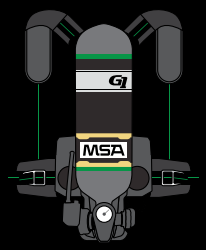
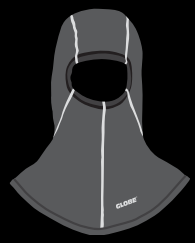
Firefighter PPE Cleaning **and Inspection Guide**

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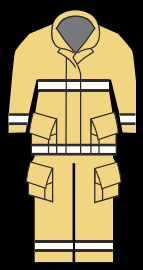












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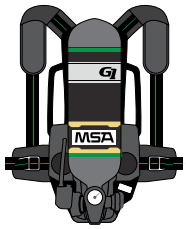
At MSA, your health, safety and well-being are what drive us to not only develop technologically-advanced safety equipment to help protect you on the job, but to advocate for your well-being. In fact, after more than 100 years in business, our mission remains unchanged: that men and women may work in safety and live in health.

As part of our commitment to your health and safety, this guide is intended to help you understand the PPE cleaning and inspection requirements set forth in NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, with a focus on changes to the 2020 edition.

The information contained herein is only a brief synopsis of the requirements of the NFPA 1851 standard, and is not all-inclusive.

We encourage departments and users to review the NFPA 1851 standard for themselves. The annex contains valuable insight to the new requirements of the 2020 edition and the reasoning behind them. While you must purchase a standard in order to download or print the information, NFPA allows anyone to read any standard for free by opening the FREE ACCESS tab on the NFPA website.

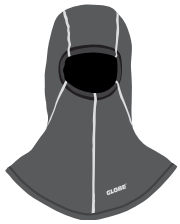
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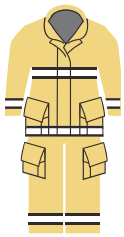
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NFPA 1851

The purpose of NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, is to establish a program for structural and proximity fire fighting protective ensembles and ensemble elements to help reduce the safety risks and potential health risks associated with poorly maintained, contaminated, or damaged protective ensembles and ensemble elements. Additionally, the standard serves to establish basic criteria for selection, inspection, cleaning, decontamination, repair, storage, and retirement of structural and proximity protective ensembles and ensemble elements.

NFPA 1851 – Cleaning Overview

The most significant changes to the 2020 edition of the standard involve cleaning, sanitization, and disinfection. Several modifications to and additions of definitions were made specific to cleaning:

- **Preliminary Exposure Reduction.** Techniques for reducing soiling and contamination levels on the exterior of the ensemble or ensemble elements following incident operations. (This term replaces Routine Cleaning in the previous edition of the standard.)
- **Sanitizer.** A type of antimicrobial agent that is used to reduce, but not necessarily eliminate, microorganisms from the inanimate environment to levels considered safe as determined by public health regulations.
- **Gross Decontamination.** A term used in the hazardous materials response industry to indicate the partial removal of exterior contamination from protective clothing usually by rinsing with water, sometimes with detergent, to allow for the safe exit of the responder from the protective clothing in the contamination reduction zone of an emergency incident.
- **Cleaning Facility.** An entity, location, or site engaged in the cleaning of ensemble elements that includes an element manufacturer verified in cleaning, a verified cleaner, a verified organization, or a verified ISP.
- **Contamination.** The accumulation of products of combustion and other hazardous materials on or in an ensemble element that includes carcinogenic, toxic, corrosive or allergy-causing chemicals, body fluids, infectious microorganisms, or CBRN terrorism agents.
- **Disinfectant.** A type of antimicrobial agent that destroys or irreversibly inactivates fungi and bacteria, but not necessarily their spores, on inanimate surfaces and objects.
- **Soiling.** The accumulation of sweat, dirt, dust, debris and other nonhazardous materials on or in an ensemble or ensemble element that could degrade its performance or cause hygiene issues.
- **Advanced Cleaning.** The act of removing both soiling and contamination generally associated with products of combustion.
- **Specialized Cleaning.** The act of removing hazardous materials, soiling associated with body fluids, or other forms of contamination.

New Requirements of Preliminary Exposure Reduction

- End users will remain on SCBA air and shall carry out preliminary exposure reduction immediately after exiting the emergency scene at any incident where PPE could have become soiled or contaminated.
- The standard contains techniques for both wet and dry mitigation. Wet mitigation is performed by gently rinsing the exterior of the ensemble elements using low-pressure and low-volume flow water. Dry mitigation is performed by brushing debris from the exterior of ensemble elements with a soft bristle brush prior to removal of the ensemble elements. However, using a brush or other abrasive cleaning device is never permitted on proximity gear.
- If returning to the emergency scene after a cylinder change, dry debris is required to be brushed off the helmet, facepiece, and SCBA prior to changing out the cylinder.

