

## **PHYSICAL AGILITY TEST, ORIENTATION & PRACTICE SESSION GUIDE**

This manual has been developed to introduce you to the King George Fire, Rescue & Emergency Services Department's Physical Ability Test (KGPAT). The test consists of a series of tasks designed to assess important physical abilities necessary for effective job performance as a firefighter. These tasks were developed to mirror real situations that firefighters encounter on the job. These tasks represent basic skills that do not require training or previous experience as a firefighter to successfully complete.

The selection process for firefighters is very competitive. Although you are not required to read or use this Orientation and Preparation Guide, we encourage you to do so. The more prepared you are, the more likely you are to pass the test.

There are six job-related physical ability test components that are timed in a continuous series. The following is an overview of the components/stations of the KGPAT:

- Stair climb with equipment
- Vertical ventilation/forcible entry simulation (Keiser Sled)
- Charged hose line advance
- Ladder extension
- Victim rescue (dummy drag)
- Ceiling breach and pull

The following points should help to familiarize you with what will take place on the day of the test.

- ❖ Applicants are strongly encouraged to wear athletic shoes (sneakers) and appropriate clothing for physically demanding work (shorts or long pants). You will be performing physical acts that demonstrate strength, agility, and endurance, and it is important to be outfitted in attire that does not hinder your performance. During the KGPAT, you may get dirty and/or wet from maneuvering through the components. Plan your dress accordingly.
- ❖ A fire helmet, fire gloves, turnout coat, and SCBA are required and will be provided at the test site for your use. You may bring your own fire helmet, fire gloves, and turnout coat to use; however, the testing authority reserves the right to disallow any and all candidate supplied equipment, to ensure that its use does not affect the fair and impartial administration of the KGPAT.
- ❖ Applicants must wear a self-contained breathing apparatus (SCBA), excluding the face piece and regulator, for all components of the KGPAT. The SCBA bottle will be full. The SCBA weighs approximately 25 pounds.
- ❖ **All six components of the KGPAT will be timed in a series. The test has a cutoff time and failure to complete the course in the allowed time will result in disqualification. The test will be scored on a pass-fail basis. An overall time equal to or below 10 minutes is passing; greater than 10 minutes is failing. The inability to perform any of the tasks in the manner described below may also constitute test failure**
- ❖ **You must not run during the test.** You may move at a fast pace without meeting the definition of running. Running is defined as any time both feet are off the ground at the same time while you are advancing on the course. Failure to heed a first warning not to run will result in disqualification. You may move as fast as you like, while remaining safe,

on the hose drag and stair climb stations as it is not technically possible to run during these components.

- ❖ Test monitors will be assigned to time you while on the course. It is acceptable to ask the test monitor questions concerning course rules and layout prior to beginning the course and while on the course.
- ❖ You will be allowed as much time as needed to complete each individual component of the KGPAT within the maximum allotted time. Should you perform one of the components incorrectly, the test monitor will guide you as to how to correct your actions or to perform the component again. Pay careful attention to the instruction of the test monitor and ask for clarification when needed.
- ❖ Unnecessarily dropping, throwing or other **intentional misuse** of any of the testing props will be grounds to disqualify the candidate. If a candidate is observed by any of the test administrators misusing the test props, the candidate will be immediately escorted from the test site and registered as having failed the test.

It is the expectation of the King George Fire, Rescue & Emergency Services Department that this orientation guide will provide you with sufficient information to prepare for and succeed in the KGPAT. The six events that compose the King George Physical Ability Test are outlined for you on the following pages, along with suggestions for preparing for each event.



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*Please note that suggestions regarding preparation activities are simply suggestions intended to offer the candidate a means of practicing for the KGPAT. These are only suggestions. The King George Fire, Rescue & Emergency Services Department cannot be held responsible for injuries or expenses incurred during preparation for the KGPAT.*

# EVENTS

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## EVENT 1- STAIR CLIMB

### EQUIPMENT

- ❖ Step Box— NOTE: Position the box on a level surface as to ensure to “rocking” of the box during the event.
- ❖ High Rise Pack — NOTE: The high rise pack should be located pre-bundled in the center of the box.

