



ALASKA WING SUPPLEMENT 1

CAP REGULATION 70-1

18 February 2025

APPROVED/R.OLIENYK/CAP/DO

Operations

CIVIL AIR PATROL FLIGHT MANAGEMENT

CAP Regulation 70-1, dated 31 March 2020, including ICL 20-08 dated 1 October 2020 is supplemented as follows:

3.1 Added. Recommendations, questions, or comments regarding the CAPR 70-1 AKWG Sup 1 should be directed to the AKWG/DO or AKWG/DOV. Deviations or exemptions from the guidance implemented by this Alaska Wing Supplement must be approved by the CAP/DO.

4.3.1.1.7 Added. For specialty aircraft (defined in this supplement as C-172 aircraft in float configuration, or C-185 aircraft in wheel, float, ski or amphibious configurations), be designated as a CAP Instructor Pilot in type and configuration by the AKWG/CC, AKWG/DO or AKWG/DOV. A type and configuration-specific CAP Instructor Pilot CAPF 70-5A will be required for any CAP Instructor Pilot not previously designated as an CAP Instructor Pilot in type and configuration. Minimum experience requirements to instruct in specialty aircraft is 25 hours in type and configuration.

4.3.2.1.6 Added. For specialty aircraft (defined in this supplement as C-172 aircraft in float configuration, or C-185 aircraft in wheel, float, ski or amphibious configurations), be designated as a CAP Check Pilot in type and configuration by the AKWG/CC, AKWG/DO or AKWG/DOV. A type and configuration-specific CAP Check Pilot CAPF 70-5A will be required for any CAP Check Pilot not previously designated as a CAP Check Pilot in type and configuration.

5.1.1.4 Added. For Float and Amphibious Airplane, the pilot must hold a Single Engine Seaplane rating and appropriate endorsements, and be recommended by an AKWG CAP Instructor Pilot prior to accomplishing a CAPF 70-5A in a Float and/or Amphibious Airplane. Pilots without a Single Engine Seaplane rating and appropriate endorsements must use a training syllabus approved by the CAP/DO.

5.1.1.5 Added. For Tailwheel Airplanes, the pilot must hold appropriate endorsements and be recommended by an AKWG CAP Instructor Pilot prior to accomplishing a CAPF 70-5A in a Tailwheel Airplane. Pilots without a Tailwheel endorsement must use a training syllabus approved by the CAP/DO.

5.1.1.6 Added. CAP Pilots will be required to have a current CAPF 70-5A based on aircraft type and configuration, not intended operation, to be eligible to fly an aircraft with multiple configuration options (e.g. C-185 wheel type will not be sufficient when equipped with wheel-skis).

6.5.4 Added. Mountain Flight Endorsement (MFE) and Mountain Flying Certification (MFC). CAP Pilots assigned to Alaska Wing are required to attain a mountain flight endorsement prior to any flight as pilot in command. Mountain flying tasks as outlined in CAPF 70-5A will be evaluated during the member's initial and annual checkride(s). The initial training for, and subsequent CAPF 70-5A evaluation of mountain flying

tasks and award of the Mountain Flying Endorsement is not to be confused with the Mountain Flying Certification (MFC), which is an Emergency Services rating with its own SQTR. Pilots must have an MFC in order to act as a CAP Mission Pilot in Alaska. These requirements are not applicable to sUAS Mission Pilots. Ground Training and Flight Training options and resources are listed in Attachments 3 and 4.

7.2.1.1 Added. AKWG pilots receiving an initial CAPF 70-5A check ride in a corporate aircraft from a Check Pilot must first have a recommendation from a CAP Instructor Pilot, recommending them for the CAPF 70-5A check ride.

7.2.1.1.1 Added. The instructor recommendation that the member is ready for the check ride must be communicated to the Check Pilot and annotated in the comments section of the CAPF 70-5A (e.g. "Recommending Instructor: Captain James W. Buffett, CAP").

7.2.1.1.2 Added. The instructor who provides the recommendation cannot conduct the CAPF 70-5A check ride. If there is no other instructor located at the unit, advise the AKWG/DOV or DO.

7.2.1.2 Added. Initial Amphibious, floats, skis and tail wheel airplanes will always require a recommendation prior to accomplishing an initial check ride in type and configuration.

7.4.1.4 Added. For a float aircraft: Successfully accomplish a CAPF 70-5A in a straight float or amphibious aircraft. Renewal in a float configured aircraft does not renew the amphibious configuration. Renewal in amphibious aircraft may be added by accomplishing an abbreviated CAPF 70-5A if the member is otherwise current in the aircraft and configuration. AKWG members who have been continuously qualified for a minimum of 5 years in any float equipped type are exempt from this requirement.

7.4.1.5 Added. For any amphibious aircraft: Successfully accomplish a CAPF 70-5A in an amphibious aircraft. AKWG members who have been continuously qualified for a minimum of 5 years in any amphibious equipped type are exempt from this requirement.

7.4.1.6 Added. For wheel-ski equipped aircraft: Successfully accomplish a CAPF 70-5A in a wheel-ski equipped aircraft, with at least 3 ski-configured landings. These takeoffs and landings may be accomplished during an abbreviated CAPF 70-5A if the member is otherwise current in the aircraft and configuration. AKWG members who have been continuously qualified for a minimum of 5 years in any wheel-ski equipped type are exempt from this requirement.

