

Bunker Gear Wear Test Evaluation Protocol

Participant data for evaluation/follow-up

REFERENCE Document: NFPA 1851 / Selection / Annex A.5.1

Prior to starting the selection process of structural or proximity firefighting ensembles and ensemble elements, a risk assessment should be performed. A risk assessment should consider and include, but not be limited to, type of duties performed; frequency of ensemble element use; organization's experiences; incident operations; geographic location and climate.

Based on this risk assessment, the organization should compile and evaluate information on the comparative strengths and weaknesses of the elements under consideration and that they interface properly with other personal protective items being used. When a field evaluation is being conducted, the organization should establish criteria to ensure a systematic method of comparing products in a manner related to their intended use. Assess their performance relative to the organization's expectations.

The committee should consist of the department Safety Officer and interested individuals representing a cross section from both labor and management who have several years of experience in firefighting activities.

The purpose of the evaluation is to improve the organization's criteria over existing specifications. To accomplish this, five areas are identified as quantifiable parameters. These are: Technical Performance, Preparation, Fit and Function, Performance and In Service.

INSTRUCTIONS

There are four forms attached.

A) Technical Performance Form – completed once at the beginning of the evaluation by the committee. This information should be obtained from the element manufacturer and should be verified (example: product literature, certification documentation, etc.). All data should be considered relative and the committee should educate themselves on acceptable ranges of performance. The committee and each wear test participant should receive a product presentation from each manufacturer or manufacturer's representative.

B) Preparation Form – completed once at the beginning of the evaluation by the individual wear test participant. This covers proper fit, familiarity of construction features and any special preparation such as washing of the garment prior to use.

C) Performance Form – completed once during scheduled wear trial evaluation on training ground.

D) In Service Form– completed repetitively through duration of shift evaluation, a period recommended to be several months extending through at least two seasons. This form should be completed at each rotation of brand or manufacturer. At the end of the evaluation, the scores and subjective comments should be tabulated. An Excel spreadsheet can be utilized to accomplish this.

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TECHNICAL PERFORMANCE FORM

Reference Document: NFPA 1971, 2007 Edition.

Manufacturer: _____ Model: _____

Date: _____

Composite Performance

(Outer Shell/Moisture Barrier/Thermal Liner). Consideration should be given to the optimal balance of TPP and THL based on the risk assessment. Spot thermal insulation should be used to enhance areas identified as potential burn hazards. If higher values are desired above the NFPA minimums, the minimum values below should be increased.

7.1.1 Thermal Protective Performance (TPP) Minimum 35 _____

7.2.2 Total Heat Loss (THL) Minimum 205 _____

7.1.6 Conductive Compressive Heat Resistance (CCHR) Minimum 25 (knees and shoulders) _____

Note – Some test methods do not take into account moisture in the system. Therefore, consideration should be given to actual field performance when water, sweat, garment weight and heat conductivity become factors.

Outer Shell Performance

Consideration should be given to the need for strength, durability and color fastness.

7.1.12 Trapezoidal Tear Resistance Minimum 22 _____

7.1.18 Water Absorption Resistance Minimum 30% _____

Notes – Taber abrasion is not a required NFPA performance test, shows no correlation to durability or actual wear life and has been shown to provide inconsistent results. Color fastness is affected by the method of dyeing. The committee should become knowledgeable about the various methods of fabric dyeing.

Moisture Barrier Performance

Considerations should be the desired breathability (based on composite performance – see above) and durability.

Thermal Liner Performance

Considerations should be based on desired thermal insulation (based on composite performance – see above), working weight, comfort and moisture management needs.

Thermal Liner Face Cloth

Consideration should be given to the lubricity of the thermal liner face cloth. The higher the lubricity of the face cloth, the less friction against the skin or station work uniform, which aids in comfort and donning.

Water Absorption

Minimizing the amount of water absorption in the system reduces the risk of burn injury. If possible, the following assessments should be made. This portion should be completed by the safety committee. See methodology to be used in the Preparation document immediately following.

Turnout Pants Water Wicking Weight Gain Dry Weight _____ Wet Weight _____

Turnout Coat Water Absorption Weight Gain Dry Weight _____ Wet Weight _____

Turnout Coat Water Weight at Two Hours Two-Hour Weight _____

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PREPARATION FORM

The participant should familiarize themselves with the manufacturer’s User Instructions, the garment closure system, DRD, and product features (such as pockets, accessories, and any other unique components such as safety harnesses or belts).

Fit and Function:

Sizing and Interface – The following should be evaluated prior to wearing the garments in order to ensure proper fit. If you check no to any of the following, the garment should be properly adjusted prior to use.

