PURPOSE
Firefighters rely heavily on their personal protective equipment (PPE) to prevent injuries, or death, while carrying out their duties. Proper care and maintenance of assigned PPE will ensure that it provides its intended protection, and will extend the life of the PPE.

OBJECTIVE
To provide personnel with guidelines that define proper techniques and methods for inspecting and maintaining their assigned PPE.

SCOPE
All Personnel

GENERAL INSPECTION
Personnel shall conduct a general inspection of their PPE for the following types of damage after each use, and at least weekly:

Cleanliness – Unclean gear can indicate contamination of the PPE with foreign substances that may be flammable, toxic, and/or carcinogenic. Soiled PPE should be cleaned and restored to a dry and sanitized condition.

Char and Heat Damage – Burned areas indicate excessive exposure to heat and/or flame impingement. These areas are damaged and need to be thoroughly checked for strength loss or other signs of degradation. In protective clothing, all 3 layers should be examined for damage if the outer shell is charred.

Discoloration – Discoloration can indicate many types of possible damage such as dye loss, frosting, heat degradation, ultraviolet damage, chemical contamination, or other forms of damage. These areas should be thoroughly checked for strength and integrity. Loss of strength or weakening of the material(s) is a sign of damage and grounds for removal from service.

Dye Loss – Dye loss resulting from heat or chemical contamination (not general fabric fading) should be thoroughly checked as to the severity of damage.

Mechanical Damage – Rips, tears, abraded, worn areas, and areas that are easily torn are evidence of mechanical damage. This type of damage has many possible causes and can often be repaired. The complexity and extent of the damage should be used to determine the appropriate follow-up action.

Reflective Trim – Reflective trim may be missing, loose, burned, melted, or have lost its reflective properties. Personnel may use a flashlight to test the reflectivity of trim. Reflective trim that has substantially lost is reflective properties should be replaced.

DETAILED INSPECTION

Personnel shall periodically conduct a detailed inspection of each component of their assigned PPE. A detailed inspection shall include the following:

Helmet

- Shell
    1. Bubbling of shell material
    2. Delaminating or soft spots
    3. Significant dents, cracks, nicks, gouges, or flaking
- Face Shield/Goggles/Safety Glasses
    1. Reduced clarity
    2. Scratches, cracks, warping
    3. Defective attachment hardware
    4. Retention system (elasticity, hardware, seal)
- Inner Shell and Impact Liner
    1. Warping, wear
    2. Broken or missing components
    3. Proper installation and attachment
- Suspension
    1. Cracked or missing components
    2. Torn head band or size adjustment mechanism
    3. Stripped adjustment ratchet knobs
    4. Reduced pliability of appropriate components
    5. Proper installation and fit
- Chin Strap
    1. Frays, cuts, or loose stitching
    2. Proper installation and fit

Protective Hood

- Shrinkage
- Loss of elasticity
- Seam integrity
- Holes or severe wear

Gloves

- Shrinkage
- Loss of elasticity or flexibility

- Seam integrity
- Liner damage
- Holes or severe wear

Boots

- Loss of elasticity
- Delaminating seam seals
- Material damage
- Steel toe or shank damage
- Excessive sole tread wear
- Waterproofing

Coat and Pants

- Outer Shell
    1. Damage to pockets
    2. Hardware
    3. Reinforcement leather or material
    4. Seam integrity
    5. Closure system (snaps, zippers, and velcro)
    6. Holes or severe wear
- Moisture Barrier and Thermal Liner
    1. Delaminating seam seals
    2. Seam integrity
    3. Attachment system to outer shell
    4. Holes or severe wear
- Coat
    1. Open up and look at collar
    2. Collar minimum 4” high
    3. Liner must be attached to shell from neck down
    4. No drooping of material below snaps
    5. Liner must be within 3” of the bottom of the coat
- Pants
    1. Liner attached to shell and extends from bottom of pant legs to top of waist
- Protective wristlets (coat only)
    1. Shrinkage
    2. Loss of elasticity
    3. Seam integrity
    4. Thumb hole elongation
    5. Holes or severe wear
- Suspenders (pants only)
    1. Shrinkage

2. Loss of elasticity
3. Seam integrity
4. Proper installation
5. Hardware

CARE AND CLEANING

Personnel will make every effort to maintain their PPE in a clean and serviceable condition. Periodic PPE inspections by the District or Battalion Chief, or Safety Officer may be used to ensure personnel are performing proper maintenance on their assigned PPE.

All PPE that has been exposed to harmful products of combustion, toxins, or other dangerous materials will be thoroughly cleaned as soon as possible after the conclusion of the incident.