### PURPOSE OF EVALUATION

This event is designed to simulate the critical tasks of climbing stairs in full protective clothing while carrying a high-rise pack (hose bundle) and climbing stairs in full protective clothing carrying fire fighter equipment. This event challenges the candidate’s aerobic capacity, lower body muscular endurance and ability to balance. This event affects the aerobic energy system as well as the following muscle groups: quadriceps, hamstrings, glutes, calves, and lower back stabilizers.

### EVENT

During these 6 events, the candidate is required to wear the required KGPAT PPE including: bunker coat, fire helmet, fire gloves, and SCBA. In addition, a high rise pack containing 50’ 2.5” hose will be used to simulate the advancement of hose line to an interior stand pipe connection. The candidate must shoulder the hose bundle, then step both feet up onto the box. Once both feet have returned to the ground, this will count as 1. This step will be repeated for a total of 30 repetitions. The candidate then walks 35 feet (10.69m) within the established walkway to the next event.

### The following practices are allowed:

- ❖ The candidate is allowed to carry the hose bundle anyway they feel the most comfortable so long as it stays shouldered

### The following practices constitute a failure:

- ❖ The candidate falls or drops the hose bundle after the start of the test
- ❖ The candidate fails to finish 30 repetitions

### Reasons for failure:

- ❖ Falling demonstrates poor balance or muscular endurance and could cause injury to the candidate.
- ❖ Allowing the hose bundle to fall demonstrates a lack of aerobic and/or anaerobic ability required to carry the multiple hoses and tools required for firefighting operations to a critical area



## EVENT 2- KEISER FORCE MACHINE

### EQUIPMENT

- ❖ Keiser Force Machine with specifically designed 9lb dead blow sledge hammer and I-Beam

### PURPOSE OF EVALUATION

This event is designed to simulate the critical tasks of vertical ventilation and/or forcible entry. It provides an efficient and durable means of training or testing individuals who use axes and sledgehammers in their occupation. The movement is biomechanically correct, accurately reflecting structural firefighting tasks

### EVENT

The candidate, utilizing the provided sledgehammer, must strike the Keiser sled in a downward motion. The candidate will continue striking the sled until it has moved the required distance, past the first set of numbers 1-10. The candidate will be told when to stop. If the candidate throws the sledge, the candidate will fail. This event challenges candidate's aerobic capacity, upper body muscular strength, lower body muscular strength, balance, grip strength, and anaerobic endurance. This event affects the aerobic and anaerobic energy systems as well as the following muscle groups: biceps, deltoids, upper back, trapezius, muscles of the forearm and hand (grip), glutes, quadriceps, and hamstrings. The candidate then walks 35 feet (10.69m) within the established walkway to the next event.

#### The following practices are allowed:

- ❖ The candidate is to allowed to hold the sledge hammer in any position they feel comfortable so long as there is no imminent danger of the handle slipping

#### The following practices constitute a failure:

- ❖ The candidate falls at any time once the test has begun
- ❖ The candidate uses the sledge hammer to "drag" the I-Beam
- ❖ The candidate fails to move the I-Beam past the number first number 10
- ❖ The candidate throws the sledge hammer

#### Reasons for failure:

- ❖ Falling demonstrates poor balance or muscular endurance and could cause injury to the candidate.
- ❖ Dragging the I-Beam does not reflect the correct methods for simulating a vertical ventilation/forcible entry task

## EVENT 3- HOSE DRAG

### EQUIPMENT

- ❖ 200 feet (60 m) of double jacketed 1 3/4-inch (44-mm) hose - hose is marked at 8 feet (2.44 m) past the coupling at the nozzle
- ❖ Fog Nozzle - 6 lbs. (± 1lb), 3 kg (± .5 kg)

### PURPOSE OF EVALUATION

This event is designed to simulate the critical tasks of dragging a charged hose line from the fire ground throughout the fire occupancy. This event challenges the candidate's aerobic capacity, lower body muscular strength and endurance, upper back muscular strength and endurance, grip strength and endurance, and anaerobic endurance. This event affects the aerobic and anaerobic energy systems as well as the following muscle groups: quadriceps, hamstrings, glutes, calves, lower back stabilizers, biceps, deltoids, upper back, and muscles of the forearm and hand (grip).