New Requirements of Advanced Cleaning

- Advanced cleaning can only be performed by an element manufacturer verified in cleaning, by a verified cleaner, a verified ISP, a verified organization, or by a manufacturer-trained organization cleaning the department's **own** ensemble elements.
- The frequency of advanced cleaning has been changed from once per year to at least every six months, resulting in a minimum of two advanced cleanings in a 12-month period. One of those advanced cleanings must occur at the time of annual advanced inspection.
- Advanced cleaning must be conducted using a washer/extractor that is programmable to permit multiple formulations for adjustment of detergent application, water level and water temperature, and cycle type/function and cycle time. Top loading machines, with or without a center agitator, are no longer permitted to be used for advanced cleaning.
- The G-force requirement of a maximum 100G remains in this revision, as does the pH detergent requirement of not less than 6.0 or not greater than 10.5. The use of chlorine bleach or chlorinated solvents still require prior approval from the element manufacturer.
- Procedures for the washer/extractor have been updated to include not only overloading but also under loading the machine. Additionally the section has been revised to include a requirement that the specific formulation for the washer/extractor must include steps for filling the wash basket, adding detergent, performing multiple rinses, and including separate extractions between wash and rinse steps.
- Proximity outer shells and other radiant reflective components continue to require hand washing and air-drying without the use of mechanical action. They shall not be cleaned with a brush or other abrasive cleaning device, but rather wiped with a moist soft cloth or sponge and hung without any folding of the aluminized fabric.
- For helmets, textile-based detachable components such as ear covers or suspension covers are to be removed and either hand washed or washed in a washer/extractor with other components such as garments or hoods. Helmets shall not be machine cleaned or dried using equipment that produces mechanical action and, unless otherwise specified by the manufacturer, helmets are to be hand washed in a utility sink using procedures outlined in 1851.
- Unless otherwise specified by the manufacturer, gloves and footwear continue to be hand washed, while hoods are allowed to be either machine or hand washed. As with helmets, footwear shall also not be machine cleaned or dried using equipment that produces mechanical action.
- The manufacturer must be consulted for advanced cleaning of ensembles certified to the optional liquid and particulate contamination protection requirements of NFPA 1971.
- Drying of ensembles and ensemble elements in an air-dying cabinet is now an option, with specific procedures provided, while the air-drying processes for ensemble elements have not changed from the 2014 edition.
- A new section on disinfection or sanitization and biological decontamination of protective ensembles and ensemble elements, including the use of disinfectants and sanitizers, has been added to the 2020 edition. Additionally, there is a complete section on specialized cleaning.

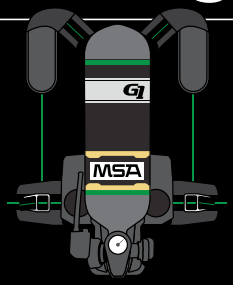
Responsibilities for Garment Inspection, Cleaning, and Repair

The 2020 edition of NFPA 1851 outlines what entity can perform what service with regard to the different levels of PPE inspection, cleaning, sanitization, training, and repairs:

- **End User.** Routine Inspections can only be performed by the end user. Preliminary Exposure Reduction can only be performed by end user.
- **Verified Cleaner.** A cleaner who has been third-party verified in effectiveness of cleaning is able to perform advanced cleaning, sanitization or disinfection, specialized cleaning, and can provide training for cleaning.
- **Manufacturer Trained Organization.** An organization who has been trained by a garment element manufacturer can perform advanced inspection, complete liner inspection, advanced cleaning, sanitization or disinfection, specialized cleaning, and basic repair – but **only on its own department's garments**. In order to work on another department's garments, the organization has to be a Verified Organization.
- **Manufacturer Verified for Cleaning; a Verified Organization; or a Verified ISP.** This category is able to perform advanced inspections, complete liner inspection, advanced cleaning, sanitization or disinfection, specialized cleaning, basic repair, advanced repair, training for cleaning, training for repairs, and training for inspection. In other words, this category is able to do all but the routine inspections and preliminary exposure reductions.
- **Element Manufacturer.** This last category is able to do all of the above, with the exception of advanced cleaning, sanitization or disinfection, or specialized cleaning. In order to offer these services, the element manufacturer must be verified in cleaning. Naturally, the element manufacturer is also not able to perform the routine inspections and preliminary exposure reduction.

7 Steps to Clean **Firefighting SCBA**

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The entire fire service industry recognizes that soiled or contaminated protective gear can expose firefighters to toxic substances, spread communicable disease, absorb heat, conduct electricity, and can be flammable. In short, clean PPE can help keep you safe. NFPA 1851 recommends the user to evaluate PPE after each use to determine the appropriate cleaning level. This includes instructions for cleaning at the scene and an advanced cleaning at least once a year or whenever on-scene cleaning is not sufficient. Here are seven steps to assist in cleaning your SCBA.

1. CLEAN BEFORE YOU LEAVE THE SCENE

Remain on air (if possible) during on-scene cleaning. Gently brush or lightly sponge off SCBA with mild soap/water solution to remove the large, gross contaminants following overhaul and rinse with a low pressure hose. This on-scene cleaning greatly reduces the amount of particles you take into the rig and the firehouse bay. If an on-scene cleaning doesn't do the job, the SCBA requires an advanced cleaning.



NOTE: Step 1 constitutes an on-scene cleaning that should be done at the scene. Steps 2 through 7 constitute an advanced cleaning, done at least once a year or when on-scene cleaning is not sufficient.