9.11.7.7.1 Added. In the interests of safety and the preservation of aircraft airframes and power plants, operating CAP aircraft in cold temperatures is restricted in accordance with Attachment 2 of this supplement. Waiver requests will be considered on a case-by-case basis and should be coordinated with AKWG/DO or CC via email and phone call.



DERK A. MACPHERSON, Colonel, CAP
Commander

Attachment 1
COMPLIANCE ELEMENTS

There are no compliance elements with this supplement.

Attachment 2
COLD WEATHER RESTRICTIONS FOR OPERATING CAP AIRCRAFT

Alaska Wing aircraft will operate with the following restrictions during cold weather:

Outside Air Temperature-F (4)	Outside Air Temperature-C (4)	All Flight Activity	All Training Flights	Non-Distress Missions	Actual SAR with known Life or death situation
Above 0	Above -17C	YES	YES	YES	YES
0 to -9	-18 to -23C	YES (1)	YES (1)	YES (1)	YES(1)
-10 to -19	-24 to -28C		YES (1) (2)	YES (1) (2)	YES (1) (2)
-20 and lower	-29 and lower				YES (1) (3)

Notes:

1. Limit one takeoff and one landing per sortie, and no maneuvers that can shock cool the engine.
2. Approved on a case by case basis by Wing Commander or their designee.
3. Approved on a case by case basis by CAP/DO or their designee.
4. Temperature restriction applies to surface temperatures at intended departure point, arrival point, and any search areas you may remain in for a significant portion of your flight.
5. The following tables will be adhered to for the operation of CAP aircraft assets with regard to temperature. In all cases, the aircraft power plant manufacturer's recommendation(s), only, shall supersede this supplement. Waivers will be considered on a case by case basis by AKWG/CC or DO

Outside Air Temperature	Use Engine Cover	Pre-Heat Required	Hangar Use
Greater Than 30 F (> -1C)	Not Required	Not Required	Not Required
30 F to 10 F (-1C to -12C) in preceding 24 Hours	Required if on the ground more than 2 hours	Required – Oil to run freely	Minimum of 4 hours if used in lieu of pre-heat
10 F or lower (-12C or lower) in preceding 24 Hours	Hangaring aircraft strongly recommended if on the ground more than 4 hours	Required– Oil to run freely	Minimum of 24 hours if used in lieu of preheat

Attachment 3
ALASKA WING MOUNTAIN FLYING ENDORSEMENT (CAPF 70-5A)

GROUND TRAINING: Alaska Wing pilots will satisfy Mountain Flying Endorsement ground training using one of the options listed below (ideally during onboarding):

- a. CAP Mountain Flying Clinic Classroom Instruction (upload documentation in Ops Quals)
- b. Mountain Flying Course and Exam (eServices/AXIS)
- c. AOPA "Flying In The Mountains" Course (upload completion certificate in Ops Quals)
- d. Instructor-led JBER Aero Club Mountain Checkout (See Attach 3, upload completed/signed last page of syllabus as documentation in Ops Quals)

FLIGHT TRAINING: Alaska Wing pilots will satisfy completion of Mountain Flying Endorsement flight training by demonstrating all tasks listed in Section 6 on their initial CAPF 70-5A and as deemed appropriate by CAP check airmen on each subsequent CAPF 70-5A accomplished.

Alaskan Mountain Flying Certification (CAPF 70-91)

GROUND TRAINING: Alaska Wing mission pilots will satisfy the Mountain Flying Certification ground training using one of the options listed below:

- a. CAP Mountain Flying Clinic Classroom Instruction (upload documentation in Ops Quals)
- b. Mountain Flying Course and Exam (eServices/AXIS)
- c. Instructor-led JBER Aero Club Mountain Checkout (See Attach 4, upload completed last page of syllabus to serve as documentation of training in Ops Quals)

FLIGHT TRAINING: Alaska Wing pilots will satisfy initial and recurring Mountain Flying Certification flight training by demonstrating CAPF 70-91, section V, tasks a through h on their initial CAPF 70-91 and as deemed appropriate by CAP check airmen on each subsequent CAPF 70-91 accomplished.

ATTACHMENT 4

(USED WITH PERMISSION BY JBER AERO CLUB MANAGEMENT)

MOUNTAIN FLYING CERTIFICATION SYLLABUS (2021)

COURSE OBJECTIVE

The objective of the JBER Aero Club Mountain Flying course is to help pilots develop the necessary skills and aeronautical knowledge to fly safely in the mountainous terrain of Alaska.

This course will emphasis all areas of mountain flying with particular emphasis placed on mountain pass flying. This syllabus is designed to assist the instructors in effectively teaching mountain flying in Alaska.

COURSE COMPLETION STANDARDS

The mountain flying course is complete when the student has the skill to safely navigate and plan a flight over/through mountainous terrain. Performance in this course will vary considerably depending on the experience level of the pilot. It is important that each flight instructor understand that all individuals are different, and that the level of proficiency at the completion of this course will vary greatly; however, the goal is to make each individual pilot confident and competent to fly through mountainous terrain, and to realize their own limitations and to abide by them.

NOTE: Ground and flight times indicated in this Syllabus are recommended minimums.

GROUND LESSON 1

1.0 HOUR

LESSON OBJECTIVE:

During this lesson, the applicant will review mountain weather considerations, planning and aircraft performance.