PPE that has been contaminated by blood or other biohazards, and cannot be adequately cleaned at the fire station, shall be returned to Central Supply for proper cleaning.

CLEANING

PPE worn at an emergency incident will absorb and retain harmful toxins, fumes, hydrocarbons, and other materials that are dangerous to personnel. If not decontaminated, PPE can expose firefighters to harmful products of combustion or dangerous toxins long after the conclusion of an emergency. Prolonged off-gassing by contaminated PPE has been shown to expose firefighters to unacceptable amounts of harmful vapors while in an enclosed area such as the cab of an apparatus, inside one's personal vehicle, or within an assigned PPE storage area.

The following methods and techniques shall be used for cleaning assigned PPE:

Coats, Pants, Suspenders, Hood, Gloves

- Hand wash or use approved washing machines
- Do not use bleach, chlorinated solvents, or petroleum based cleaning solvents
- Heavily soiled areas may be pretreated with liquid detergent
- Use mild liquid detergent and water only for general cleaning
- If not using a washing machine, use a soft bristle brush to scrub gear
- Thoroughly rinse with clean water
- Allow to air dry or use approved dryer, do not dry in direct sunlight or excessive heat

Helmet

- Remove large encrustments from the outside of the helmet
- Do not use liquid hydrocarbons or solvents
- Use mild liquid detergent and water only for general cleaning

- Use a soft bristle brush to scrub helmet shell if needed
- Use a soft cloth to clean face shield/goggles/safety glasses
- Headband and ear flaps should be cleaned in the same manner as coat and pants

Rubber Boots

- Hand wash only
- Use liquid detergent and water only
- Use a soft bristle brush to scrub if needed
- Allow boots to air dry in a well vented area, not in direct sunlight
- Clean boot liners with mild detergent and water solution
- Dry boot liners with absorbent toweling and allow to air dry
- Do not use excessive heat to dry boot liners (radiators, ovens, hair dryers)
- Store boots in a dry, well ventilated area

Leather Boots

- Use mild saddle soap to remove lingering dirt
- Use soft bristle brush to scrub if needed
- Allow boots to air dry in a well vented area, not in direct sunlight
- To maintain leather's appearance, polish with non-alcohol based polish
- Do not use mink oil or Neat's foot oil.
- Clean boot liners with mild detergent and water solution
- Dry boot liners with absorbent toweling and allow to air dry
- Do not use excessive heat to dry boot liners (radiators, ovens, hair dryers)
- Store boots in a dry, well ventilated area

REPAIR

Any PPE that is in need of repair shall be properly tagged and delivered to Central Supply. Personnel may be issued spare PPE while their PPE is being repaired.

PPE Routine Inspection

Name: _____ Date: _____

In accordance with NFPA 1581, Firefighters should perform a routine inspection to their personal protective equipment (PPE) after each use where it has been exposed, or is suspected of having been exposed, to damage or contamination. If the PPE should fail a routine inspection, the firefighter should tag their gear as to the deficiency and notify their immediate supervisor so that the gear may be cleaned, repaired, or replaced. The routine inspection shall include at a minimum:

Inspected For:	**Bunker Coat**	**Bunker Pants**	**Hood**	**Helmet**	**Gloves**	**Boots**	**SCBA Mask**
Soiling							
Contamination from hazardous materials or biological agents							
Physical damage, such as: rips, tears, and cuts; damaged missing hardware and closure systems; thermal damage such as charring, burn holes, and melting							
Damaged or missing reflective trim			N/A		NIA		N/A
Loss of face opening adjustment	N/A	N/A		N/A	N/A	N/A	
Physical damage to shell, such as: cracks, crazing, dents, and abrasions; thermal damage to shell such as bubbling; soft spots, warping, or discoloration	N/A	N/A	N/A		N/A	N/A	
Damage or missing components of the suspension and retention system.	N/A	N/A	N/A		N/A	N/A	
Physical damage to the ear flaps such as: rips, tears, and cuts; thermal damage such as charring, burn holes, and melting	N/A	N/A	N/A		N/A	N/A	N/A
Damage or missing components of the Face shield goggle system, including: discoloration, crazing, and scratches to the face shield /goggle lens limiting visibility	N/A	N/A	N/A		N/A	N/A	N/A
Shrinkage Loss of elasticity/flexibility				N/A			
Physical damage such as: rips, tears, and cuts; thermal damage such as charring, burn holes, and melting; exposed/deformed steel toe, steel mid sole, and shank	N/A	N/A	N/A	N/A	N/A		N/A
Loss of water resistance							

Inspection Performed by: _____ Date: _____