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Flying Operations

CAP-USAF AIRCREW OPERATIONS

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This manual implements AFPD 11-2, *Aircrew Operations.* It applies to all individuals assigned or attached to Civil Air Patrol- United States Air Force (CAP-USAF). It does not apply to Air Force Reserve Command, Air National Guard units or the United States Space Force. This manual establishes the minimum standards for training and qualifying active duty and civil service personnel performing duties in aircraft operated by CAP-USAF regardless of type. This publication requires the collection and/or maintenance of information protected by the Privacy Act of 1974 authorized by Title 10 United States Code (USC), Section (§) 9013, *Secretary of the Air Force*. The applicable System of Records Notices (SORN) F011 AF XO A, Aviation Resource Management System (ARMS) membership programs is available at **https://dpcld.defense.gov/privacy/SORNS.aspx**. Information that is collected from other DoD components or Federal agencies must be approved by DoD and licensed with a report control symbol. Ensure all records generated as a result of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the publication OPR using the DAF Form 847, *Recommendation for Change of Publication*. Route DAF Forms 847 from the field through the appropriate functional chain of command. This publication may be supplemented at any level, but all supplements must be routed to the Air Combat Command Director of Operations (ACC/A3) through the OPR of this publication for coordination prior to certification and approval. The authorities to waive wing or detachment level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3")

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SUMMARY OF CHANGES

This document is significantly revised and must be completely reviewed. This revision eliminates redundancies between the Pilot's Operating Handbook (POH) and the previous version and clarifies internal processes.

Chapter 1

GENERAL INFORMATION

1.1. Scope. This instruction outlines the procedures applicable to the safe operation of CAP-USAF aircraft. This instruction prescribes standard operational procedures to be used by all pilots operating any CAP-USAF aircraft. Detachments (Dets) may provide local operating procedures in a supplement to this publication.

1.2. Pilot's Responsibility. In conjunction with other governing directives, this instruction prescribes CAP-USAF procedures under most circumstances but is not to be used as a substitute for sound judgment or common sense. The pilot in command (PIC) is ultimately responsible for the safe and effective operation of the aircraft and will ensure all occupants of the aircraft comply with this directive.

1.3. Deviations. Do not deviate from the procedures and guidance in this publication except when necessary to preserve safety or protect lives. In that case, the PIC has ultimate authority and responsibility for the course of action to be taken and will take the appropriate action to safely recover the aircraft. Report all deviations without waivers through appropriate channels to Civil Air Patrol-United States Air Force Director of Operations (CAP-USAF/DO).

1.4. References. The primary references for CAP-USAF operations are this publication and either the Pilot's Operating Handbook (POH) or the aircraft flight manual (AFM) for the aircraft being flown. (**Note:** The terms POH or AFM may be used interchangeably in this publication.) CAP-USAF may expand these basic procedures with publications detailing maneuvers and instructional techniques. These publications may be used to augment and expand qualification and continuation training but will not be less restrictive.

1.5. Crew Requirements. The minimum crew complement for CAP-USAF aircraft is the certified crew complement for the aircraft.

1.6. Maximum Flight Duty Period (FDP) and Flight Time. AFMAN 11-202, Volume 3, *Flight Operations*, lists maximum FDPs.

1.6.1. For normal operations, consider CAP-USAF aircraft as a single piloted aircraft.

1.6.2. Maximum FDP is 12 hours. The PIC is authorized to extend FDP a maximum of 2 hours to compensate for unplanned mission delays.

1.6.3. Evaluee FDP will not exceed 10 hours for any evaluation.

1.7. Clothing Requirements. AFMAN 11-301, Volume 2, *Management and Configuration Requirements for Aircrew Flight Equipment (AFE)*, prescribes minimum aircrew clothing requirements. In the absence of specific guidance:

1.7.1. Active-duty aircrew will wear the aircrew uniform as outlined in DAFI 36-2903, *Dress and Personal Appearance of United States Air Force and United States Space Force Personnel*, on all missions, unless otherwise authorized by CAP-USAF/DO.