CONTENT:

Mountain Flight Preflight

- ☐ Mountain Weather Consideration.
- ☐ Difference between flatland and mountain weather.
- ☐ Accelerating winds across ridges.
- ☐ Mountain waves and their evidence.

Route Planning

- ☐ Selecting adequate terrain clearance routes.
- ☐ Plan flying through published and known passes when able.
- ☐ Use of navigational aids in mountainous areas (VOR, GPS and ForeFlight don't always work).
- ☐ Emergency landing fields.

AIRCRAFT PERFORMANCE CALCULATIONS

Performance charts

- ☐ Takeoff and landing charts.
 - ☐ Rate-of-climb and time to climb charts.
- ☐ Cruise performance charts.

Density Altitude Considerations

- ☐ Determining density altitude, using computer, and density altitude correction tables.
- ☐ Effects of density altitude on aircraft performance.

High Altitude Takeoffs and Landings

- ☐ Power plant operational check (fuel mixture setting).
- ☐ Consider "one way airport" factor, if applicable.
- ☐ Explain reasons for higher true airspeeds for takeoffs and landings.
- ☐ Explain landing on sloping runways.
- ☐ Talk about terrain illusion in the mountains.

GROUND LESSON 2

1.0 HOUR

LESSON OBJECTIVE:

During this lesson, the applicant will review mountain weather considerations, planning and aircraft performance.

MOUNTAIN FLYING TECHNIQUES

Aircraft Performance

- ☐ Discuss increased time to gain speed during stall recovery.
- ☐ Discuss aircraft performance as it relates to coping with updrafts and downdrafts.

Turbulence and Mountain Winds

- ☐ Importance of maneuvering speed.
- ☐ Discuss what side of ridges and where in passes will produce least amount of turbulence when winds are strong.

Ridge, Canyon, and Mountain Pass Flying

- ☐ Cross ridges at 45 degree angle so you can turn downhill if downdrafts are encountered.
 - ☐ Establish margin of safety in altitude when crossing ridges.
 - ☐ Avoid box canyons; always fly down canyons, not up.
 - ☐ Avoid canyons, passes and valleys in marginal weather; help the student set safe standards that are good for his/her level of proficiency.
 - ☐ Discuss "Canyon Turn" techniques (climbing, level and descending)

PHYSIOLOGICAL CONSIDERATIONS

Hypoxia

- ☐ What it is.
- ☐ What are the symptoms.
- ☐ How to avoid it.

Hyperventilation

- ☐ What it is.
- ☐ What are the symptoms.
- ☐ Explain the remedies.

The Body's Altitude Tolerances

- ☐ Explain typical altitude tolerances.
- ☐ Explain acclimating to higher altitudes.
- ☐ Explain effects of alcohol, smoking and poor health on tolerance to high altitudes.

FLIGHT LESSON 1

1.5 – 2.5 HOURS DUAL

LESSON OBJECTIVE:

During this lesson, the student will determine proper preflight planning.

REVIEW OF STUDENT'S PREFLIGHT PLANNING

Flight Planning

- ☐ Review flight planning, weather turbulence, and airport departure plan.
- ☐ Aircraft preflight examination: Survival gear, food, personal ELT.
- ☐ Density altitude computation check, if required.

Route Selection

- ☐ Discuss with student route selected over mountains, through passes, etc.
- ☐ Discuss emergency options.
- ☐ Use of navigational aids (if available).
- ☐ Plan on using the old adage "The weather just closed in ahead of us, what will you do?"

HIGH ALTITUDE AIR WORK (ABOVE 6,000 FEET)

Stall Series

- ☐ Normal stall series at low altitude (2500 feet).
- ☐ Complete normal stall series above 6,000 feet, note the differences.

Airplane Configuration and Speed vs. Power Required

- ☐ Complete slow flight; low altitude and high altitude, note the differences.
- ☐ Practice rapid transitions from cruise to best rate of climb speed, cruise to maximum rate of descent with and without flaps, not exceeding maneuvering speed.
- ☐ Leaning Procedures.

MOUNTAIN TERRAIN MANEUVERS

Identification of Up/Down Drafts

- ☐ Show how leeward side of ridges usually produce downdrafts.
- ☐ Repeat maneuver on windward side and show updrafts.
- ☐ Demonstrate how to use up and down drafts to advantage when required.

Maneuvers in Passes, Canyons, and Valleys

- ☐ Have student fly a flight path through pass or valley below ridges to simulate weather on top of ridge.
- ☐ Demonstrate importance of being able to "turn downhill and away" at all times.
- ☐ Have student cross a ridge at a 45 degree angle so he has the option of turning away.
- ☐ Demonstrate how to judge height above or below terrain when approaching a ridge.
- ☐ Demonstrate the mountain pass turn, climbing, level and descending "Canyon Turns."

FLIGHT LESSON 2

1.5 – 2.5 HOURS DUAL

LESSON OBJECTIVE:

During this lesson, the student will review navigation, maneuvers, takeoffs and landings.

MOUNTAINOUS TERRAIN NAVIGATION & MANEUVERS

Pilotage and Dead Reckoning in Mountainous Terrain

- ☐ Time/distance CAN work in the mountains.
- ☐ Set an upper altitude limit so student must maneuver through passes below the ridgeline using pilotage.
- ☐ Make sure student uses charts no larger than 1:500,000 scale (1:250,000 scale recommended).
- ☐ Observe false passes from above and how they look on charts.
- ☐ Show student how false passes frequently out climb the climb capability of the aircraft.