2. INSPECT

Wear exam gloves and eye protection during this process. Note any physical damage that will need to be addressed before the SCBA is returned to service.



3. WASH

For normal cleaning, use a soft sponge or bristle brush with warm water to remove surface dirt on the exterior of the SCBA, and then rinse thoroughly. Be sure to clean the following components of the SCBA, 1. Harness, including straps and buckles, 2. Carrier, including band and latch assembly, 3. Cylinder, including handwheel and gauge, 4. Pressure reducer, including bell and coupling connection, and 5. Control, Power, Battery, and Speaker Modules.



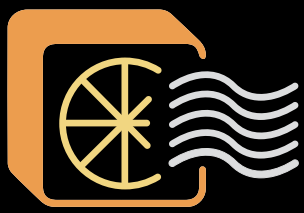
4. RE-INSPECT

Once the SCBA has been through the cleaning process, inspect again and if not clean, repeat Step 3.



5. DRYING

Dry the SCBA in an area with good ventilation; never dry in direct sunlight. SCBA should never be machine dried using equipment that produces mechanical action by tumbling or agitation. It is imperative that the SCBA be allowed to thoroughly dry before returning to service.



6. STORAGE

Store clean SCBA in a dry, well-ventilated area out of direct sunlight and away from indoor light sources, which can also produce harmful UV rays. Do not store in extreme hot or cold temperatures.



7. INSPECTION & TESTING

Remember to perform all inspection and functional testing of the SCBA before returning the unit to service.



ONLINE RESOURCES

MSAfire.com | PPE101.com | NFPA.org

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ID 0105-246-MC / Sept 2019

7 Steps to Clean **Structural Fire Helmets**

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The fire service recognizes that clean PPE can help keep you safe. NFPA 1851 requires the user to evaluate PPE after each use to determine the appropriate cleaning level. MSA recommends obtaining a copy of the current edition of NFPA 1851 to ensure complete compliance. Information regarding inspection criteria, cleaning criteria, repair, and retirement of your MSA Cairns Fire Helmet is also available in the MSA Cairns Fire Helmet Operating Manual.

The following guide is meant to assist firefighters in performing on scene and Advanced Cleaning of Structural Fire Helmets.

Always observe universal precautions and wear appropriate personal protective equipment (PPE), including, but not limited to: exam gloves, apron, coveralls, and eye protection before performing the following steps:

1. CLEAN BEFORE YOU LEAVE THE SCENE

Hose, brush, or wipe away the large, gross contaminants at the emergency scene. This on scene cleaning helps reduce the amount of particulates transported back to the fire station. Soiled Helmets should be stored in a protective case or bag, and not transported back in the apparatus crew compartment.

NOTE: Step 1 constitutes the first steps in the Preliminary Exposure Reduction Procedures as defined in NFPA 1851, for on scene cleaning at an emergency scene. Steps 2-7 are meant for additional Routine Cleaning in a designated Utility Sink.



2. INSPECT AND DISASSEMBLE

Before cleaning the helmet shell, remove all components: faceshield/ goggles/ Bourkes/ Defender Visor lens, soft goods and set aside.

Inspect MSA Cairns Fire Helmets and all helmet accessories after each use for impact, thermal and general damage.
A damaged helmet must NEVER be used.



3. WASH

For Advanced Cleaning in a Utility Sink:

Use a soft sponge or cloth dampened with a solution of warm water under 105˚ F, and mild detergent *(pH of not less than 6.0 or more than 10.5)* to clean the shell of the Fire Helmet. Reference the MSA Cairns Fire Helmet Operating manual for specific shell material routine cleaning and inspection guidelines.



Soft Goods:

- Exchange and place the soiled soft goods in the mesh bag from the applicable MSA Soft Good Replacement Kit
- Machine wash and dry on low settings. Refer to product instructions for laundering

To clean eye and face protection:

- Use mild cleaning agents such as ethyl alcohol or warm water under 105˚F with mild detergent *(pH of not less than 6.0 or more than 10.5),* and a soft sponge or cloth
- NEVER use abrasives, solvents, paint removers, acetone, paint or lacquer thinner, or any chlorinated organic solvents

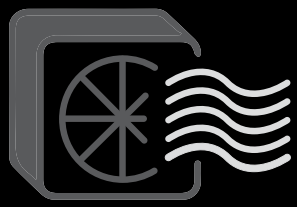
4. RE-INSPECT

Once the Fire Helmet has been through the cleaning process, inspect again and if not clean, repeat Step 3.



5. DRYING

Dry the Fire Helmet in an area with good ventilation; never dry in direct sunlight. Fire Helmets should never be machine dried using equipment that produces mechanical action by tumbling or agitation. Fire helmets and all components should be thoroughly dry before returning to service.



6. STORAGE

Store clean Fire Helmets in a dry, well-ventilated area out of direct sunlight and away from indoor light sources, which can also produce harmful UV rays.
Do not store in extreme hot or cold temperatures.





7. RECORD KEEPING

Organizations should have a system for keeping minimal records for their MSA Cairns Fire Helmets.

