

State of Oregon  
Department of Public Safety Standards and Training

**NFPA Airport Fire Fighter**  
Task Book

Task Book Assigned To:	
Name	DPSST Fire Service #
Agency Name	Date Initiated
Signature of Agency Head or Training Officer	Date Completed

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**NOTE: Prior to completing this task book please see NFPA Airport Fire Fighter**

Department of Public Safety Standards and Training  
4190 Aumsville Hwy SE.  
Salem, Oregon 97317  
(503) 378-2100

Additional copies of this document may be downloaded from the DPSST web site:  
<http://www.oregon.gov/DPSST/FC/FireCertFormFree.shtml>

Revised August 2013

Task Book Qualification Record Books (Task Book) have been developed for various certification levels within the Oregon Department of Public Safety Standards and Training (DPSST) system. Each Task Book lists the job performance requirements (JPRs) for the specific certification level in a format that allows a candidate to be trained and evaluated during a single session. Successful performance of all tasks, as observed and recorded by a qualified and approved evaluator will result in the candidate's eligibility for DPSST certification.

To become certified at a specific level, the applicant must successfully complete the job performance requirements in sequence. Before a job performance evaluation can be taken, all requisite knowledge and skills must be satisfied. In addition, all relative task book evaluations must be checked off by the evaluator. When all prescribed requirements have been met, an application for Certification will be forwarded to DPSST. All certificates are mailed to the Training Officer at his/her Fire Service Agency.

**NOTE TO FIRE SERVICE AGENCIES:** These JPRs serve as general guidelines. As such they are not intended to replace specific sequences of apparatus or equipment operation that may be outlined by manufacturer specifications. At all times, standard operating procedures of the Fire Service Agency in which the evaluation is being conducted will govern. Fire Service Agencies should have available for evaluators a copy of manufacturer specifications and the Fire Service Agencies standard operational guidelines.

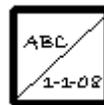
The JPRs covered in this Task Book meet or exceed all NFPA published standards for this certification level at the time of this publication. Mention of NFPA and its standards do not, and are not intended as adoption of—or reference to—NFPA standards. For more information on the complete job performance requirements and data, see the individual DPSST Task Book for that certification level.

**\*A vertical line (|) to the left of the document indicates a change from the previous standard.**

#### **HOW TO EVALUATE PERFORMANCE:**

Each JPR has one corresponding box to the right in which to confirm a candidate's success. The evaluator shall indicate successful passing by the candidate of each JPR by initialing and dating (see example).

**(A) Requisite Knowledge.** Incident management system (IMS) protocol, the airport emergency plan, airport and aircraft familiarization, and communications equipment and procedures.



**NOTE: The following are recommendations from the NFPA Airport Fire Fighters task force.**

- **Task book evaluators should be certified as a NFPA Airport Fire Fighter prior to signing off on another fire service professional's task book per agency having jurisdiction (AHJ).**
- **The following tasks should only be signed by the evaluator once the fire service professional has shown proficiency in each task per AHJ.**

# TASK BOOK QUALIFICATION RECORD

FOR THE CERTIFICATION LEVEL OF

## NFPA Airport Fire Fighter

Prior to becoming certified in this position, the sample candidate must successfully complete the following Job Performance Requirements (JPR). The evaluator shall initial and date the appropriate box to indicate successful completion. For each JPR there are requisite knowledge and skill requirements. The evaluator must initial and date in the box provided to indicate the meeting of those requirements before the firefighter may proceed.

### 5.1 General.

**5.1.1 Qualifications.** To be qualified as an airport fire fighter, the candidate shall meet each of the job performance requirements defined in this chapter.

**5.1.1.1 Duties.** These requirements shall be divided into three major duties: response, fire suppression, and rescue.

**5.1.1.2 Function.** The primary function of the airport fire fighter shall be to execute fire suppression and rescue activities.

**5.1.1.3\* General Knowledge Requirements.** Fundamental aircraft fire-fighting techniques, including the approach, positioning, initial attack, and selection, application, and management of the extinguishing agents; limitations of various sized hand lines; use of personal protective equipment (PPE); fire behavior; fire-fighting techniques in oxygen-enriched atmospheres; reaction of aircraft materials to heat and flame; critical components and hazards of civil aircraft construction and systems related to ARFF operations; special hazards associated with military aircraft systems; a national defense area and limitations within that area; characteristics of different aircraft fuels; hazardous areas in and around aircraft; aircraft fueling systems (hydrant/vehicle); aircraft egress/ingress (hatches, doors, and evacuation chutes); hazards associated with aircraft cargo, including dangerous goods; hazardous areas, including entry control points, crash scene perimeters, and requirements for operations within the hot, warm, and cold zones; and critical stress management policies and procedures.