Ridge-Crossing and Canyon Turns

- ☐ Student demonstrates ridge-crossing techniques.
- ☐ Have student perform level, descending and climbing Canyon Turns.
- ☐ Review common errors and risk management during high altitude maneuvers.

MOUNTAINOUS AREA TAKEOFFS AND LANDINGS

Short and obstructed takeoffs and landings

- ☐ Have student perform short field and short obstructed takeoffs and landings.
- ☐ Show procedure for landing on sloped runway.
- ☐ Note runway requirements at higher density altitudes.

Rough and Soft Field Conditions (Simulated)

- ☐ Show the student how to detect rough and soft fields.
- ☐ Have student demonstrate rough and soft field takeoff and landings (simulated).

Emergency Landings Over Rough Terrain

- ☐ Have student demonstrate emergency landings (simulated under various conditions: over mountains, sand bars, glaciers, etc.).
- ☐ Show student how to determine wind velocity and direction.

NAME: _____ DATE: _____ AIRCRAFT TYPE _____

INSTRUCTOR'S SIGNATURE _____

STUDENT'S SIGNATURE _____

INSTRUCTOR'S COMMENTS: *(Use backside of paper is necessary)*

ATTACHMENT 5
(USED WITH PERMISSION BY JBER AERO CLUB MANAGEMENT)

AIRPLANE SINGLE ENGINE SEA RATING COURSE

PREREQUISITES

The applicant must hold at least a private pilot certificate with an airplane category rating. In addition, the applicant must meet the experience requirements of FAR Part 61 for the issuance of a Single Engine Sea rating.

GROUND TRAINING COURSE OBJECTIVE

The applicant will acquire the necessary aeronautical knowledge for a Single Engine Sea rating.

GROUND TRAINING COURSE COMPLETION STANDARDS

The applicant will demonstrate, through records and oral evaluation that the necessary aeronautical knowledge has been obtained for a Single Engine Sea rating. Ground training will consist of 11 hours.

FLIGHT TRAINING COURSE OBJECTIVES

The applicant will obtain the aeronautical skills and experience necessary to obtain a Single Engine Sea rating with an airplane category rating.

FLIGHT TRAINING COURSE COMPLETION STANDARDS

The applicant must demonstrate through flight tests and training records the necessary aeronautical skills to obtain a Single Engine Sea rating with an airplane category rating. Flight training will consist of 10.5 hours.

FLIGHT TRAINING SYLLABUS

The ground training contains one stage with six lessons. The flight-training syllabus is one stage with 10 lessons. Each of these instructional units are described in the succeeding pages. Flight training consists of 10.5 hours of flight. The applicant's proficiency and knowledge will be checked by the flight instructor prior to the final stage check. A qualified AKWG/DOV team member other than the instructor conducting training will conduct the final stage check.

Exemption from this requirement will be made on a case-by-case basis by the AKWG/DO.

Hours shown in each lesson for flight training are offered as a guide to the instructor. Whereas times used on individual lessons may be adjusted to the individual applicant's needs.

LESSON DESCRIPTION AND STAGES OF TRAINING

Each lesson is fully described within the syllabus, including the objectives and standards, for each lesson. Applicants are expected to complete this training within 90 days to ensure continuity of learning. The objectives and standards are described within the syllabi.

GROUND TRAINING SYLLABUS GROUND TRAINING – 11.0 HOURS

1. GROUND TRAINING COURSE OBJECTIVES

The applicant will obtain the necessary aeronautical knowledge to pass the oral phase of the FAA ASES practical test.

2. GROUND TRAINING COURSE COMPLETION STANDARDS

The applicant will demonstrate through oral evaluation that they have the knowledge to pass the oral phase of the practical test.

3. GROUND TRAINING SYLLABUS

Hours shown in each lesson of ground training are offered as a guide to the instructor. Specified minimum times for an entire stage must be complied with whereas times used on individual lessons may be adjusted to the individual applicant's needs.

GROUND LESSON 1

2.0 HOURS

LESSON OBJECTIVES

This lesson will introduce the applicant to seaplane types, components, systems and powerplant operation.

LESSON CONTENT:

Seaplane types

- ☐ Amphibian
- ☐ Floatplane
- ☐ Flying Boat

Seaplane

- ☐ Wings
- ☐ Fuselage
- ☐ Empennage
- ☐ Landing Gear
- ☐ Powerplant and Propeller
- ☐ Floats and Hull Construction

Controls

- ☐ Ailerons, ☐ Elevator/Stabilator, Rudder, Flaps
- ☐ Water Rudders
- ☐ Trim System

Electrical System

- ☐ Master Switch
- ☐ Alternator/Generator
- ☐ Battery

Fuel and Fuel System

- ☐ Use of Proper Fuel
- ☐ Fuel System Operation
- ☐ Fuel Contamination and Preventive Measures
- ☐ Refueling

Oil and Oil System, Powerplant Operations

- ☐ Fuel/Air Induction Systems
- ☐ Ignition System
- ☐ Cooling
- ☐ Precautions and Operational Considerations

Propellers

- ☐ Fixed Pitch
- ☐ Constant Speed

Preflight Operations

COMPLETION STANDARDS:

This lesson will be complete when by oral examination the applicant displays an understanding of the material presented and has completed the study assignment.