### EVENT

During this event, the candidate grasps a fog nozzle attached to 200 feet (60 m) of 1 3/4-inch (44-mm) hose. The candidate places the hose line over the shoulder or across the chest, not exceeding the 8-foot (2.44-m) mark. The candidate drags the hose 100 feet (22.86 m) to a prepositioned cone. The candidate then places the nozzle on the ground just past the cone. This concludes the event. The candidate walks 35 feet (10.69m) within the established walkway to the next event.

#### The following practices are allowed:

- ❖ The candidate is permitted move as expediently as possible

#### The following practices constitute a failure:

- ❖ The candidate grabs the hose beyond the marked 8 foot mark
- ❖ Violently or uncontrolled placement of the nozzle onto the ground

#### Reasons for failure:

- ❖ Grabbing the hose beyond the 8 foot mark gives the candidate a mechanical advantage that may not be available on the fire ground. This demonstrates a lack of upper body strength by using lower body strength to compensate.
- ❖ Throwing down the nozzle has the potential to cause damage to equipment or allow the bale to open. This can create an uncontrolled fire stream which poses a hazard to all of those nearby

## **EVENT 4- LADDER EXTENSION**

### **EQUIPMENT**

- ❖ One 24-foot (7.32-m) aluminum ground ladders
- ❖ Bracket for ladder raise
- ❖ Attaching rebar rods for ladder extension

### **PURPOSE OF EVALUATION**

This event is designed to simulate the critical tasks extending the ladder to the roof or window at a structure fire. This event challenges candidate's aerobic capacity, upper body muscular strength, balance, grip strength, and anaerobic endurance. This event affects the aerobic and anaerobic energy systems as well as the following muscle groups: biceps, deltoids, upper back, trapezius, muscles of the forearm and hand (grip)

### **EVENT**

The candidate proceeds to the pre-positioned and secured 24-foot (7.32- m) aluminum extension ladder, stands with both feet within the marked box of 36 inches x 36 inches (91.44 cm x 91.44 cm) and extends the fly section hand over hand until it hits the stop. The candidate then lowers the fly section hand over hand in a controlled fashion to the starting position. This process is repeated once, for a total of 2 (two) repetitions. This concludes the event. The candidate walks 15 feet (4.57 m) within the established walkway to the next event.

#### **The following practices are allowed:**

- ❖ The candidate is given one warning for a boundary violation during the ladder extension.

#### **The following practices constitute a failure:**

- ❖ The candidate commits a second infraction for not remaining within the marked boundary during the ladder extension.
- ❖ The candidate does not control the halyard in a hand over hand manner.
- ❖ The candidate allows the halyard to slip in an uncontrolled manner.

#### **Reasons for failure:**

- ❖ Failure to completely raise the ladder demonstrates poor grip and muscular strength.
- ❖ A candidate could gain an advantage by walking the halyard backward to compensate for poor upper body strength. This compensation is not available on the fire ground where the ladder is not bolted to the fire structure.
- ❖ Failure to control the ladder indicates poor grip strength as well as muscular strength and endurance.



## EVENT 5- RESCUE

### EQUIPMENT

- ❖ 185-pound (83.91-kg) Mannequin with harness (full turnout gear excluding SCBA, boots, gloves, and helmet)
- ❖ 55 gallon [US] (208.2-liter) weighted drum

### PURPOSE OF EVALUATION

This event is designed to simulate the critical task of removing a victim or injured partner from a fire scene. This event challenges the candidate's aerobic capacity, upper and lower body muscular strength and endurance, grip strength and endurance, and anaerobic endurance. This event affects the aerobic and anaerobic energy systems as well as the following muscle groups: quadriceps, hamstrings, glutes, abdominals, torso rotators, lower back stabilizers, trapezius, deltoids, biceps, and muscles of the forearm and hand (grip).

