.

## Bag – Polyvinyl - Practice Fire Shelter, M2002

NFES Status

Active

NFES #

002681

Category

PPE

Updated

Mon, 05/01/2017 - 12:00

Storage and Shelf Life Checks

None

## Initial Inspection/Disposal Criteria

1. Inspect the following:
  - a. Shelter
    - i. Unfold practice fire shelter and inspect for tears, ripped seams, punctures.
    - ii. Polyvinyl Bag i. Inspect the bag for cracks or tears. ii. Inspect Velcro pull strip for damage.
  - b. Case
    - i. The M-2002 Practice Fire Shelter Carrying Case is orange in color.
    - ii. Inspect for cuts, tears, torn seams or flap.
    - iii. Ensure that an M-2002 instruction sheet and a folding instruction are in the Use Instructions Pocket on the front.
    - iv. Check that there are two belt clips and that they are in working condition.

- d. Liner
  - i. Inspect the plastic liner for cracks or tears.
2. Return to stock if item is in new condition and does not require refurbishment.
3. Refurbish by patching rips or tears. Velcro strips on bag can be replaced if damaged or missing.
4. Dispose of practice fire shelter if damage is extensive and cannot be recycled.

## Refurbishing Procedures

### A. Cleaning

1. Clean the Shelter Package with a damp cloth.
2. Brush dirt off heavily soiled case with a stiff brush.
3. Remove oils from carrying case using a solution of warm water and detergent and brush.
4. Rinse with clear water and let dry.

### B. Repairs

1. Repair as needed and economically feasible.
2. Replace Use Instructions with M-2002 Use Instructions, English/Spanish and/or Folding Instructions with M-2002 Folding Instructions if missing or damaged.
3. Replace belt clips and polyvinyl bag if missing or damaged.
4. Mark each shelter as Practice Only shelter.

### C. Testing for performance

- None

### D. Repackaging

1. 10 each of NFES #[002679](#), #002679, #[002798](#), #[002799](#) in NFES #008059 carton (24" x 12.5" x 10").
2. All other items, local cache option.