To aid with record keeping guidelines, MSA has created an easy-to-use Fire Helmet Tracking Form (ID 3600-46), and the NFPA 1851, 2014 Edition - Compliance Guide for Cairns Fire Helmets (ID 3600-45-MC).
http://s7d9.scene7.com/is/content/minesafetyappliances/3600-45-MC%20NFPA%201851%202014%20Ed%20Compliance%20Guide%20-%20EN

ONLINE RESOURCES

https://us.msasafety.com/cairnsproductinfo | PPE101.com | NFPA.org

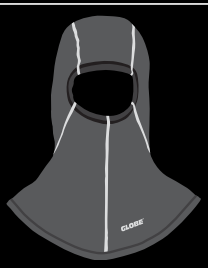
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3600-118-MC / 07.2020
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6 Steps to Clean
Particulate-Protective Hoods

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The fire service recognizes that clean PPE can help keep you safe. NFPA 1851 requires the user to evaluate gear after each use to check for any damage and to determine the appropriate cleaning level necessary. This includes instructions for "preliminary exposure reduction" on scene and an advanced cleaning at least twice a year or whenever on-scene cleaning is not sufficient. While we encourage everyone to read the detailed instructions found in NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, here are steps to assist in cleaning your particulate-protective hood.

1. CLEAN BEFORE YOU LEAVE THE SCENE

Perform preliminary exposure reduction on scene by gently brushing off any loose debris. Should any debris or materials be adhered to the components/fabric of the hood, remove the hood from service until it can be subjected to an advanced cleaning.



2. INSPECT

Wear exam gloves and eye protection during this process. Any physical damage will need to be addressed before the hood is returned to service.



3. PRETREAT AND WASH

Hoods can be hand or machine washed. If necessary, pretreat heavily soiled areas before laundering. To hand wash hoods, use a utility sink or other suitable container and allow the hood to presoak for at least 10 minutes. Lightly rub the hood material together, starting with the exterior and then turning the hood inside out. Avoid stretching or wringing the hood out; hoods should be slightly squeezed to remove excess water after washing. If hoods are machine laundered, the machine should be a washer/extractor that is programmable to permit multiple formulations for adjustments of detergent application, water temperature, water level, cycle type/function, and cycle time. The washer/extractor g-force must not exceed 100G. Whether hand or machine washing, use a mild detergent with a pH range of not less than 6.0 and not greater than 10.5 and a wash water temperature that is not higher than 105°F. Hoods should be thoroughly rinsed following washing.



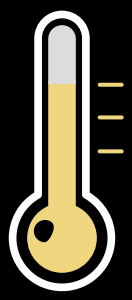
4. RE-INSPECT

Once the hood has been washed, inspect it to ensure it is clean. If necessary, repeat Step 3.



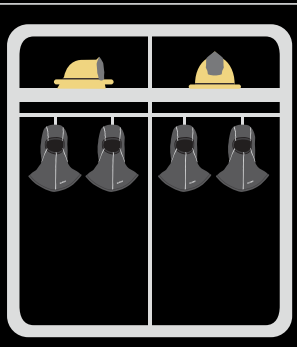
5. DRYING

NFPA 1851 requires that protective elements be dried out of direct or indirect lighting, especially sunlight. If machine drying hoods, tumble dry on "no heat" or lowest possible machine setting, with the basket temperature of the dryer not to exceed 105°F. If air drying, lay the hood on a drying rack or other surface that helps promote draining of water from the hood, again out of direct light.



6. STORAGE

Store clean hoods in a dry, well-ventilated area out of direct sunlight and away from indoor light sources. Do not store in extreme hot or cold temperatures, nor in airtight containers.



ONLINE RESOURCES

MSAfire.com/Globe | PPE101.com | NFPA.org

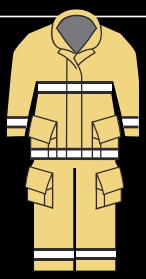
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7 Steps to Clean
Firefighting Turnout Gear

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The fire service recognizes that clean PPE can help keep you safe. NFPA 1851 requires the user to evaluate gear after each use to check for any damage and to determine the appropriate cleaning level. Also included in NFPA 1851 are instructions for cleaning at the scene, known as "preliminary exposure reduction," and an advanced cleaning at least twice a year or whenever on-scene cleaning is not sufficient. While it's important that you read the detailed instructions found in NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, here are seven steps to assist in cleaning your gear.

1. CLEAN BEFORE YOU LEAVE THE SCENE

Gently brush or lightly hose gear to remove the large, gross contaminants following overhaul. If an on-scene cleaning is not sufficient, the PPE requires an advanced cleaning.

NOTE: Step 1 constitutes the preliminary exposure reduction, which should be done at the scene. Steps 2 through 6 constitute an advanced cleaning, done at least twice a year or when on-scene cleaning is not sufficient.



2. INSPECT AND DISASSEMBLE

Wear exam gloves and eye protection during this process. Separate the outer shells from the liner system and remove the drag rescue device. Look for deep stains, tears, holes, and other damage; any physical damage needs to be repaired before the gear is able to be returned to service. Turn the liner inside out for cleaning, and close all of the outer shell's zippers, clasps, and hook and loop tapes.