1.7.2. Civil service aircrew will wear conservatively styled civilian clothing, personally procured flight suits or other utility-type attire.

1.7.3. Each unit commander will determine extra clothing to be worn or carried aboard all flights commensurate with mission, climate, and terrain involved.

1.7.4. Crewmembers will remove all rings, scarves, and neckties before performing aircrew duties.

1.8. Seatbelts and Shoulder Harnesses:

1.8.1. All occupants will have a designated seat with a seatbelt.

1.8.2. All Aircrew members will wear seatbelts at all times while operating the aircraft.

1.8.3. Passengers will remain seated with seatbelts fasted during taxi, takeoff, landing, flight operations below 1,500 feet above ground level (AGL), and any other time as determined by the PIC.

1.9. Oxygen Requirements. The PIC will ensure oxygen is supplied to occupants IAW AFMAN 11-202V3.

1.10. Cargo Restrictions. Transportation of mission-essential animals or hazardous cargo is not authorized without CAP-USAF/DO approval.

1.11. Interfly. Flights in CAP-USAF aircraft, by qualified aircrew assigned to other MAJCOMs, require CAP-USAF/CC approval IAW DAFMAN 11-401, *Aviation Management*.

1.12. Aerial Events. CAP-USAF pilots will not participate in aerial reviews or aerial demonstrations.

Chapter 2

MISSION PLANNING

2.1. Responsibilities. The PIC and other pilots jointly share responsibility of mission planning though the PIC is ultimately responsible.

2.2. General Procedures. The aircrew will:

2.2.1. Accomplish sufficient flight planning to ensure safe mission accomplishment as specified in AFMAN 11-202V3.

2.2.1.1. CAP-USAF missions are conducted as official military flights and do not require individual civil aircraft landing permits IAW AFI 10-1001, *Civil Aircraft Landing Permits*, paragraph 3.1.2.2. Include the remark "Air Force Contract Rental or Leased Aircraft" in the remarks section of the flight plan and use only the assigned CAP-USAF call sign to preclude confusion with CAP or civilian aircraft.

2.2.1.2. Pilots may use ForeFlight® or any commercially procured flight planning software for General Aviation aircraft approved by Air Combat Command Flight Operations Division (ACC/A3T).

2.2.2. When pilots use less than the entire runway for takeoff, base the takeoff data calculations on the actual runway remaining from the point where takeoff starts. At a minimum, compute takeoff and landing data for each flight when:

2.2.2.1. Runway available is less than 3000 feet, or

2.2.2.2. Density Altitude is greater than 3000 feet, or

2.2.2.3. More than two personnel are on the aircraft.

2.2.3. Web Mission Information Reporting System (WMIRS) and Patriot Excalibur (PEX) are the approved systems of record for CAP-USAF pre- and post-mission paperwork.

2.2.3.1. Pre-Mission.

2.2.3.1.1. All flight order requests will be input into WMIRS No Later Than (NLT) 1400 CT the day prior to mission execution. Late flight order requests require CAP-USAF/DO approval. All CAP-USAF flights exiting or originating outside the continental United States (to include flights to or from Puerto Rico or Alaska) must receive prior approval from CAP-USAF/CC.

2.2.3.1.2. Verbal flight authorizations without signed orders may only be granted by CAP-USAF/CC, CAP-USAF Vice Commander (CAP-USAF/CV) or CAP-USAF/DO. If a verbal authorization is received, the PIC will notify CAP-USAF Aviation Resource Management (CAP-USAF/DOF) prior to flight.

2.2.3.1.3. Designate a CAP-USAF pilot as the PIC on all flights with CAP pilots. **Exception:** Dets may designate CAP pilots as PIC when observing or evaluating a CAP training mission or when receiving training.

2.2.3.1.4. Ensure all passengers are manifested IAW AFMAN 11-202V3. CAP-USAF/DO is the approval authority for passengers on CAP-USAF missions. Forward a copy of the passenger manifest to CAP-USAF/DOF prior to takeoff.