**5.1.1.4 General Skills Requirements.** Don PPE; operate hatches, doors, and evacuation chutes; approach, position, and initially attack an aircraft fire; select, apply, and manage extinguishing agents; shut down aircraft systems, including engine, electrical, hydraulic, and fuel systems; operate aircraft extinguishing systems, including cargo area extinguishing systems.



**5.1.2** The job performance requirements of this chapter shall be accomplished in accordance with the requirements of the authority having jurisdiction and NFPA 1500, Standard on Fire Department Occupational Safety and Health Program.

**5.2 Response.** This duty involves the timely arrival at an incident or accident and the capability to perform emergency functions. The duty also includes responding to hazardous conditions and performing standby operations.

**5.2.1** Respond to day and night incidents or accidents on and adjacent to the airport, given an assignment, operating conditions, a location, a grid map, a vehicle, and a prescribed response time, so that the route selected and taken provides access to the site within the allotted time.

**(A) Requisite Knowledge.** Airport familiarization, including runway and taxiway designations, frangible gate locations, airport markings, lights, Instrument Landing System (ILS) critical areas, critical rescue and fire-fighting access areas, designated isolation areas, vehicular traffic controls on airfield, bridge load limits, controlled access points, aircraft traffic patterns and taxi routes, fuel storage and distribution locations, airport and immediate local area topographic layout, drainage systems, water supplies, airport facilities, and security.



**(B) Requisite Skills.** Read, interpret, and take correct action related to grid maps, water distribution maps, airport markings, and lights.



**5.2.2** Communicate critical incident information regarding an incident or accident on or adjacent to an airport, given an assignment involving an incident or accident and an incident management system (IMS) protocol, so that the information provided is accurate and sufficient for the incident commander to initiate an attack plan.

(A) **Requisite Knowledge.** Incident management system (IMS) protocol, the airport emergency plan, airport and aircraft familiarization, and communications equipment and procedures.

(B) **Requisite Skills.** Operate communications systems, communicate an accurate situation report, implement incident management system (IMS) protocol and airport emergency plan, and recognize aircraft types.

**5.2.3** Communicate with applicable air traffic control facilities, given a response destination on or adjacent to an airport and radio equipment, so that all required clearances are obtained.

(A) **Requisite Knowledge.** Communications equipment and frequencies, tower light signals, aviation phraseology, and phonetic alphabet.

(B) **Requisite Skills.** Operate communications equipment and use aviation phraseology and phonetic alphabet.

**5.2.4\*** Perform an airport operation, given an assignment, a hazardous condition, and the airport policies and procedures, so that unsafe conditions are detected and reduced in accordance with the airport policies and procedures.

(A) **Requisite Knowledge.** Airport and aircraft policies and procedures for hazardous conditions.

(B) **Requisite Skills.** Recognize hazardous conditions and initiate corrective action.

**5.3 Fire Suppression.** This duty involves the attack, control, and extinguishment of fires involving aircraft, aircraft cargo, airport facilities, and other equipment related to airport operations and property conservation. The primary purpose of this duty is to protect lives and property.

**5.3.1\*** Extinguish a 23.2 m<sup>2</sup> (250 ft<sup>2</sup>) aircraft fuel spill fire, given PPE, a minimum of a 45 kg (100 lb) dry chemical fire extinguisher, and procedures, so that the agent is applied according to procedures and the fire is extinguished in 25 seconds.

(A) **Requisite Knowledge.** The fire behavior of aircraft fuels in spills and pools, physical properties, characteristics of aircraft fuel, agent application rates, densities, and procedures.

(B) **Requisite Skills.** Operate dry chemical extinguishers equipped with a hose line, including removing and operating hose and applying agent.