Fit and Function	YES	NO
Are the sleeves the appropriate length for the gloves worn?	<input type="checkbox"/>	<input type="checkbox"/>
Are the pants the appropriate length for the boots worn?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a minimum of 2" overlap of the coat and pants when reaching?	<input type="checkbox"/>	<input type="checkbox"/>
Is the pants waist the appropriate size?	<input type="checkbox"/>	<input type="checkbox"/>
Is the coat chest diameter the appropriate size?	<input type="checkbox"/>	<input type="checkbox"/>
Is the DRD the correct size and secured correctly?	<input type="checkbox"/>	<input type="checkbox"/>

Washing:

All turnout samples should be washed once prior to wearing according to NFPA 1851. Subsequent washings should take place during the in service period and an assessment of durability completed at the end of the evaluation. Fabric tears should be noted as to cause, since any fabric or reflective trim can tear when exposed to sharp objects.

Note – Contact the distributor if any normal fabric tears or ensemble defects arise during the evaluation period. This provides you with an opportunity for a service evaluation based on response to the rapidity of the repair and the return of the ensemble.

Wicking and Weight Gain and Drying:

Water wicking upward in the turnout gear can result in fire fighter steam burns, knee compression burns and undesirable weight gain. The following evaluation will be done following the washing and 24-hour drying. The information obtained in this evaluation should be included on the preceding Technical Performance Form.

- a) Immerse the lower legs (starting at the pants cuff) of the turnout pants in four inches (4") of water for 15 minutes. Weigh the turnout pants (a simple fish type scale is sufficient) before and after the immersion and the resulting weight gain will be recorded on the Technical Performance Form.
- b) The turnout coat, outer shell and thermal liner will be completely submerged in water for 15 minutes. Weigh the turnout coat (a simple fish type scale is sufficient) before and after the immersion and the resulting weight gain will be recorded on the Technical Performance Form.
- c) Immediately following (b), hang the turnout coat on a hook. After a period of two hours, weigh the turnout coat for a second time using the same scale. The weight will be recorded on the Technical Performance Form.

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PERFORMANCE FORM

Manufacturer _____ Model _____

Serial Number _____ Participant Name _____

The evaluator should be properly hydrated. The recommendation is for each evaluator to consume 8 oz. of water prior to the start of each exercise. The exercises should be completed at a moderate pace with the evaluator focusing on the garment performance.

The evaluators and manufacturer brands should be mixed in consideration of the ambient temperature increase from morning to afternoon, with the intent of minimizing the impact on the evaluation.

The committee should note below the environment and consider this when analyzing scores (information should include ambient conditions: temperature, humidity, etc.; burn facility conditions: temperature, etc.).

Ladder Raise: As a member of a team, retrieve a 24' ladder from the engine. Raise, secure and climb the ladder to the height of the fly section to lock in.

Rate the following on a scale of 1-10 ("10" being most favorable):

Flexibility of the knees	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Flexibility of the crotch and thighs	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Flexibility of the shoulders	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Flexibility of the arms and elbows	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Overall cut of the pants	Bulky	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Conforming
Overall cut of the coat	Bulky	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Conforming
Overall comfort of the pants	Uncomfortable	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable
Overall comfort of the coat	Uncomfortable	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable

Advancing a Preconnect: Advance a 1 3/4" preconnect, charge the line and flow water to knock over three traffic cones placed at positions of 9, 12 and 3 o'clock, maneuvering the line each time so it is aligned with the cones.

Rate the following on a scale of 1-10 ("10" being most favorable):

Flexibility of the pants	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Flexibility of the coat	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Overall comfort of the pants	Uncomfortable	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable
Overall comfort of the coat	Uncomfortable	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable

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SCBA Confidence Course: Complete the fire department's authorized course.

Rate the following on a scale of 1-10 ("10" being most favorable):

Flexibility of the knee when crawling	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Padding in the knee for thickness	Insufficient	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Sufficient
Padding in the knee for bulkiness	Bulky	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Not Bulky
Flexibility of the shoulders	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Flexibility of the arms and elbows	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Collar effectiveness and comfort	Uncomfortable	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable

Live Fire: Complete the fire department's authorized live fire exercise, such as "Burn to Learn" or other. Minimum should be entry with a charged 1 3/4" handline, advance to seat of fire and drag a dummy out of the burn building.

Note – The burn exercise should be completed twice using the same turnouts with a sufficient rehab break for hydration. The evaluator should note that on the first entry the turnouts will be at ambient temperature and relatively dry. Then note on the second entry how much "stored energy" and sweat/weight gain has occurred and the effect on task fulfillment.

