
S.O.P. #: 400-26

SUBJECT: PROTECTIVE CLOTHING AND EQUIPMENT

DIVISION: EMERGENCY OPERATIONS

Objective: To provide a standard for the issuing and wearing of protective clothing provided by the Department that will help to ensure the safety and well-being of all personnel.

Note: Protective clothing of sufficient specifications and grade are provided to every member of the department required to operate in unsafe environments. Protective clothing that is issued to personnel but not utilized provides no level of protection. Officers in command of fire department units are strictly accountable for the implementation of all components of this procedure and the safety of assigned personnel.

Section 1: Protective Clothing Items

A. Items shall include the following:

1. Helmet--firefighting
2. Turnout coat
3. Turnout pants with suspenders
4. Turnout boots
5. Firefighting hood
6. Gloves--firefighting (2 pair)
7. Personal Alert Safety System (P.A.S.S.) device [one per riding position]
8. Personal Hearing Protection Devices
9. Self-Contained Breathing Apparatus (S.C.B.A.) [one per riding position]
10. Pocket mask with one-way valve
11. Nitrile gloves
12. Personnel Accountability Tag (2)
13. Fire Department issued face and eye protection
14. Facepiece with bag
15. Personal issued gear bag
16. NFPA 1971 compliant Leather Footwear for firefighting/EMS responses
17. One pair of station footwear steeltoe ansi approved
18. EMS responder boot

B. All items shall be provided to each uniformed member of the Fire Department.

Note: S.C.B.A., P.A.S.S. devices, and hearing protection devices shall be provided at each riding position on the apparatus, and universal protection, including gown, face mask and gloves, as well as eye protection, shall be placed on each vehicle operated by Fire Department personnel.

C. At time of purchase, all items shall meet or exceed current N.F.P.A. standards.

D. No alterations of turnout gear shall occur unless requested in writing and approved by the Fire Department Safety Officer and performed by the Quartermaster.

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E. Personal Alert Safety System (P.A.S.S.) Device for Each Riding Position

1. The P.A.S.S. device shall be worn continuously while involved in any incident.
 - a. The P.A.S.S. device shall become a part of, and be attached to, the turnout coat when the breathing apparatus is not being worn.
 - b. When your assigned equipment is released from the incident, then, and only then, will your P.A.S.S. device be deactivated and returned to the riding position of the apparatus.
2. Prior to entering a working atmosphere, check your P.A.S.S. device as follows:
 - a. Look at the light on the front of the device and make sure that the light is blinking. This indicates that your device is fully operational. (NOTE: Life Guard II does not have lights)
 - b. If your light is not blinking, this indicates that your battery is in need of replacement. If this occurs during an incident, make sure that you are always with another individual.
 - c. If your light is not blinking, follow the maintenance instructions in 3.d. below.
3. The personnel on the on-coming shift, day and night, are responsible for checking the P.A.S.S. device for their riding position as follows:
 - a. Turn the switch to the auto position by pushing in on the switch and turning in that direction.
 - b. Check to see if the light is blinking.
 - c. Place the unit on a flat surface and let it sit undisturbed for approximately twenty-five (25) seconds. If the unit is working properly, the device will begin sounding in short beeps. This is a notification that the device is prepared to go into full alarm due to the lack of movement.
 - 1) After the short beep warning, the device will go into full alarm in approximately five (5) seconds, if no movement occurs.
 - 2) Allow your device this additional time period to identify that it will function as designed.
 - 3) If your light is not blinking, follow the maintenance instructions, as stated below.
 - d. If your light is not blinking, then your batteries are in need of replacement.
 - 1) Regardless of condition, batteries will be replaced in April and October.
 - 2) To obtain batteries for the devices, use the Station Procurement Procedure currently in place in each station. Order Duracel MN-1604 type batteries or equivalent.
 - e. If your device does not function after battery replacement, it needs repair.
 - f. Each individual is responsible for the operation of their device.
 - g. In cases when there is a P.A.S.S. device in a position that is not occupied for a shift, it shall be the driver's responsibility to check the operation of this device.

