



Fire Protection Training

Procedures Handbook 4300

AIRCRAFT

TOPIC: Introduction to CDF Firefighting Aircraft

TIME FRAME: 1 Hour

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will list and describe the capabilities and uses of wildland firefighting aircraft.

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- Chalkboard and chalk
- Appropriate visual aids
- Audio visual equipment

REFERENCES:

- Wildland Firefighting, Clayton, Day and McFadden
- Field Operation Guide, ICS 420-1
- CDF, Aviation Management Procedures Handbook (8300)

PREPARATION: Firefighting aircraft are best used on small initial attack fires and require quick reinforcement by ground personnel. As a firefighter tasked with reinforcing aircraft operations, it is helpful to understand the different types, uses and capabilities of firefighting aircraft.



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INTRODUCTION TO CDF
FIREFIGHTING AIRCRAFT

PRESENTATION	APPLICATION
<p>I. FIXED WING AIRCRAFT</p> <ul style="list-style-type: none">A. Assigned to Airbase Throughout the StateB. Bases are Spaced to Provide a Maximum Response Time of 20 Minutes to any Fire within the StateC. Many Bases are Operated Jointly with the U.S.F.S.D. Aircraft Types<ul style="list-style-type: none">1. Air attack<ul style="list-style-type: none">a. The aircraft from which an air attack supervisor coordinates fixed and/or rotary wing aircraft on a fire.b. Staffing is a pilot and the air attack supervisorc. Also used for<ul style="list-style-type: none">(1) Mapping(2) Reconnaissance(3) Aerial photography(4) Supplemental lighting detection(5) Special assignments(6) Federal agencies use them as "lead planes" to lead air tankers into and through the drop zone2. Air tankers	<p>Point out airbases near your initial attack areas</p>



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PRESENTATION	APPLICATION
<ul style="list-style-type: none">a. Any fixed wing aircraft certified to transport and deliver retardant on a fireb. ICS types<ul style="list-style-type: none">(1) Type I (heavy)<ul style="list-style-type: none">(a) 2000 gallons minimum retardant capacity(b) DC-4, DC-6, DC-7, C-130(2) Type II (medium)<ul style="list-style-type: none">(a) 1000 gallon minimum retardant capacity(b) B-17, C-119-J(3) Type III (light)<ul style="list-style-type: none">(a) 800 gallon minimum retardant capacity(b) CDF S-2Fc. Hazards<ul style="list-style-type: none">(1) Steep topography(2) High winds(3) Deep shadows(4) Dense smoke(5) Trees or towers(6) Powerlines(7) Other aircraftd. Usage guidelines	



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<ul style="list-style-type: none"> (1) Best utilized on small initial attack fires (2) Plan on one drop each five minutes (3) Drops must be followed up by ground forces (4) Avoid splitting the head of a fire in two e. Types of retardant drops <ul style="list-style-type: none"> (1) Salvo <ul style="list-style-type: none"> (a) All tanks emptied at same time and place (i.e. single drop) (b) Coverage is 4 gallons per foot (2) Trail <ul style="list-style-type: none"> (a) Tanks emptied sequentially on a single pass (b) Overlapping series (c) Coverage 2 gallons per foot (3) Split <ul style="list-style-type: none"> (a) Series of drops spaced in terms of interval and time 	
<p>II. HELICOPTER</p> <p>A. A Rotary Wing Aircraft Used for Reconnaissance, Transport, Water Drops, Helitorch Operation, Medical Evacuation Search and Rescue, etc.</p>	



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<p>B. ICS Types</p> <ol style="list-style-type: none">1. Type I (heavy)<ol style="list-style-type: none">a. 16 passengers (includes pilot)b. 5000 lbs. cargoc. 700 gallon bucket2. Type II (medium)<ol style="list-style-type: none">a. 10 passengers (includes pilot)b. 2500 lbs. cargoc. 300 gallon bucket<p>Examples: Bell 204, 205, 212, UHIF (CDF)</p>3. Type III (light)<ol style="list-style-type: none">a. 5 passengers (includes pilot)b. 1200 lbs. cargoc. 100 gallon bucket<p>Examples: Bell 206 A-Star 350D</p>4. Type IV (light)<ol style="list-style-type: none">a. 3 passengers (include pilot)b. 600 lbs. cargoc. 75 gallon bucket<p>Example: Bell 47, Hughes 500C</p> <p>C. Usage Guides</p> <ol style="list-style-type: none">1. Utilized to deploy firefighting crews in areas with difficult access	



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<ul style="list-style-type: none">2. Helitack crew can be supported with water/foam bucket drops3. Most effective if water source within 2 minutes4. Helitender dispatched concurrently with water, food, and supplies	



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SUMMARY:

Aircraft are an essential part of the CDF wildland firefighting arsenal. Though expensive to acquire, maintain, and operate, they are a cost effective tool when properly ordered, utilized and released.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).