Rate the following on a scale of 1-10 ("10" being most favorable):

First entry – overall function of the pants	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
First entry – overall function of the coat	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Second entry – protective effectiveness	Restrictive	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Second entry – water/weight gain	Uncomfortable	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable
Second entry – overall comfort of the pants	Uncomfortable	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable
Second entry – overall comfort of the coat	Uncomfortable	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable

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IN SERVICE FORM

This form needs to be completed after each shift that the garment was used and for each manufacturer's brand.

Manufacturer _____ Model _____

Serial Number _____ Participant Name _____

Date _____ Was this gear used at a structure fire this shift? Yes No

Please rate the turnout gear on a scale of 1-10 ("10" being favorable)

Stiff	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Difficulty donning	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Ease of donning
Difficulty doffing	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Ease of doffing
Discomfort with SCBA	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfort with SCBA
Poor SCNA interface with pockets	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Good SCBA interface with pockets
Poor shoulder flexibility with SCBA	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Good shoulder flexibility with SCBA
Difficult coat/collar closure	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Good coat/collar closure
Insufficient padding on shoulders	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Sufficient padding on shoulders
Inflexibility of arms and elbows	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexibility of arms and elbows
Dislike pant closure/belt	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Like pants closure/belt
Insufficient padding in knees	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Sufficient padding in knees
Inflexible when kneeling	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible when kneeling
Coat is too hot to work in	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Coat is cool to work in
Pants are too hot to work in	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Pants are cool to work in
Turnouts are heavy	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Turnouts are light
Pockets are inadequate	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Pockets are adequate
Suspenders are uncomfortable	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Suspenders are comfortable
Dislike the design/looks	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Like the design/looks
Unsatisfactory fit	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Satisfactory fit
Uncomfortable turnouts!	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable turnouts!

I rate the use of these turnouts this shift as (check one): Exceptional Acceptable Marginal Unacceptable

Please write a statement about the overall fit and function of the gear and elaborate on any very positive or very negative scores you gave above.

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Brand/Model: _____ Shell/Liner: _____

Please complete and return to Chief _____ upon completion of wear test.

Fire Department Name: _____

Your name: _____ Rank: _____ Phone# _____

Station # _____ Address: _____ Shift: _____

Dates Tested: From: _____ To: _____

Approximate # of Runs: _____ # of Working Fire Calls: _____

Wearer Acceptability Scale for Fire Fighter Clothing

PLEASE RATE THE PROTECTIVE GEAR ON THE FOLLOWING FEATURES:

(Rate on a scale of 1-10... "10" being most favorable. Please check only one rating per question.)

Heavy	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Light
Stiff	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Flexible
Hard to put on	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Easy to put on
Too hot to work in	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Cool to work in
Body is <u>not</u> adequately covered	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Body is adequately covered
Restricted movement of arms	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Freedom of movement of arms
Restricted movement of shoulders	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Freedom of movement of shoulders
Restricted movement of waist	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Freedom of movement of waist
Restricted movement of the crotch area	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Freedom of movement of the crotch area
Restricted movement of knees	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Freedom of movement of knees
Restricted movement in crawling	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Freedom of movement in crawling
Restricted movement in climbing	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Freedom of movement in climbing
Unsatisfactory fit	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Satisfactory fit
Non-functional design	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Functional design

Bunker Gear Wear Test Evaluation

Participant data for evaluation/follow-up

Reflective trim is inadequate	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Reflective trim is excellent
Pockets are inadequate	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Pockets are excellent
Wristlet/Waterwell non-functional	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Wristlet/Waterwell very functional
Uncomfortable collar	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Comfortable collar
Poor protection at knees/elbows	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Good protection knees/elbows
Dislike Gear	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>	Like Gear

A. Clothing Wear Assessment - Please describe your view of the overall performance of the gear during firefighting activities.

B. Wear/Abrasion - Describe your impressions

C. Describe the gear's ability to keep you cool during fire ground activities associated with both fire suppression and overhaul operations.

D. Did you clean the gear? If so, please explain how and with what cleaning detergent.

E. Did you have any problems donning the turnout gear? - Explain.

F. Please describe any way in which the gear interfered with the wearing or use of the rest of your protective ensemble.

Bunker Gear Wear Test Evaluation

Participant data for evaluation/follow-up

TURNOUT COAT FIT AND FUNCTION:

A. Overall: Excellent Good Fair Poor

B. Arm Mobility (shoulders, elbows)

Comfortable Somewhat Restrictive Too Restrictive

If restrictive, during what activity or arm motion? _____

TURNOUT PANTS FIT AND FUNCTION:

A. Overall: Excellent Good Fair Poor

B. Leg mobility (hip, knee, crotch)

Comfortable Somewhat Restrictive Too Restrictive

If restrictive, during what activity or leg motion? _____

OVERALL EVALUATION:

What features of turnout gear to you feel are most important to safety? _____

Would you recommend the gear to your department? Yes No

Additional Comments: _____