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4. When the employee brings the approved gear to work, the issued gear that it is replacing shall be given to the Station Officer to be tagged and returned to Supply. The only exception will be rubber boots, which the employee may keep for use on water details.
5. The Station Officer shall document that the purchased gear does meet **all** outlined criteria and that the Department issued gear has been returned to Supply. A copy of this documentation shall be placed in the employee's personnel folder.
6. If, at a later time, the employee decides they again want Department issued gear, a form 133P shall be sent through the proper channels and the personal gear removed from the station.
7. A record of all P.A.S.S. devices assigned to the unit will be maintained in the company journal. The recorded information shall include:
 - a) The serial number of all P.A.S.S. devices assigned to the station.
 - b) Dates when the batteries are changed.
 - c) Dates of any/all needed repairs and dates completed.

Section 2: Turnout Gear Specifics

A. Turnout Coats and Pants

1. Shall be White for Chief Officers.
2. Shall be N.F.P.A. Standard #1971 Yellow or PBI Tan for all other uniformed members.

B. Boots--shall be knee length.

C. Helmets

1. Firefighting--helmet color shall be:
 - a. Chief Officers--White
 - b. Captains--Red
 - c. Lieutenants--Blue
 - d. Fire-Rescue Academy/Safety Office--Orange
 - e. All other Personnel--Yellow
 - f. Fire Investigation—Black
2. Helmet decals shall be attached as follows:
 - a. Color Guidelines
 - 1) Officers--White
 - 2) Engine/Truck Personnel and EMS Personnel--Blue
 - b. Placement guidelines
 - 1) The decals are to be centered on the front of the helmets.
 - 2) The bottom of the decal is to be placed on the seam where the helmet rim meets the helmet.

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- c. Only decals approved by the department are permitted on helmets, with the exception of the shields in Item 3 below. The individual will submit a request to the appropriate Division Chief, through the Battalion/Division Chief, for approval.
- 3. Leather helmet shields and the Cairns 1000 or 1010 shield may be substituted for the decals with all costs handled by the employee.

D. Protective Hearing Devices / Radio Headsets

- 1. Shall be worn when:
 - a. responding in emergency vehicles with warning devices operating
 - b. assisting at Medevac operations
 - c. in attendance of an Air Unit/compressor operation
 - d. in attendance of the testing of the emergency generators
 - e. using the gasoline-powered saws
 - f. using any shop-type grinders, or similar noise producing tools
 - g. operating gasoline engine driven lawn care equipment
 - h. operating or attending the pumps at the fire scene
 - i. noise exceeds the normal conversation range
- 2. Use of Disposable Earplugs:
 - a. The ear canal is made accessible by reaching over the head with the opposite hand and pulling the ear slightly up and back, prior to inserting the plug.
 - b. For maximum effectiveness, the plug should fit as snug as possible in the ear canal. Try to obtain an airtight seal.
 - c. Your own voice should sound muffled, or lower pitched to you.
 - d. Remove plugs with a slow, twisting motion, gradually breaking the seal.
 - e. Inspect the plugs regularly for signs of aging (hardening, cracks, or discoloration).
- 3. Use of the Earmuffs:
 - a. Earmuff cushions should form a seal around the entire ear.
 - b. Adjust the headband tension to obtain an acoustic seal with the earcups.
 - c. Eyeglasses, sideburns, or long hair under the cushion will prevent an adequate seal and lessen noise reduction.
 - d. Earmuffs may become loose as a result of talking and chewing. If this occurs, they must be repositioned.
 - e. Wipe Earmuff cushions clean with mild soap and water and dry thoroughly.
 - f. Replace cushions that have become hardened or damaged.
- 4. Earmuffs used as part of the equipment's communication system shall comply with items listed in 3. above.