3. PRESOAK AND WASH

Pretreat heavily soiled or spotted areas prior to machine laundering. Shells and liners are washed separately in a front loader washer/extractor; do not use an agitator. For advanced cleaning, wash water temperature should not be higher than 105°F and the detergent must have a pH factor between 6 and 10.5. The washing machine g-force must not exceed 100g for all gear.



4. RE-INSPECT

Once the clothing has been washed, inspect it again. If the gear is not clean, repeat Step 3.



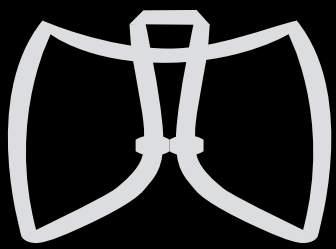
5. DRYING

Dry the gear in an area with good ventilation or in a drying cabinet; never dry in direct sunlight, which can degrade the high-temperature fabrics. When machine drying, fasten all closures and use a no-heat or air-dry option. Do not allow the area used for drying to exceed 105°F.



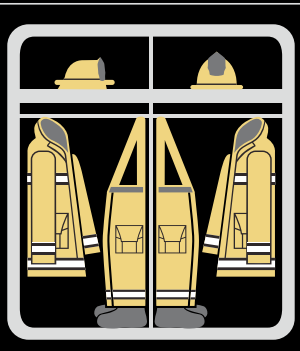
6. REASSEMBLE

When the gear is fully dry, follow the manufacturer's instructions to reinstall the drag rescue device in the jacket and to insert the liners into the outer shells. Check that all of the closures are properly secure and that the drag rescue device is properly installed.



7. STORAGE

Keep clean gear in a dry, well-ventilated area out of direct sunlight and away from indoor light sources; they also produce harmful UV rays. Do not store in extreme hot or cold temperatures, nor in airtight containers. This will keep the materials that make up the PPE from degrading while being stored.



ONLINE RESOURCES

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6 Steps to Clean **Firefighting Footwear**

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The fire service recognizes that clean PPE can help keep you safe. NFPA 1851 requires the user to evaluate PPE after each use to check for any damage and to determine the appropriate cleaning level. Also included in NFPA are instructions for cleaning at the scene, known as "preliminary exposure reduction," and an advanced cleaning at least twice a year or whenever on-scene cleaning is not sufficient. While it's important that you read the detailed instructions found in NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, here are six steps to assist in cleaning your footwear.

1. CLEAN BEFORE YOU LEAVE THE SCENE

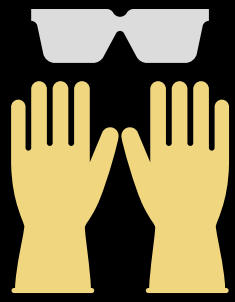
Gently brush or lightly sponge off footwear to remove the large, gross contaminants following overhaul. If an on-scene cleaning is not sufficient, the footwear requires an advanced cleaning.

NOTE: Step 1 constitutes a preliminary exposure reduction, which should be done at the scene. Steps 2 through 6 constitute an advanced cleaning, done at least twice a year or when on-scene cleaning is not sufficient.



2. INSPECT

Wear exam gloves and eye protection during this process. Note any physical damage that will need to be addressed before the footwear is able to be returned to service.



3. WASH

For advanced cleaning, use a soft sponge or rag with warm water to remove surface dirt on the exterior of the boot, and then rinse thoroughly. A very mild dishwashing detergent should be used sparingly and then the footwear rinsed off as soon as possible.

It is permissible to use a soft bristle brush to scrub any dirt or debris off the surface. Do not submerge the boots into water.

To clean the interior of the boots, fill the boot about three-quarters full with warm water and a mild detergent. Use a soft sponge or rag and scrub the interior of the boot, then rinse with clean warm water. Footwear should never be machine cleaned using equipment that produces mechanical action by tumbling or agitation.



4. RE-INSPECT

Once the boots have been through the cleaning process, inspect again and if there is visible soiling present, repeat Step 3.



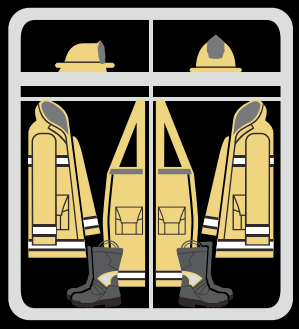
5. DRYING

Dry the boots in an area with good ventilation; never dry in direct sunlight. Footwear should never be machine dried using equipment that produces mechanical action by tumbling or agitation.
The boots MUST be thoroughly dry before returning to service.



6. STORAGE

Store clean footwear in a dry, well-ventilated area out of direct sunlight and away from indoor light sources, which can also produce harmful UV rays. Do not store in extreme hot or cold temperatures, nor in airtight containers.



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NFPA 1851 – Inspection Overview

All PPE elements must be inspected regularly to ensure continued serviceability in accordance with the requirements of NFPA 1851. The standard directs that individuals conducting inspections shall employ universal precautions as appropriate, with the wearing of examination gloves certified to NFPA 1999 as a minimum. The 2020 edition of NFPA 1851 includes several new requirements.