### EVENT

During this event, the candidate grasps a 185-pound (83.91-kg) mannequin and drags it 30 feet (9.14 m) to a pre-positioned drum, makes a 180° turn around the drum, and continues an additional 30 feet (9.14 m) to the start/finish drum. The candidate is not permitted to grasp or rest on the drum. It is permissible for the mannequin to touch the drum. The candidate is permitted to lower the mannequin to the ground to adjust their grip. The entire mannequin must be dragged past the marked finish line. This concludes the event. The candidate walks 15 feet (4.57 m) within the established walkway to the next event.

#### The following practices are allowed:

- ❖ The candidate receives one warning for grabbing or resting on the drum.
- ❖ The candidate is permitted to grab the mannequin in a reasonable manner which would not inflict serious injury on a live victim
- ❖ The candidate is permitted to lower the mannequin to the ground to adjust their grip
- ❖ The candidate is permitted to utilize the attached harness

#### The following practices constitute a failure:

- ❖ The candidate commits a second infraction for grabbing or resting on the drum.

#### Reasons for failure:

- ❖ Use of the drum by either grasping or resting on it indicates a lack of muscular strength and endurance.

# EVENT 6- CEILING BREACH AND PULL

## EQUIPMENT

- ❖ Ceiling Breach and Pull Prop
- ❖ 4-foot (1.83-m) Closet Hook
- ❖ 25lb. pre-rigged weight

## PURPOSE OF EVALUATION

This event is designed to simulate the critical task of breaching and pulling down a ceiling to check for fire extension. This event challenges the candidate's aerobic capacity, upper and lower body muscular strength and endurance, grip strength and endurance, and anaerobic endurance. This event affects the aerobic and anaerobic energy systems as well as the following muscle groups: quadriceps, hamstrings, glutes, abdominals, torso rotators, lower back stabilizers, deltoids, trapezius, triceps, biceps, and muscles of the forearm and hand (grip).

## EVENT

During this event, the candidate stands within the boundary established by the marked box, and grabs the closet hook with both hands no higher than the marked red line. The candidate fully pulls down the 25-lb weight with the closet hook twenty times. The weight is required to travel up and pass the marked line on the prop, and then fully return to the bottom on each repetition. The candidate is permitted to stop and, if needed, adjust the grip. Releasing the grip or slipping from the pike pole handle, without the closet hook swinging uncontrolled, does not result in a warning or constitute a failure. The candidate may re-establish the grip and resume the event. If the candidate does not successfully complete a repetition (i.e. weight does not pass the marked line or return to the bottom), the proctor calls out "MISS" and the candidate must pull the apparatus again to complete the repetition. The event and the total test time ends when the applicant completes the final pull stroke repetition as indicated by the proctor and returns to the Start/Finish line. At which time the proctor will call out "TIME".

### The following practices are allowed:

- ❖ The candidate receives one warning for stepping out of bounds.
- ❖ The candidate receives one warning for gripping above the marked red line
- ❖ The candidate is permitted to stop and to re-establish grip

### The following practices constitute a failure:

- ❖ The candidate commits a second infraction for stepping outside of the boundary marked by the testing apparatus.
- ❖ The candidate commits a second infraction by gripping above the marked red line.
- ❖ The candidate lets go of the closet hook, allowing an uncontrolled potentially dangerous movement

### Reasons for failure:

- ❖ Stepping out of bounds allows the candidate to use body weight to compensate for poor upper body strength, an advantage that may not be an option on the fire ground.
- ❖ Failure to maintain control of the pike pole indicates poor grip strength and muscular endurance.
- ❖ Gripping the closet hook above the red line can create a fulcrum which would not accurately reflect the biomechanics of the actual use of the hand tool.