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E. Firefighting Hood--see Appendix 2.

F. Gloves

1. Firefighting gloves--are to be worn for all fire, rescue, and Haz Mat incidents or at any incident when members are exposed to activities which might cause injury to hands..

G. Pocket Mask and Nitrile Rubber Gloves

1. Refer to S.O.P. Personnel 17: Infection Control Plan, for Universal Safety Precautions with regard to Patient Care.
2. Gloves are to be worn any time patient contact is possible.
3. Rubber gloves must be used where there are patients and/or at incidents where copious amounts of body fluids are involved and the member is in direct patient contact.
4. Pocket mask with one-way check valve shall be utilized during the performance of mouth-to-mouth resuscitation.

H. Face and Eye Protection

1. Face and eye protection shall be provided for and used by all members engaged in fire suppression and other operations involving hazards to the eye and face. The only exception is when the face is protected by the full facepiece of the S.C.B.A.
2. Goggles that can be worn over corrective glasses without disturbing the adjustment of the glasses are acceptable.
3. The helmet face shield shall be worn with approved additional eye protection.
4. Helmets issued without a face shield shall be used with either approved safety glasses and/or flexible or cushioned fitting goggles that meet the appropriate standards. Helmets issued with goggles **must** be kept as part of the helmet.
5. Safety glasses must meet ANSI Z87.1.
6. During non-IDLH operations when SCBA is not required any member using any type of gas powered saw that member and their spotter must be in a Loggers Style Helmet that provides total eye, ear, head and face protection. Those members must be in their turnout pants as well. Every career Truck Company shall carry two of those type of helmets.

Section 3: Requirements for Protective Equipment

A. Response to Incidents

1. Personnel assigned to major fire department units (engine/truck) shall be required to use hearing protection/radio headset while responding emergency to all calls for service.
 - a. S.C.B.A. or P.A.S.S. device may be donned enroute in enclosed cabs only at the discretion of the officer-in-charge.

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- b. Turnout gear is optional for drivers during responses to incidents. Turnout gear must be readily accessible as required by Two-In Two-Out procedures. Helmets must be in place once exiting the cab of apparatus at all firegrounds.
 - c. Tillerman shall be in full turnout gear while responding to emergency incidents. Helmets are required anytime the member is operating at the emergency scene. Helmets do not have to be worn while responding.
2. Emergency Medical Services personnel responding in medic units or supervisory vehicles are not required to wear turnout equipment during emergency responses, but shall follow all requirements of protective equipment use upon their arrival at an incident scene.
 3. Before permitting fire department apparatus to leave quarters on a response, the officer-in-charge shall ensure that all members assigned to the unit are in place, properly attired, seated, and safety belts in place.

B. Operating at Incidents

1. It is the policy of the Baltimore County Fire Department to provide adequate protective clothing and related equipment to all of its members. It is the responsibility of each member and their immediate supervisor to ensure that such clothing and equipment are used at all times while operating at emergency incidents, training exercises, and any other time where its use will enhance the safety and well-being of fire department personnel.
 - a. All fire department personnel regardless of assignment, duty or location shall be required to wear a helmet with chinstrap in place at all times while operating at fire, rescue or haz-mat incidents.
 - b. Personnel are not required to wear a helmet on medical incidents unless, in the opinion of the officer-in-charge, the absence of such protection would expose the member to additional and unnecessary risk.
 - c. Emergency Medical personnel shall be required to wear full protective clothing while engaged in the extrication of injured persons.
2. In order to provide for the comfort of on-scene personnel during lengthy events, the Incident Commander, in consultation with the Safety Officer, may allow personnel to remove the turnout coat.