New Requirements of Routine Inspection

- At a minimum, cleaning is done in accordance with requirements set forth in the standard for cleaning. If a soiling condition exists that is beyond preliminary exposure reduction techniques, the element shall be removed from service, tagged, and referred to personnel responsible for advanced cleaning.
- At a minimum, any necessary repairs are done in accordance with requirements set forth in the standard for repair. If a condition exists that is beyond basic garment repair techniques, the element shall be removed from service, tagged, and referred to personnel responsible for repair.
- In addition to upon issue and after each wearing, individuals are also required to perform routine inspection at the beginning of each duty period.
- A new requirement for hoods relates to the particulate-blocking hoods, which are required to be inspected for damage to the particulate-blocking layer.

New Requirements of Advanced Inspection

- Upon the issuance of a new revision of the standard, the organization must be trained on advanced inspection by either an element manufacturer or a verified ISP.
- Advanced inspection continues to be required annually and also whenever a routine inspection determines potential damage.
- During advanced inspection, in addition to inspection for damage to the particulate-blocking layer, hoods are also required to be inspected for separation of any material as described by the manufacturer.
- Complete liner inspection, including hydrostatic testing of the barrier and visual inspection of inner surface of thermal liner, is now required to be performed annually and replaces both the "puddle test" and the flashlight test.
- Advanced inspection of particulate-blocking hoods includes a choice of a method using light inside a hood mounted onto a head form or other fixture to identify damage, or of using a smoke test that involves a modified hydrostatic tester with a smoke generator.

Advanced Inspection Forms

NFPA 1851 requires that Advanced Inspections of PPE elements be documented. The following pages are offered to help you document your department's Advanced Inspections of jackets, pants, hoods, gloves, footwear, and helmets. These completed forms can be used as the documentation of the Advanced Inspections as required by the standard.

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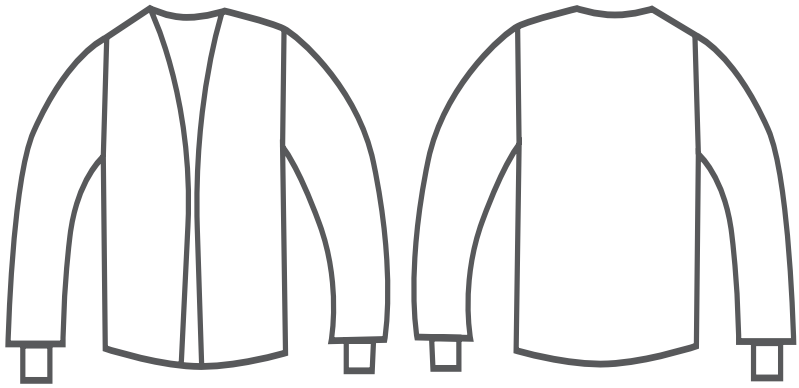
ADVANCED INSPECTION / JACKETS

Serial # (SHELL): _____ **DOM :** _____ **Inspector:** _____

Serial # (LINER): _____ **DOM:** _____ **Date of Inspection:** _____

	Outer Shell	Thermal Liner	Moisture Barrier	Comments
Soiling/Contamination	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Physical Damage: Rips, Tears, Cuts, etc.	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Damaged or Missing Hardware	☐ Pass ☐ Fail			
Thermal Damage: Flame/Heat	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Stitching/Seam Integrity	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Fabric Integrity (i.e., UV, Chemical, Strength, etc.)	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Wristlet Integrity	☐ Pass ☐ Fail	☐ Pass ☐ Fail		
Reflective Trim Damage; Loss of Reflectivity	☐ Pass ☐ Fail			
Label Integrity/Legibility	☐ Pass ☐ Fail	☐ Pass ☐ Fail		
Hook and Loop Functionality	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Liner Attachment Systems	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Closure System Functionality	☐ Pass ☐ Fail			
Accessory Integrity	☐ Pass ☐ Fail			
Correct Assembly and Size of Shell and Liner	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
DRD Size, Cleanliness, Physical Integrity	☐ Pass ☐ Fail			
Moisture Barrier Leakage (Hydrostatic Testing)			☐ Pass ☐ Fail	
Proximity—Loss of Reflectivity or Delamination	☐ Pass ☐ Fail			

Important note: As part of advanced inspection, NFPA Standard 1851 requires that the system be inspected annually for fit and coat/trouser overlap, which can only be performed by observing the coat and pant on the firefighter.



Complete liner inspection, including a hydrostatic test, is required to be performed annually.

HYDROSTATIC TEST RESULTS

(Test 6 Areas: 3 Flat, 3 Seams)

Flat Test Areas: _____ of 3 **PASS**

Seam Test Areas: _____ of 3 **PASS**

Flat Test Areas: _____ of 3 **FAIL**

Seam Test Areas: _____ of 3 **FAIL**

Comments:

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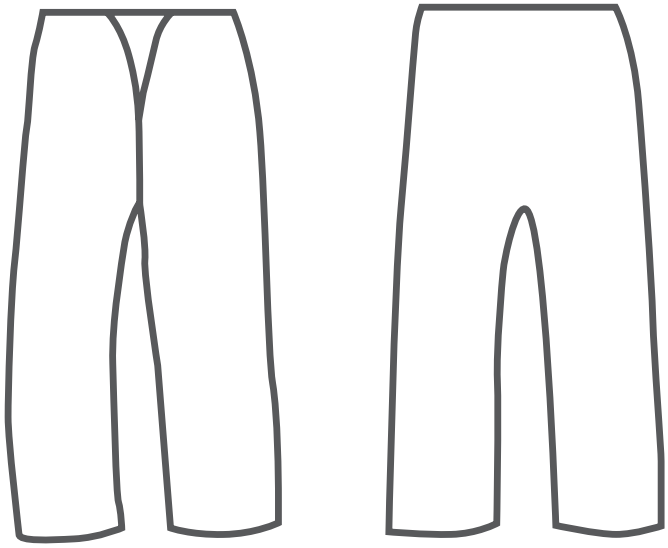
ADVANCED INSPECTION / PANTS

Serial # (SHELL): _____ **DOM :** _____ **Inspector:** _____

Serial # (LINER): _____ **DOM:** _____ **Date of Inspection:** _____

	Outer Shell	Thermal Liner	Moisture Barrier	Comments
Soiling/Contamination	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Physical Damage: Rips, Tears, Cuts, etc.	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Damaged or Missing Hardware	☐ Pass ☐ Fail			
Thermal Damage: Flame/Heat	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Stitching/Seam Integrity	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Material Physical Integrity (i.e., UV, Chemical, Strength, etc.)	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Reflective Trim Damage; Loss of Reflectivity	☐ Pass ☐ Fail			
Label Integrity/Legibility	☐ Pass ☐ Fail	☐ Pass ☐ Fail		
Hook and Loop Functionality	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Liner Attachment Systems	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Closure System Functionality	☐ Pass ☐ Fail			
Accessory Integrity	☐ Pass ☐ Fail			
Correct Assembly and Size of Shell and Liner	☐ Pass ☐ Fail	☐ Pass ☐ Fail	☐ Pass ☐ Fail	
Moisture Barrier Leakage (Hydrostatic Testing)			☐ Pass ☐ Fail	
Proximity—Loss of Reflectivity or Delamination	☐ Pass ☐ Fail			

Important note: As part of advanced inspection, NFPA Standard 1851 requires that the system be inspected annually for fit and coat/trouser overlap, which can only be performed by observing the coat and pant on the firefighter.



Complete liner inspection, including a hydrostatic test, is required to be performed annually.

HYDROSTATIC TEST RESULTS

(Test 6 Areas: 3 Flat, 3 Seams)

Flat Test Areas: _____ of 3 **PASS**

Seam Test Areas: _____ of 3 **PASS**

Flat Test Areas: _____ of 3 **FAIL**

Seam Test Areas: _____ of 3 **FAIL**

Comments:

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ADVANCED INSPECTION / HOOD

Serial # (HOOD): _____ **Inspector:** _____

DOM : _____ **Date of Inspection:** _____

	Hood	Comments
Soiling/Contamination	☐ Pass ☐ Fail	
Rips, Tears, Cuts, etc.	☐ Pass ☐ Fail	
Flame/Heat Damage	☐ Pass ☐ Fail	
Stitching/Seam Integrity	☐ Pass ☐ Fail	
Loss of Elasticity/ Stretching out of Shape	☐ Pass ☐ Fail	
Loss of Face Opening Adjustment	☐ Pass ☐ Fail	
Shrinkage	☐ Pass ☐ Fail	
Damage to or Separation of Any Material as Described by Mfg.	☐ Pass ☐ Fail	
Damage to Particulate-Blocking Layer where Present	☐ Pass ☐ Fail	
Label Integrity/Legibility	☐ Pass ☐ Fail	

Comments:

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ADVANCED INSPECTION / GLOVES

Serial # (GLOVES): _____ **Inspector:** _____

DOM : _____ **Date of Inspection:** _____

	Gloves	Comments
Soiling/Contamination	☐ Pass ☐ Fail	
Physical Damage: Rips, Tears, Cuts, etc.	☐ Pass ☐ Fail	
Thermal Damage: Flame, Heat, etc.	☐ Pass ☐ Fail	
Stitching/Seam Integrity	☐ Pass ☐ Fail	
Loss of Elasticity/ Stretching out of Shape	☐ Pass ☐ Fail	
Loss of Elasticity and Shape in Wristlets	☐ Pass ☐ Fail	
Loss of Flexibility	☐ Pass ☐ Fail	
Shrinkage	☐ Pass ☐ Fail	
Liner Attachment System/ Damage/Inversion	☐ Pass ☐ Fail	
Label Integrity/Legibility	☐ Pass ☐ Fail	
Accessories for Compliance	☐ Pass ☐ Fail	

Comments:

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ADVANCED INSPECTION / FOOTWEAR