**5.3.2\*** Extinguish an aircraft fuel spill fire, given PPE, an assignment, agent application procedures, an ARFF vehicle hand line flowing a minimum of 359 L/min (95 gpm) of AFFF extinguishing agent, and a fire sized to the flow rate used [AFFF flow rate divided by 4.92 L/min/m<sup>2</sup> for fire size in square meters (0.13 gpm/ft<sup>2</sup> for fire size in square feet)], so that the agent is applied using the prescribed techniques and the fire is extinguished in a time proportionate to, but no longer than, 90 seconds for a 73 m<sup>2</sup> (786 ft<sup>2</sup>) fire with a flow rate at 359 L/min (95 gpm).

(A) **Requisite Knowledge.** The fire behavior of aircraft fuels in pools, physical properties and characteristics of aircraft fuel, and agent application rates and densities.

(B) **Requisite Skills.** Operate fire streams and apply agent.

**5.3.3\*** Extinguish an aircraft fuel spill fire, given an assignment, PPE, an ARFF vehicle turret flowing a minimum of 946 L/min (250 gpm), a fire sized to the flow rate used [AFFF flow rate divided by 4.92 L/min/m<sup>2</sup> for fire size in square meters (0.13 gpm/ft<sup>2</sup> for fire size in square feet)], and the procedures for agent application, so that the agent is applied according to procedures and the fire is extinguished in a time proportionate to, but no longer than, 90 seconds for 192 m<sup>2</sup> (1923 ft<sup>2</sup>) fire with a flow rate at 946 L/min (250 gpm).

(A) **Requisite Knowledge.** Operation of ARFF vehicle agent delivery systems, the fire behavior of aircraft fuels in pools, physical properties and characteristics of aircraft fuel, the procedures for agent application, and agent application rates and densities.

(B) **Requisite Skills.** Apply fire-fighting agents and streams using ARFF vehicle turrets.

**5.3.4\*** Extinguish a three-dimensional aircraft fuel fire as a member of a team, given a team, PPE, an assignment, ARFF vehicle hand line(s) using primary and secondary agents, and agent application procedures, so that a dual-agent attack is used, the agent is applied according to procedures, the fire is extinguished, and the fuel source is secured.

**(A) Requisite Knowledge.** The fire behavior of aircraft fuels in three-dimensional and atomized states, physical properties and characteristics of aircraft fuel, agent application rates and densities, agent application procedures, and methods of controlling fuel sources.

**(B) Requisite Skills.** Operate fire streams and apply agents, and secure fuel sources.

**5.3.5\*** Attack a fire on the interior of an aircraft while operating as a member of a team, given a team, PPE, an assignment, an ARFF vehicle hand line, an extinguishing agent, and a ladder or other means of accessing the aircraft, so that team integrity is maintained, the attack line is deployed for advancement, ladders or other means are used, access is gained into the fire area, effective agent application practices are used, the fire is approached, attack techniques facilitate suppression given the level of the fire, hidden fires are located and controlled, hazards are avoided or managed, and the fire is brought under control.

**(A) Requisite Knowledge.** Techniques for accessing the aircraft interior according to the aircraft type, methods for advancing hand lines from an ARFF vehicle, precautions to be followed when advancing hose lines to a fire, observable results that a fire stream has been applied, dangerous structural conditions created by fire, principles of exposure protection, potential long-term consequences of exposure to products of combustion, physical states of matter in which fuels are found, common types of accidents or injuries and their causes, the role of the backup team in fire attack situations, attack and control techniques, and techniques for exposing hidden fires.

**(B) Requisite Skills.** Deploy ARFF hand line on an interior aircraft fire; gain access to aircraft interior; open, close, and adjust nozzle flow and patterns; apply agent using direct, indirect, and combination attacks; advance charged and uncharged hose lines up ladders and up and down interior and exterior stairways; and locate and suppress interior fires.

**5.3.6** Attack an engine or auxiliary power unit/emergency power unit (APU/EPU) fire on an aircraft while operating as a member of a team, given PPE, an assignment, ARFF vehicle hand line or turret, a correct agent, and agent application procedures, so that agent application procedures are followed, the fire is extinguished, and the engine or APU/EPU is shut down.

**(A) Requisite Knowledge.** Techniques for accessing the aircraft engines and APU/EPUs, safety procedures, methods for advancing hand line from an ARFF vehicle, methods for operating turrets, and methods for shutting down engine and APU/EPU operation.

**(B) Requisite Skills.** Deploy and operate ARFF hand line, operate turrets, gain access to aircraft engine and APU/EPU, and shut down engine and APU.