Section 4: Identification of Turnout Gear

All turnout gear shall be marked with the Personnel Identification Number of the individual that the gear is assigned to, in the following manner:

- A. Helmets: shall be marked on the underside of the rear brim with black permanent ink marking pen. See Appendix 1.
- B. Gloves: shall be marked with permanent ink marking pens, black in color, on the outside of the gloves, as close to the wrist cuff as possible.
- C. Turnout coat: shall be marked with permanent ink marking pens, black in color, on the underside of the collar on the left side as the coat is worn.
- D. Turnout pants: shall be marked with permanent ink marking pens, black in color, on the inside near the waist section of the pants. The suspenders shall be marked with black permanent ink on the underside.

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- E. Boots: shall be marked with the black marking pens on the inside of the boots, just below the rubber coating.
- F. Firefighting hood: shall be marked with the black permanent ink pen on the underside of the shoulder section of the hood.

Section 5: Protective Clothing and Equipment Replacement and Repair Procedures

- A. Replacement or repair of all individually issued protective clothing and equipment shall be requested on a Personal Supply Requisition form.
- B. Repair of any Protective equipment not individually issued shall be Red Tagged with problem identified and either sent to Supply or the B.A. Repair Shop.
- C. Boots that are not fit for suppression operations will be discarded by the Quartermaster.
- D. Any member needing turnout coat, pants, helmet, hood, or firefighting gloves shall report to the Supply Depot with a Form 133-P signed by his/her company commander. All PPE exchange is one for one at the Supply Depot, not via departmental mail or driver messenger.

Section 6: Contamination of Protective Clothing.

- A. Any and all protective equipment contaminated on an incident shall be immediately examined by the Incident Commander. After the Incident Commander's examination, the protective clothing shall be IMMEDIATELY removed from service and bio bagged. A Form #58 explaining the nature of the contamination shall be completed and forwarded to the Safety Office and Quartermaster.
- B. Upon determination, by a Division/Battalion Chief or above, that the gear is contaminated beyond the point of cleaning, personnel should utilize loaner gear that is available at Station 1 in designated lockers. A key for the locker is available at Station 1. Replacement gear will be ordered as soon as possible using normal quartermaster procedures. At no time will the Quartermaster deny a request for replacement gear after a Division/Battalion Chief or above has determined the gear unusable.

Section 7: Inspection of Turnout Gear

- A. Formal gear inspection utilizing the Form #35 shall be conducted twice per year, in January and July. The January inspection is conducted by the Battalion/Division Chief while the July inspection is conducted by the Captain. Inspection report form #35 will be stored at the member's station for one year. Any defects found during the inspection will be repaired or replaced in a timely manner.

Section 8: Line of Duty Injury/Death

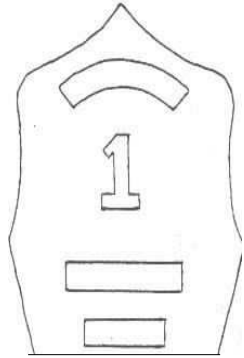
- A. Immediately secure the scene and seize all Personal Protective Equipment being utilized by the injured member(s). Notify the on-duty Safety Officer for follow up investigation/instruction.
- B. If deemed life threatening or line of duty death, refer to S.O.P. Personnel 16 for guidance.