Serial # (FOOTWEAR): _____ **Inspector:** _____

DOM : _____ **Date of Inspection:** _____

	Footwear	Comments
Soiling/Contamination	☐ Pass ☐ Fail	
Physical Damage: Rips, Tears, Cuts, etc.	☐ Pass ☐ Fail	
Thermal Damage: Flame, Heat, etc.	☐ Pass ☐ Fail	
Stitching/Seam Integrity	☐ Pass ☐ Fail	
Lining Condition: i.e., Tears, Excessive Wear, Separation from Outer Layer, etc.	☐ Pass ☐ Fail	
Exposed or Deformed Toe/Mid Sole/Shank	☐ Pass ☐ Fail	
Excessive Tread Wear	☐ Pass ☐ Fail	
Heel Counter Failure	☐ Pass ☐ Fail	
Closure System Functionality	☐ Pass ☐ Fail	
Loss of Water Resistance	☐ Pass ☐ Fail	
Label Integrity/Legibility	☐ Pass ☐ Fail	
Accessories for Compliance	☐ Pass ☐ Fail	

Comments:

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FIRE HELMET TRACKING / INSPECTION FORM

Helmet issued to:

Condition when issued:

Date issued:

Helmet Model

- ☐ Houston N6A® Helmet
- ☐ New Yorker N5A® Helmet
- ☐ Cairns 1010 Helmet
- ☐ Cairns 1044 Helmet
- ☐ 660C Metro® Helmet
- ☐ Invader 664® Helmet
- ☐ Commando HP3® Helmet
- ☐ 880 Tradition® Helmet
- ☐ Structural 360S® Helmet
- ☐ Rescue 360R-13 Helmet
- ☐ Rescue 360R Helmet
- ☐ XF1 Fire Helmet
- ☐ Other

Helmet serial number:

Manufactured on: *Month* *Year*

Date retired:

Date disposed of:

Disposal method:

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ADVANCED INSPECTION / HELMET

Serial # (HELMET): _____ **Inspector:** _____

DOM : _____ **Date of Inspection:** _____

	Helmet	Comments
Soiling/Contamination	☐ Pass ☐ Fail	
Physical Damage: Ear Flaps Rips, Tears, Cuts, etc.	☐ Pass ☐ Fail	
Thermal Damage: Ear Flaps Flame, Heat, etc.	☐ Pass ☐ Fail	
Stitching/Seam Integrity	☐ Pass ☐ Fail	
Liner Attachment System/Damage	☐ Pass ☐ Fail	
Loss of Flexibility	☐ Pass ☐ Fail	
Damage to Shell – Bubbling/Warping/Soft Spots	☐ Pass ☐ Fail	
Damage to Retention/Suspension Systems or Missing Components	☐ Pass ☐ Fail	
Functionality of Retention/Suspension	☐ Pass ☐ Fail	
Faceshield/Goggles Missing Components	☐ Pass ☐ Fail	
Damage To Faceshield/Goggles i.e., Scratching, Discoloration	☐ Pass ☐ Fail	
Faceshield/Goggles Functionality	☐ Pass ☐ Fail	
Reflective Trim Damaged or Missing	☐ Pass ☐ Fail	
Impact Cap Damage (ie. Cracks, Dents, Abrasions, etc.)	☐ Pass ☐ Fail	
Accessories for Compliance	☐ Pass ☐ Fail	
Label Integrity/Legibility	☐ Pass ☐ Fail	

Comments:

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FIRE HELMET TRACKING
ADVANCED CLEANING/ADVANCED INSPECTION/REPAIRS

Date	Performed by	Reason
Advanced Cleaning ☐	Advanced Inspection ☐	Replaced Soft Goods ☐
Disinfection or Sanitized Cleaning ☐	Specialized Cleaning ☐	Replaced Chinstrap ☐
Findings/Repairs		

Date	Performed by	Reason
Advanced Cleaning ☐	Advanced Inspection ☐	Replaced Soft Goods ☐
Disinfection or Sanitized Cleaning ☐	Specialized Cleaning ☐	Replaced Chinstrap ☐
Findings/Repairs		

Date	Performed by	Reason
Advanced Cleaning ☐	Advanced Inspection ☐	Replaced Soft Goods ☐
Disinfection or Sanitized Cleaning ☐	Specialized Cleaning ☐	Replaced Chinstrap ☐
Findings/Repairs		

Date	Performed by	Reason
Advanced Cleaning ☐	Advanced Inspection ☐	Replaced Soft Goods ☐
Disinfection or Sanitized Cleaning ☐	Specialized Cleaning ☐	Replaced Chinstrap ☐
Findings/Repairs		

Date	Performed by	Reason
Advanced Cleaning ☐	Advanced Inspection ☐	Replaced Soft Goods ☐
Disinfection or Sanitized Cleaning ☐	Specialized Cleaning ☐	Replaced Chinstrap ☐
Findings/Repairs		

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Established in 1914, MSA Safety Incorporated is the global leader in the development, manufacture and supply of safety products that protect people and facility infrastructures. Many MSA products integrate a combination of electronics, mechanical systems and advanced materials to protect users against hazardous or life-threatening situations. The company's comprehensive product line is used by workers around the world in a broad range of markets, including the oil, gas and petrochemical industry, the fire service, the construction industry, mining and the military. MSA's core products include self-contained breathing apparatus, fixed gas and flame detection systems, portable gas detection instruments, industrial head protection products, firefighter helmets and protective apparel, and fall protection devices.

Online Resources

MSAfire.com

MSAfire.com/Globe

PPE101.com

NFPA.org

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice.

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