GROUND LESSON 2

2.0 HOURS

LESSON OBJECTIVES

This lesson will introduce weight and balance theory and computations including their importance to seaplane performance.

LESSON CONTENT:

Definitions

- ☐ Empty Weight
- ☐ Gross Weight
- ☐ Maximum Gross Weight
- ☐ Useful Load
- ☐ Datum
- ☐ Arm
- ☐ Moment
- ☐ Center of Gravity

Weight and Balance

- ☐ Graph Method
- ☐ Table Method
- ☐ CG Adjustment
- ☐ Fuel Burn
- ☐ Performance and Handling

Emergency operations

- ☐ Approach and Landing
- ☐ Partial or Complete Power Malfunctions
- ☐ Systems or Equipment Malfunctions
- ☐ Lost Procedures

COMPLETION STANDARDS:

This lesson will be complete when by oral examination and the applicant displays an understanding of the material presented and has completed the study assignment.

GROUND LESSON 3

2.0 HOURS

LESSON OBJECTIVES

This lesson will introduce methods of determining wind direction and techniques used in taxiing and takeoff under varying wind conditions.

LESSON CONTENT:

Determining Wind Direction

- ☐ Tide
- ☐ Current (*Strength and Direction*)
- ☐ Waterfowl
- ☐ Smoke
- ☐ Flags
- ☐ Wave Pattern & Whitecaps
- ☐ Boats at Anchor

Taxiing

- ☐ Center of Buoyancy
- ☐ Position Idling
- ☐ Plowing
- ☐ On the Step
- ☐ Wind Direction/Velocity
- ☐ Debris (*Floating/Submerged*) & Sandbars

Taxiing Turns

- ☐ Positions
- ☐ Slow Speed
- ☐ Plowing
- ☐ On the Step

Wind Direction and Conditions of Water Surface

- ☐ Sailing
- ☐ Takeoff
- ☐ Glassy
- ☐ Calm
- ☐ Choppy/Rough
- ☐ Swells

Takeoff

- ☐ Initial Climb Speed V_x or V_y
- ☐ Climb Performance
- ☐ Selection of Climb Speed/Rate of Climb
- ☐ Confined Area
- ☐ Cruise Climb

COMPLETION STANDARDS:

This lesson will be complete when by oral examination the applicant displays an understanding of the material presented and has completed the study assignment.

GROUND LESSON 4

2.0 HOURS

LESSON OBJECTIVES

This lesson will introduce cruise performance charts, landing techniques, hazards and methods of securing the aircraft.

LESSON CONTENT:

Cruise Performance

- ☐ Altitude Selection
- ☐ Power Settings
- ☐ RPM
- ☐ Manifold Pressure
- ☐ Mixture Control
- ☐ Fuel Consumption Rate
- ☐ True Airspeed

Landings-Water Surface

- ☐ Glassy
- ☐ Calm
- ☐ Choppy/Rough
- ☐ Swells
- ☐ Wind Direction
- ☐ Current/Tidal effects
- ☐ Approach Speed
- ☐ Use of Flaps
- ☐ Confined Area

Hazards

- ☐ Porpoising
- ☐ Skipping

Surface Operations

- ☐ Anchoring
- ☐ Mooring
- ☐ Docking
- ☐ Sailing
- ☐ Beaching

Seaplane Bases

COMPLETION STANDARDS:

This lesson will be complete when by oral examination and the applicant displays an understanding of the material presented and has completed the study assignment.

GROUND LESSON 5

2.0 HOURS

LESSON OBJECTIVES

This lesson will review federal aviation regulations discussed as an integral part of previous lessons and will introduce other regulations applicable to seaplane operations and safety.

LESSON CONTENT:

Regulations

- ☐ FAR Part 1
- ☐ FAR Part 61
- ☐ FAR Part 91
- ☐ NTSB part 830
- ☐ Maritime Rules
- ☐ Maritime Navigation Aids

COMPLETION STANDARDS:

This lesson will be complete when, by oral examination, the applicant displays an understanding of the material presented and has completed the study assignment.

GROUND LESSON 6

1.0 HOUR

LESSON OBJECTIVES

This lesson will be a review of material presented in lessons 1 through 5 in preparation for the final written examination.

LESSON CONTENT:

Review as necessary.

COMPLETION STANDARDS:

This lesson and final stage will be complete when the applicant has demonstrated through training records and oral evaluation that they have a thorough understanding of the material presented in ground lessons 1 through 5.

FLIGHT LESSON 1

1 HOUR DUAL

LESSON OBJECTIVE:

The applicant will be familiarized with the training seaplane's operating characteristics, limitations, cockpit controls, instruments and systems. Preflight procedures, use of checklists and safety precautions to be followed will be introduced.