**5.3.7** Attack a wheel assembly fire, as a member of a team, given PPE, a team, an assignment, an ARFF vehicle hand line, and correct agent, so that the fire is extinguished.

**(A) Requisite Knowledge.** Agent selection and application procedure, special safety considerations, and the characteristics of combustible metals.

**(B) Requisite Skills.** Approach the fire in accordance with safety procedures, and select and apply agent.

**5.3.8\*** Ventilate an aircraft through available doors and hatches while operating as a member of a team, given PPE, an assignment, tools, and mechanical ventilation devices, so that openings are created, all ventilation barriers are removed, and the heat and other products of combustion are released.

**(A) Requisite Knowledge.** Aircraft access points; principles, advantages, limitations, and effects of mechanical ventilation; the methods of heat transfer; the principles of thermal layering within an aircraft on fire; and the techniques and safety precautions for venting aircraft.

**(B) Requisite Skills.** Operate doors, hatches, and forcible entry tools; operate mechanical ventilation devices; and remove barriers.

**5.3.9\*** Replenish extinguishing agents while operating as a member of a team, given an assignment, an ARFF vehicle, a fixed or mobile water source, a supply of agent, and supply lines and fittings, so that agents are available for application by the ARFF vehicle within the time established by the authority having jurisdiction (AHJ).

**(A) Requisite Knowledge.** Resupply procedures, operation procedures for ARFF vehicle replenishment, and pumps and transfer devices.

**(B) Requisite Skills.** Connect hose lines, operate valves, and operate pumps and transfer devices.

**5.3.10** Preserve the aircraft accident scene, given an assignment and procedures, so that evidence is identified, protected, and reported according to procedures.

**(A) Requisite Knowledge.** Airport emergency plan requirements for preservation of the scene, evidence identification, evidence protection, and evidence reporting procedures.

**(B) Requisite Skills.** Preserve the scene for investigators, and identify, protect, and report evidence.

**5.3.11** Overhaul the accident scene, given PPE, an assignment, hand lines, and property conservation equipment, so that all fires are located, exposed, and extinguished and all property is protected from further damage.

**(A) Requisite Knowledge.** Methods of complete extinguishment and prevention of re-ignition, reasons for conservation, operating procedures for property conservation equipment, overhaul procedures, signs of a hidden fire, methods of detecting hidden fires, and tools and equipment used for overhaul.

**(B) Requisite Skills.** Use property conservation equipment, detect hidden fires, and use tools and equipment to expose hidden fires.

**5.4\* Rescue.** This duty involves gaining access to an aircraft and assisting in the evacuation process, performing disentanglement, and initial triage.

**5.4.1\*** Gain access into and out of an aircraft through normal entry points and emergency hatches, shut down and safety the aircraft, and assist in the evacuation process while operating as a member of a team, given PPE and an assignment, so that passenger evacuation and rescue can be accomplished.

**(A) Requisite Knowledge.** Aircraft familiarization, including materials used in construction, aircraft terminology, automatic explosive devices, hazardous areas in and around aircraft, aircraft egress/ingress (hatches, doors, and evacuation chutes), military aircraft systems and associated hazards; capabilities and limitations of manual and power rescue tools and specialized high-reach devices, aircraft shutdown and safetying procedures.

**(B) Requisite Skills.** Operate power saws and cutting tools, hydraulic devices, pneumatic devices, and pulling devices; operate specialized ladders and high-reach devices; secure aircraft safety and shutdown.

**5.4.2\*** Locate and disentangle an entrapped victim from an aircraft as a member of a team, given PPE, a team and an assignment, and rescue tools, so that the victim is freed from entrapment without undue further injury and hazards are managed.

**(A) Requisite Knowledge.** Capabilities and limitations of rescue tools, search procedures, hazard identification, and control methods.

**(B) Requisite Skills.** Perform search procedures, control hazards, remove victims, and operate rescue tools.

**5.4.3** Implement initial triage of the victims of an aircraft accident, given PPE, an assignment, and the triage protocol of the AHJ, so that each victim is evaluated and correctly categorized according to protocol.

**(A) Requisite Knowledge.** Categories of triage according to the triage protocol of the AHJ, and methods of assessment.

**(B) Requisite Skills.** Triage patients per protocol.