Federal Aviation Agency

ADVISORY CIRCULAR

AC NO: AC 150/5210-8
AIRPORTS
EFFECTIVE: 1/13/67

SUBJECT: AIRCRAFT FIREFIGHTING AND RESCUE PERSONNEL AND PERSONNEL CLOTHING

1. PURPOSE. This circular provides guidance concerning the manning of aircraft fire and rescue trucks, the physical qualifications that personnel assigned to these trucks should meet, and the protective clothing with which they should be equipped.

2. REFERENCE. AC 150/5210-6, Aircraft Fire and Rescue Facilities and Extinguishing Agents, establishes a system for indexing airports and lists the extinguishing agent and equipment recommendations for the various indexes.

3. GENERAL. As the majority of aircraft fire and rescue trucks presently in service on airports have been built to individual specifications, it is not possible to recommend the exact number of firefighters that should be assigned. Accordingly, this subject is discussed in generalities taking the factors of truck design and the aeronautical operations experienced by an airport into consideration.

4. FIREFIGHTER RECOMMENDATIONS.

   a. Listed below, by type of equipment, is the recommended number of firefighters per tour of duty necessary to obtain the desired potential from each type of truck:

      (1) Light-Weight Aircraft Fire and Rescue Truck (2 Firefighters). This truck, carrying a dry chemical extinguishing agent, will provide, in a single unit, the fire suppression potential recommended for Index III airports. It may also be used as a rescue unit on Index V through Index VIII airports equipped with the 1000 or 1500-gallon water/foam truck(s). When so used, it is normally the first truck to arrive at the scene of an emergency; and, where practicable, its extinguishing agent may be used to control or contain a fire until the arrival of the water/foam trucks. Subsequent to the arrival of these larger trucks, the men assigned to this truck function as the rescue men. Experience has demonstrated the need for rescue men to work in pairs.

(2) Combination Foam and Dry Chemical Aircraft Fire and Rescue Truck (2 Firefighters). This truck, carrying both dry chemical and water/foam, will provide, in a single unit, the fire suppression potential recommended for Index IV airports used primarily by general aviation type aircraft grossing over 12,500 pounds. It may also be considered an acceptable substitute for the light-weight aircraft fire and rescue truck at Index V through Index VIII airports.

(3) Water/Foam Truck (3 Firefighters Each). These trucks, carrying 1000 or 1500 gallons of water for foam and 200 or 300 gallons of foam concentrate, are capable of discharging the water/foam carried at the rate of from 500 to 800 GPM respectively through a single turret remotely controlled from within the cab and 60 GPM from each of two handlines. Should this turret be manually operated from the cab roof, an additional man is required.

(4) Water Tank Trucks (2 Firefighters Each). These trucks, carrying 1000 or 2000 gallons of water, provide an additional supply of water to the water/foam trucks.

b. The total number of full-time firefighters per tour of duty recommended for airports in the eight Indexes defined in AC 150/5210-6, Aircraft Fire and Rescue Facilities and Extinguishing Agents, is indicated below:

(1) Index I.

No fire suppression or rescue capability.	None

(2) Index II.

Portable fire extinguishers. This man monitors and services an airport's fire extinguishers and trains airport employees and tenants in their use.	1 - Firefighter

(3) Index III.

One light-weight truck.	2 - Firefighters

(4) Index IV.

One combination truck.	2 - Firefighters

(5) Index V.

One combination truck.	2	- Firefighters
One 1000-gallon water/foam truck.	3	- Firefighters
Total	5	- Firefighters

(6) Index VI.

One light-weight or one combination truck.	2	- Firefighters
One 1000-gallon water/foam truck.	3	- Firefighters
One 1000-gallon water/foam truck.	3	- Firefighters
One 1000-gallon water tank truck.	2	- Firefighters
Total	10	- Firefighters

(7) Index VII.

One light-weight or one combination truck.	2	- Firefighters
One 1000-gallon water/foam truck.	3	- Firefighters
One 1500-gallon water/foam truck.	3	- Firefighters
One 2000-gallon water tank truck.	2	- Firefighters
Total	10	- Firefighters

(8) Index VIII.

One light-weight or one combination truck.	2	- Firefighters
One 1500-gallon water/foam truck.	3	- Firefighters
One 1500-gallon water/foam truck.	3	- Firefighters
One 2000-gallon water tank truck.	2	- Firefighters
One 2000-gallon water tank truck.	2	- Firefighters
Total	12	- Firefighters

c. In addition to the number of full-time firefighters shown above, airports falling in Index V and above should provide a minimum of one supervisor (chief).

d. The use of volunteer firefighters may be necessary at many airports. It is recommended that the following guidelines be employed in the use of volunteer firefighters:

(1) These personnel are well organized, trained, and provided with suitable transportation so they may become an integral part of an effective firefighting "team".

(2) When volunteers are to be substituted for full-time firefighters, two volunteers will be considered the equivalent of each full-time firefighter they replace.

(3) At airports in Indexes V through VIII, not less than 50 percent of the total number of personnel assigned should be full-time firefighters, and the remainder may be volunteers in the ratio described in 4d(2).

(4) A suitable audible alarm is provided to alert the volunteers. Controls to actuate this alarm should be installed in the control tower, the fire station, or fixed stations strategically located on the airport.

5. PHYSICAL REQUIREMENTS.

a. Firefighter duties require arduous physical exertion under rigorous and unusual conditions. The firefighters will be subjected to extreme physical danger and to irregular and protracted hours of work. Care should be exercised to assure that firefighters do not have physical defects which would cause the firefighter to be a hazard to himself or to others or which would prevent proficient performance of his duties. Accordingly, a firefighter should be subjected to a thorough medical examination prior to employment, biennial physical examinations until the age of 40, and annual examinations thereafter. In the absence of suitable city or state physical standards, those contained in the Federal Civil Service Qualification Standards (Firefighting and Fire Prevention Series, GS-081, paragraph B, General; Crash; Crash-Structural) should be used as a guide.

b. While volunteers need not be subjected to such strict physical requirements, these requirements should be used as a guide in their selection.

6. PROTECTIVE CLOTHING. Firefighters should be provided with a complete set of protective clothing. A complete set normally includes:

a. Bunker Suit. This suit should include heat insulative interliners for coat and trousers to afford full arm, body, and leg protection; the outer garments should be treated for water repellency and flame resistance.

b. Gloves. These gloves should be woolen and of sufficient length to provide wrist protection. Soft, pliable leather shields to fit over these gloves should be supplied to provide additional protection to the wearer.

c. Boots. These boots should be of the standard fireman type with wool lining and steel innersole.

d. Hood. This hood should be of the standard aircraft fire and rescue type made of fire resistive material and be of sufficient length to protect the head and shoulders of the wearer. The hood assembly should include a full vision face shield and a helmet.

7. HOW TO OBTAIN PUBLICATIONS. Copies of the referenced advisory circular, AC 150/5210-6, Aircraft Fire and Rescue Facilities and Extinguishing Agents, and additional copies of this publication, AC 150/5210-8, Aircraft Firefighting and Rescue Personnel and Personnel Clothing, may be obtained from Federal Aviation Agency, Distribution Unit, HQ-438, Washington, D.C. 20553.

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