LESSON CONTENT

Aircraft Familiarization

Preflight Operations

- ☐ Certificates and Documents
- ☐ Performance and Limitations
- ☐ Weight and Balance
- ☐ Weather Information
- ☐ Seaplane Servicing
- ☐ Use of Checklist
- ☐ Preflight Inspection
- ☐ Engine and Systems Preflight Check
- ☐ Engine Starting
- ☐ Use of Water Rudders
- ☐ Pre-take off Check
- ☐ Normal Takeoff
- ☐ Climbs
- ☐ Straight and Level Flight
- ☐ Slow Flight
- ☐ Steep Turns
- ☐ Power On Stall (*with and without turns*)
- ☐ Power Off Stall (*with and without turns*)
- ☐ Accelerated
- ☐ Descents and Glides
- ☐ Seaplane Base Traffic Pattern
- ☐ Prelanding Check
- ☐ Normal Landing
- ☐ After Landing Check
- ☐ Aircraft Shutdown
- ☐ Aircraft Mooring

COMPLETION STANDARDS:

At the completion of this lesson, the applicant will be able to conduct a pre-flight, use check list and display coordination in all piloting fundamentals covered in this lesson. Altitude will be maintained within ± 100 feet, heading within ± 10 degrees and airspeed within ± 10 knots.

FLIGHT LESSON 2

1 HOUR DUAL

LESSON OBJECTIVES

The applicant will review normal takeoffs and landings and be introduced to the three positions of the seaplane while taxiing.

LESSON CONTENT:

Review

- ☐ Preflight Operations
- ☐ Normal Takeoffs
- ☐ Normal Landings
- ☐ Skipping
- ☐ Aircraft Mooring

Introduction

Taxiing Positions

- ☐ Idling
- ☐ Plowing
- ☐ On Step
- ☐ Porpoising

Taxiing Turns

- ☐ Slow Speed
- ☐ Plowing
- ☐ On Step

COMPLETION STANDARDS:

The applicant will show proper planning, judgment and positive control of the aircraft while taxiing, on final approach speed will be within +10/-5 kts of the recommended speed and a straight course will be maintained during touchdown and throughout the runout on the surface.

FLIGHT LESSON 3

1 HOUR DUAL

LESSON OBJECTIVES

The applicant will review taxiing, takeoffs and landings and be introduced to taxiing under varying wind conditions, aborted takeoffs and accuracy landings.

LESSON CONTENT:

Review

Taxiing Positions

- ☐ Idling
- ☐ Plowing
- ☐ On Step

Taxiing Turns

- ☐ Slow Speed
- ☐ Plowing
- ☐ On Step
- ☐ Normal Takeoff
- ☐ Normal Landing

Introduction

Taxiing

- ☐ Down Wind
- ☐ Crosswind
- ☐ Aborted Takeoff
- ☐ Accuracy Landing

COMPLETION STANDARDS:

The applicant will demonstrate proper use of flight controls. Lower water rudders while safely and effectively taxiing the seaplane. During landings, the applicant will correctly use the controls in flight and on the surface; touchdowns will be within a specified area.

FLIGHT LESSON 4

1 HOUR DUAL

LESSON OBJECTIVES

This lesson will review taxiing, aborted takeoffs and accuracy landings, emergency operations, go-around and crosswind takeoff and landing techniques will be introduced.

LESSON CONTENT:

Review

Taxiing

☐ Downwind

☐ Crosswind

Introduction

☐ Crosswind Takeoffs

☐ Aborted Takeoff

☐ Crosswind Landings

☐ Accuracy Landing

☐ Emergency Operations

☐ Go-around

COMPLETION STANDARDS:

The applicant will use the controls smoothly and correctly in-flight and on the surface and during takeoffs and landings, go-around will be executed safely from any point during the landing approach. Emergency procedures will be performed in compliance with the manufacturer's published recommendations.

FLIGHT LESSON 5

1 HOUR DUAL

LESSON OBJECTIVES

This lesson will review crosswind takeoff and landing technique emergency operations and go-around. The applicant will be introduced to sailing, docking, beaching and securing techniques.

LESSON CONTENT:

Review

- ☐ Crosswind Takeoffs
- ☐ Crosswind Landings
- ☐ Emergency Operations
- ☐ Go-Around

Introduction

- ☐ Sailing
- ☐ Anchoring
- ☐ Docking
- ☐ Beaching
- ☐ Taxiing
- ☐ Approach to a Buoy (actual or simulated)
- ☐ Approach to a Pier (actual or simulated)
- ☐ Approach to a Ramp (actual or simulated)

COMPLETION STANDARDS:

The applicant will demonstrate proper planning, judgment, timing and aircraft control while sailing, docking, beaching and taxiing the aircraft.

FLIGHT LESSON 6

1 HOUR DUAL

LESSON OBJECTIVES

This lesson will review sailing, docking, and beaching. Takeoff and landing techniques for choppy and rough water conditions plus downwind takeoffs and landings will be introduced.

LESSON CONTENT:

Review

- ☐ Sailing
- ☐ Anchoring
- ☐ Docking
- ☐ Beaching

Introduction

Takeoffs

- ☐ Glassy Water
- ☐ Choppy Water
- ☐ Rough Water
- ☐ Confined Area and Maximum Performance Climb

Landings

- ☐ Glassy Water
- ☐ Choppy Water
- ☐ Rough Water
- ☐ Confined Area
- ☐ Emergency - high and low altitude
- ☐ System and Equipment Malfunction

COMPLETION STANDARDS:

The applicant will demonstrate correct downwind, choppy water and landing techniques. Takeoff and landings will be performed smoothly with correct use of the controls in flight and on the surface. Emergency procedures will be performed in compliance with the manufacturer's published recommendations.

