



Fire Protection Training

Procedures Handbook 4300

PERSONAL PROTECTIVE EQUIPMENT

TOPIC: Personal Alert Safety System (PASS)

TIME FRAME: 30 Minutes

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will identify the uses and functions of the personal alert safety system (PASS)

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- Personal alert safety system (PASS)
- Appropriate visual aids
- Written quizzes

REFERENCES:

- Manufacturer's literature
NFPA, Standard 1982, 1988 Edition

PREPARATION: Firefighting is a job in which any number of conditions can trap or render a firefighter unconscious. A personal alert safety system (PASS) worn by firefighters is designed to emit an audible alarm signal to summon aid in the event the firefighter becomes incapacitated or needs assistance.

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PERSONAL ALERT SAFETY SYSTEM (PASS)

PRESENTATION	APPLICATION
<p>I. COMPONENTS</p> <p>A. Case</p> <ol style="list-style-type: none"> 1. Outer shell which protects the internal workings of the (PASS) and a storage area for the batteries <ol style="list-style-type: none"> a. Powered by single 9 volt battery b. Must withstand following tests <ol style="list-style-type: none"> (1) Rain resistance/drainage (2) Elevated operating temperature of 160oF for 4 hours (3) Low operating temperature of - 40oF (4) Case integrity test of 442 pounds (5) Dust intrusion (6) Flame resistance (7) Impact tests 2. Entire unit shall not weight more than 16 ounces <p>B. Retention System</p>	<p>CDF uses many different Personal Alert Safety Systems, but each must comply with NFPA Standard 1982</p> <p>NFPA Standard 1982</p>

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<p>1. Normally a clip which allows the wearer to attach the PASS to the safety uniform or the SCBA waist strap</p> <p>C. Switch/Knob</p> <p>1. A three position function or mode selector</p> <p>a. "Off" - non-operational position with no drain on the battery</p> <p>b. "On" - alarm signal is activated within 2 seconds and signals continuously in this mode</p> <p>(1) Wearer manually turns alarm "on" when in distress</p> <p>(2) With fully charged battery will last 4 hours</p> <p>(3) Alarm signal shuts off only when it is manually shut off or battery is discharged</p> <p>c. "Arm" - this is the automatic mode which the PASS is put in during normal operations</p> <p>(1) Within one second of turning switch/knob to "arm" or automatic mode an audible tone will sound indicating the unit is functioning properly</p> <p>(2) If the wearer is motionless for 30 seconds, a pre-alert signal will sound</p>	<p>Device should be worn with the switch readily accessible in low light environment</p>

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<p>(3) If the wearer is motionless for an additional 10 seconds, after the pre-alert sounds, the alarm signal will sound continuously until manually shut off or the battery is discharged</p> <p>D. Motion Detector - an Internal Part which Senses Movement or Lack of Movement and Activates the Alarm when in "Arm" Position</p> <ol style="list-style-type: none">1. Generally a vibrating spring device which moves rapidly and activates alarm when vibration stops <p>II. DESIGN AND PERFORMANCE REQUIREMENTS</p> <p>A. Switch/Knob Must be Operable with Gloved Hand</p> <p>B. Two Separate Actions Must Be Taken to Change from "Arm" Automatic to "Off" Mode</p> <ol style="list-style-type: none">1. Meant to prevent accidental deactivation2. Example:<ol style="list-style-type: none">a. Push switch/knob downb. Turn switch/knob off <p>C. Motion Detector Must Operate at All Angles of Use</p> <p>D. Low Battery Warning Signal Must be Audible in Automatic Mode When Remaining Battery Life is One Hour or Less</p>	<p>Pre-alert signal will be canceled by movement of the PASS. Upon cancellation the unit will return to the "arm" or automatic mode</p>

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<ul style="list-style-type: none">E. Pre-alert Signal Must be Capable of being Canceled by Moving Without the Use of the Wearers HandsF. Newer Models Signal Wearer When Temperature Exceeds a Pre-set Level by Use of Heat Sensors	
<p>III. PERSONAL ALERT SAFETY SYSTEM (PASS) DEVICES SHOULD BE WORN:</p> <ul style="list-style-type: none">A. During RescuesB. During FirefightingC. During Other Hazardous Duties	
	<p>List examples of when to wear a PASS</p> <ul style="list-style-type: none">1. Structure fire2. Below ground operations3. Confined space operations4. Hazardous materials operations5. Nighttime operations
<p>IV. CARE AND MAINTENANCE</p> <ul style="list-style-type: none">A. Test Unit Prior to Using<ul style="list-style-type: none">1. Place PASS on a flat surface2. Push and turn knob or switch to the "automatic" or "arm" position3. Device should signal it is operational	

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<ul style="list-style-type: none">4. After remaining motionless for 30 seconds, pre-alert should sound5. Within 10 seconds PASS should go into full alarm6. Push and turn switch or knob to "off" position <p>B. To Replace Battery</p> <ul style="list-style-type: none">1. Remove battery cover<ul style="list-style-type: none">a. Loosen screwsb. Loosen caps2. Lift old battery from its compartment3. Remove connectors from top of old battery4. Reattach connectors to positive and negative terminal of new 9 volt battery5. Place new battery in its compartment6. Check, replace or repair gasket seal on battery cover to maintain dust and water integrity. <p>C. Other Than the Battery, There are No Wearer/User Serviceable Parts on a PASS</p>	

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SUMMARY:

The purpose of a Personal Alert Safety System (PASS) device is to summon aid in the event a firefighter becomes incapacitated or needs assistance. In order to perform this function , the unit must be tested frequently and worn properly.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).