APPENDIX 1

- A. Purpose: With approval of the Fire Chief, each member of the Baltimore County Fire Department has the option of wearing the County issued helmet and boots or their own under the following requirements:.
- B. Requirements:
1. Members responsibilities:
 - a. All approved, purchased equipment must be presented to their Division/Battalion Chief with certifications prior to use.
 - b. All equipment must have and retain an affixed NFPA label.
 - c. If the member chooses to wear an alternate helmet or boots, all responsibility and costs for purchase and maintenance will be borne by the member.
 2. Helmets:
 - a. NFPA and OSHA approved leather style helmet, Cairns N6A1 Sam Houston, Phoenix TL2, Cairns 1044, Cairns 1000 and 1010 are the only types allowed under this S.O.P.
 - b. The member must return their County issued helmet to Supply via their Division/Battalion Chief. Should the member decide, at a later date, that they no longer want to wear their personal helmet the County helmet will be re-issued.
 - c. The alternate helmet will be maintained at all times with the “full face shield” or goggles in place.
 3. Helmet color must comply to the standard currently used in the Baltimore County Fire Department.
 - a. Chief Officers - White
 - b. Captain - Red
 - c. Lieutenant - Blue
 - d. All other personnel - Yellow
 - e. Fire-Rescue Academy/Safety Office – Orange
 - f. Fire Investigation – Black
 4. Front piece colors shall be in accordance with the National Standards
 - a. Engine Company Personnel - Blue
 - b. EMS Personnel - Blue
 - c. Truck Company Personnel - Blue
 - d. EMS Officers - White
 - e. Suppression Officers - White
 - f. Chief Officers- White (Gold leaf shall be an option)
 5. The standard style leather front piece shall be allowed (the style previously used by the Baltimore County Fire Department). The following colors shall be used.
 - a. Engine Company Personnel - Black front piece with White letters/numbers on a Black background, and White Company number.
 - b. EMS Personnel - Same as above.
 - c. Truck Company Personnel - Black front piece with White letters/numbers on a Black background, White Company number.
 - d. Suppression Officers - White front piece with White letters/numbers on a Black background, Black Company number.
 - e. EMS Officers - Same as above.

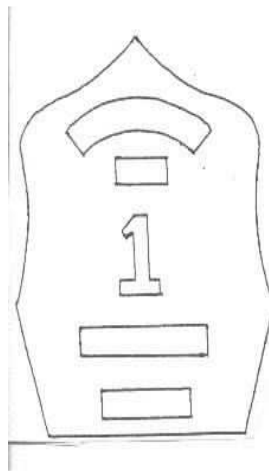
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- f. Chief Officers - White front piece with White letters/numbers on a Red background, Black Company number.



- Engine or Truck
- Company Number
- B. Co. F. D.
- Badge or Initials

STANDARD STYLE front piece for Firefighters



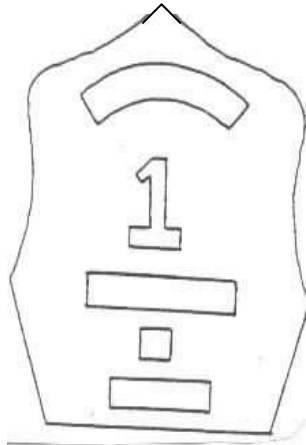
- Captain or Lieutenant
- Engine or Truck
- Company Number
- B. Co. F. D.
- Badge or Initials

STANDARD STYLE front piece for Suppression Officers



- Lieutenant/Captain
- EMS
- Vehicle #
- B. Co. F. D.
- Badge or Initials

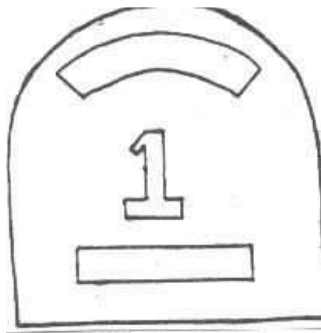
STANDARD STYLE front piece for EMS Officers



- Battalion Chief (etc.)
- Number or Round Badge
with Bugles
- Balto. Co.
- F. D.
- Initials

STANDARD STYLE front piece for Chief Officers

C. If a member has a leather front piece for the issued 660C, it must comply with the following front piece layout.



- Balto. Co.
- Number
- Fire Dept.

D. Approval procedures




1. The Battalion/Division Chief(s) of Operations is to approve each helmet prior to use.
 - a. Check the label on the inside of the shell; it will list that the helmet is both NFPA and OSHA approved.
 - b. If the label does not list both approvals, it is not to be approved.
 - c. The Burke eye shields are not accepted.
2. Division/Battalion Chiefs are to forward the County issued helmet to Supply with a Form #58 listing the individual(s) who are now wearing an approved alternate helmet.