FLIGHT LESSON 7

1 HOUR DUAL

LESSON OBJECTIVES

This lesson will review previously introduced takeoffs and landings and introduce the applicant to circular takeoffs and confined area takeoff and landing.

LESSON CONTENT:

Review

Takeoffs

- ☐ Glassy Water
- ☐ Choppy Water
- ☐ Rough Water
- ☐ Confined Area

Landings

- ☐ Glassy Water
- ☐ Choppy Water
- ☐ Rough Water
- ☐ Confined

Introduction

- ☐ Takeoffs
- ☐ Circular

COMPLETION STANDARDS:

The applicant will demonstrate correct circular takeoff plus confined area takeoff and landings. Takeoffs and landings will be performed smoothly with correct use of the controls in flight and on the water surface.

FLIGHT LESSON 8

1 HOUR DUAL

LESSON OBJECTIVES

This lesson will review previously introduced takeoffs and landings and introduce the applicant to high density altitude takeoffs.

LESSON CONTENT:

Review

Takeoffs

☐ Circular

☐ Glassy Water

Introduction

☐ High-Density Altitude Takeoff

Landings

☐ Night - Simulated

☐ No Flap

COMPLETION STANDARDS:

The applicant will demonstrate correct glassy water and high-density altitude takeoff techniques, and the correct techniques for landing in glassy water, at night and without flaps. Takeoff and landing-flights will be performed smoothly with correct use of the controls in flight and on the water surface.

FLIGHT LESSON 9

1 HOUR DUAL

LESSON OBJECTIVES

During this lesson, the applicant will review all previously introduced maneuvers and procedures in preparation for the final flight check.

LESSON CONTENT:

Review

- ☐ Basic Flight Maneuvers
- ☐ Taxiing
- ☐ Sailing
- ☐ Takeoffs
- ☐ Landings
- ☐ Emergency Operations

COMPLETION STANDARDS:

The minimum standards of proficiency will be the acceptable performance guidelines as outlined in the appropriate and current Practical Test Standards.

FLIGHT LESSON 10 – FINAL STAGE CHECK

1.5 HOURS DUAL

LESSON OBJECTIVES

This final flight check conducted by the chief flight instructor or his assistants will evaluate the applicant's readiness for the seaplane rating practical test.

LESSON CONTENT:

Review Landings

- ☐ Performance and Limitations ☐ Normal/Crosswind
- ☐ Operations of Systems ☐ Glassy Water
- ☐ Seaplane Characteristics ☐ Rough Water

Taxiing/Sailing ☐ Confined Area

- ☐ Idle *Emergency Operations*
- ☐ Plow ☐ Approach and Landing
- ☐ Step *Post Flight*
- ☐ Porpoising ☐ Anchoring

Takeoffs ☐ Beaching

- ☐ Normal/Crosswind ☐ Docking
- ☐ Glassy Water ☐ Securing Aircraft
- ☐ Rough Water
- ☐ Confined Area

Maneuvers

- ☐ Slow Flight
- ☐ Steep Turns
- ☐ Power On Stall (*with and without turns*)
- ☐ Power Off Stall (*with and without turns*)

COMPLETION STANDARDS:

The minimum standards of proficiency will be the acceptable performance guidelines as outlined in the appropriate, current ACS or PTS. If additional instruction is necessary, the chief flight instructor or his assistant will assign the additional training. If the flight is satisfactory, the chief flight instructor or his assistant will complete the applicant's training records and issue an appropriate graduation certificate.

NAME: _____ DATE: _____ AIRCRAFT TYPE _____

INSTRUCTOR'S SIGNATURE _____

STUDENT'S SIGNATURE _____

INSTRUCTOR'S COMMENTS: (*Use backside of paper is necessary*)

ATTACHMENT 6**AKWG AIRPLANE SINGLE ENGINE LAND SKI COURSE****PREREQUISITES**

The applicant must hold at least a private pilot certificate with an airplane category rating and a tailwheel endorsement.

GROUND TRAINING COURSE OBJECTIVE

The applicant will acquire the necessary aeronautical knowledge to safely operate ski-equipped tailwheel airplane (skiplane) in a variety of snow, weather, and airport conditions.

This course will emphasize all areas of skiplane operation with specific attention to the differences from wheel gear, or floats, and specific characteristics due to the tail wheel aircraft standard for these operations. In the event a tricycle gear skiplane is added, this syllabus will be updated within the first season to include specific operations related to those aircraft. This syllabus is designed to assist CAP Instructors in effectively teaching skiplane operations.

GROUND TRAINING COURSE COMPLETION STANDARDS

The applicant will demonstrate, through records and oral evaluation that the necessary aeronautical knowledge has been obtained for safe operation of a ski-equipped tailwheel airplane. Ground training will consist of a MINIMUM of 2.0 hours.

This does not guarantee any scenario has been briefed and instructed, but does arm the applicant with enough knowledge to safely make decisions. Performance in this course will vary considerably depending on the experience level of the pilot. It is important that each flight instructor understand that all individuals are different, and that the level of proficiency at the completion of this course will vary greatly; however, the goal is to make each individual pilot confident and competent to fly a skiplane in various snow, weather, and airport conditions, and to realize his or her own limitations and to abide by them.

FLIGHT TRAINING COURSE OBJECTIVES

The applicant will obtain the aeronautical skills and experience necessary to for safe operation of a ski-equipped tailwheel airplane.

FLIGHT TRAINING COURSE COMPLETION STANDARDS

The applicant must demonstrate through flight tests and training records the necessary aeronautical skills safe operation of a ski-equipped tailwheel airplane. Flight training will consist of a MINIMUM of 3.0 hours.

FLIGHT TRAINING SYLLABUS

The ground training contains one stage with 2 lessons. The flight-training syllabus is one stage with 2 lessons. Each of these instructional units are described in the succeeding pages. Flight training consists of 3.0 hours of flight. The applicant's proficiency and knowledge will be checked by the flight instructor prior to the final stage check. A qualified AKWG/DOV team member

other than the instructor conducting training will conduct the final stage check, a CAPF 70-5A. Exemption from this requirement will be made on a case-by-case basis by the AKWG/DO.

Hours shown in each lesson for flight training are offered as a guide to the instructor. Whereas times used on individual lessons may be adjusted to the individual applicant's needs.

LESSON DESCRIPTION AND STAGES OF TRAINING

Each lesson is fully described within the syllabus, including the objectives and standards, for each lesson. Applicants are expected to complete this training within 90 days to ensure continuity of learning. The objectives and standards are described within the syllabi.

GROUND TRAINING SYLLABUS

GROUND TRAINING – 2.0 HOURS

1. GROUND TRAINING COURSE OBJECTIVES

The applicant will obtain the necessary aeronautical knowledge to demonstrate their ability to safely operate a ski-equipped tailwheel airplane via CAPF 70-5A.

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2. GROUND TRAINING COURSE COMPLETION STANDARDS

The applicant will demonstrate through oral evaluation that they have the knowledge to safely operate a ski-equipped tailwheel airplane via CAPF 70-5A.

3. GROUND TRAINING SYLLABUS

Hours shown in each lesson of ground training are offered as a guide to the instructor. Specified minimum times for an entire stage must be complied with whereas times used on individual lessons may be adjusted to the individual applicant's needs.

GROUND LESSON 1

1.0 HOUR

LESSON OBJECTIVE:

During this lesson, the applicant will gain basic knowledge of ski characteristics, preflight items, ground operation, and normal takeoffs and landings.

CONTENT:

Ski Characteristics

- Ski components
- Stability and handling characteristics
- Air handling differences
- Retractable gear operation

Preflight Items

- Ski assembly
- Controls
- Condition and wear items

Ground Operation

- Visibility
- Taxi techniques
- Control inputs
- Spatial Awareness

Normal Takeoffs and Landings

- Normal Takeoff Procedure
- Types of Normal Landings
 - 3-point Landings
 - Wheel Landings
- 3-point landing procedures
- Snow types
- Ski vs wheel landings and safety

COMPLETION STANDARDS:

This lesson will be complete when by oral examination and the applicant displays an understanding of the material presented and has completed the study assignment.

GROUND LESSON 2

1.0 HOUR

LESSON OBJECTIVE:

During this lesson, the applicant will learn how to successfully select suitable landing areas on lakes and flat (non-sloped) terrain.

SKI FLYING TECHNIQUES

Area Selection

- ➔ Overflow
- ➔ Distance of landing area available
- ➔ Distance required based on conditions
- ➔ Ice vs powder and everything in between
- ➔ Ice formation on lakes
- ➔ Hazards of tundra

Performance

- ➔ Impact of snow condition on performance
- ➔ Impact of temperature on performance
- ➔ Impacts of density altitude
- ➔ How to determine safe landing distances for the day

COMPLETION STANDARDS:

This lesson will be complete when by oral examination and the applicant displays an understanding of the material presented and has completed the study assignment.

FLIGHT LESSON 1

1.5 HOUR DUAL

LESSON OBJECTIVES

This initial flight lesson introduces ground and flight operations with skis, including first landings. Ski landings should be restricted to known and groomed ski strips with known declared lengths.

LESSON CONTENT:

Ski Characteristics

- Stability and handling characteristics
- Air handling differences
- Retractable gear operation

Ground Operation

- Visibility
- Taxi techniques
- Control inputs
- Spatial Awareness

Takeoffs and Landings

- Normal takeoffs and landings
- Area preparation and scouting
- Snow determinations
- Ski takeoffs and landings

Landing Areas

- Snow depth
- Snow type
- Length determination techniques

COMPLETION STANDARDS:

The applicant will demonstrate proper use of ski equipment during ground and flight operations. The applicant will correctly assess the landing surface, use the controls in flight and on the surface and touchdowns will be within a specified area.

FLIGHT LESSON 2

1.5 HOUR DUAL

LESSON OBJECTIVES

Flight lesson 2 should incorporate known lakes and differing snow conditions if able. Landing surfaces should be relatively flat with little slope in any direction. As many landings in varying snow conditions as possible should be experienced.

LESSON CONTENT:

Landing Area Selection

- Area selection
- Lake preparation
- Inspection passes
- Checking surfaces below snow

Landing Area Preparation

- Strip preparation
- "Laying tracks"
- Length and shape of tracks to lay
- Checking for overflow
- Ice formation and temperature variance in lakes

NAME: _____ DATE: _____ AIRCRAFT TYPE _____

INSTRUCTOR'S SIGNATURE _____

STUDENT'S SIGNATURE _____

INSTRUCTOR'S COMMENTS: *(Use backside of paper is necessary)*