APPENDIX 2

Below are the recommended manufacturer's instructions for use and will therefore be employed by our Department.

**DIRECTIONS FOR WEARING
PROTEXALL'S COBRA KNOT HOODS
WITH BREATHING MASK**

Always wear breathing masks under Protexall's COBRA Fire Fighting Hoods. This will allow breathing mask to seal against face, and protect mask straps from flames and intense heat.



1.
Pull hood face opening over head so hood is around neck.

2.
Put on breathing mask and adjust straps.

3.
Pull hood up and over back of head, covering mask straps. Put on helmet.

APPENDIX 3

A. Purpose: With approval of the Fire Chief, each member of the Baltimore County Fire Department has the option of wearing a Life Safety/Rescue Harness temporarily affixed to the county issued turnout pants.

B. Harness Approval Process

1. The harness must meet the current NFPA 1983 applicable Standard.
2. All costs for the harness and training will be the responsibility of the employee.
3. Approval for the use of the harness must be in writing from the Safety Office. Included in the approval request, individuals shall provide:
 - a. Certification of training.
 - b. Verification by Battalion/Division Chief that equipment meets the current standard.
4. All employees wishing to purchase and utilize the harness must receive training in the use, care, and inspection of the harness.
5. The training program for the harness will be sanctioned and approved by the ATR Team and may be administered by the Fire-Rescue Academy.

C. Installation of Securing Tabs

1. The harness tabs must be installed to allow for removal of the harness for cleaning and repair of the pants.
2. The vendor utilized to install the tabs must be approved by the department, and must be the current contract vendor.
3. The tabs must be installed to meet the manufacturer's specification for such appliances, and must meet current vendor requirements on turnout gear.
4. The material used must be in accordance with the current material utilized in the specification for protective clothing in accordance with current department vendor of turnout gear.
5. All costs associated with the installation will be the responsibility of the employee.

D. Care and Inspection

1. All care and inspections shall meet manufacturer specifications, as well as any applicable NFPA Standards, such as NFPA 1983 and NFPA 1971.
2. The harness must be inspected twice per year, in January and July. The inspection process shall be in accordance with Section 7 of the procedure.
3. Following each use and/or exposure to interior firefighting conditions, the harness shall be inspected by the employee in accordance with the manufacturer's recommendations.
4. If any harness is found to have damage that meets the serviceability criteria of the manufacturer then the harness must be placed out of service and forwarded to the manufacturer for repair or replacement.
5. The harness shall be cleaned in accordance with the manufacturer's recommendations and air dried. The harness will not be cleaned with a bleach containing solution.
6. Personnel are not permitted to modify the harness in any way.

APPENDIX 3 (continued)

E. Use of the Harness

PERSONNEL CLASS II HARNESES ARE OPTIONAL FOR INDIVIDUALS. THEY ARE NOT TO BE UTILIZED FOR DEPARTMENT RESCUE OPERATIONS; ONLY HARNESES PROVIDED BY THE DEPARTMENT WILL BE USED ON DEPARTMENT SANCTIONED EMERGENCY OPERATIONS.

FOLLOWING ARE SUGGESTIONS FOR PERSONAL USE:

1. While operating on a ladder the harness must be affixed to the ladder by means of the ladder hook.
2. The harness shall be worn while functioning on emergency incidents.
3. The harness shall be used in concert with NFPA approved devices for life safety rope and accessories as outlined in NFPA 1983.
4. Personnel must inspect the harness at the beginning and end of their respective shift.
5. Any harness subjected to an "impact load" (free fall greater than 3 feet) must place the harness out of service and have it inspected by the manufacturer.
6. All costs associated with the use, care, and maintenance of the harness are the responsibility of the employee.

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APPENDIX 4 A



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APPENDIX 4 B



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APPENDIX 4 C