2.2.3.1.5. CAP-USAF/DOF, CAP-USAF Standardization and Evaluation (CAP-USAF/DOV), CAP-USAF Training (CAP-USAF/DOT) or CAP-USAF/DO will perform all Go/No-Go checks and forward an electronic copy of the flight orders to an approved flight order issuing authority for signature. The flight authorization signature authority will email complete flight authorizations to the PIC the duty day prior to the flight. If unable to access an electronic copy of their flight orders, the PIC shall contact CAP-USAF/DOF or the signature authority to ensure the flight is authorized prior to departure.

2.2.3.1.6. Mission-essential personnel status is not authorized on CAP-USAF contract rental aircraft.

2.2.3.2. Post-Mission.

2.2.3.2.1. All post-mission paperwork, to include required gradesheets (if applicable) will be uploaded to WMIRS and PEX NLT 3 business days after mission execution.

2.2.3.2.2. Forward a completed copy of the Air Force Technical Order (AFTO) Form 781, *ARMS Aircrew/Mission Flight Data Document*, to CAP-USAF/DOF.

2.2.3.2.3. If multiple fuel receipts from one mission are combined on a single document for uploading to WMIRS, it is the PICs responsibility to ensure the correct amount is entered in WMIRS.

2.2.3.2.4. Once all paperwork has been completed and forwarded, CAP-USAF/DOF will close the mission in WMIRS. If a mission was uploaded into WMIRS and subsequently cancelled, the PIC will delete all sorties under the mission number before closing the mission.

2.3. Briefings and Debriefings. The PIC will utilize the CAP-USAF Pre-Mission Brief to present a logical briefing that promotes safe and effective mission accomplishment. All pilots will attend the flight briefing. The PIC will structure the flight briefing to accommodate the capabilities of each pilot on the flight. Passengers will be briefed on their specific duties and responsibilities related to safe mission accomplishment. All missions will be debriefed.

2.3.1. Minimum Briefing Times. Begin initial briefings at least 30 minutes before the scheduled takeoff. On subsequent flights with the same crew on the same day, the PIC must brief only those items that have changed from the previous flights.

2.3.2. Briefing Guides:

2.3.2.1. Aircrews will refer to the briefing guide located in **Attachment 2** and brief applicable items before each mission. Electronic copies of the Pre-Mission Brief are available in the CAP-USAF SharePoint® or Electronic Flight Bag (EFB) publications libraries. The aircraft flight manual contains the passenger briefing guide.

2.3.2.2. Items listed may be briefed in any sequence. Underlined items may be briefed as "standard" if the crew has briefed together before and there are no changes. The guide may be expanded as necessary to cover other important items of the flight. Brief in sufficient detail to prevent any misunderstanding between crewmembers.

2.4. Maps and Charts. Downloaded ForeFlight® maps and charts will be verified current prior to every flight.

2.4.1. If flying into known Instrument Metrological Conditions (IMC) conditions, a secondary method for viewing flight information publications (paper or electronic) must be onboard the aircraft.

2.5. Required Documents and Publications. The following documents and publications must be on board for flight:

2.5.1. Aircraft weight and balance.

2.5.2. Airworthiness certificate.

2.5.3. Aircraft registration.

2.5.4. CAP aircraft information file (CAP aircraft only).

2.5.5. Passenger manifest, if required (according to AFMAN 11-202V3).

2.5.6. AFM or POH.

2.5.7. Current ForeFlight® or other approved navigation database.

Chapter 3

NORMAL OPERATING PROCEDURES

3.1. General.

3.1.1. CAP-USAF units will not develop their own aircraft checklists. Pilots will utilize aircraft owner/operator provided checklists on all CAP-USAF flights.

3.1.2. Communications:

3.1.2.1. CAP-USAF/DO will designate call signs.

3.1.2.2. In terminal areas, both pilots will monitor the primary air traffic control frequency.

3.1.2.3. The pilot operating the radios will inform the other pilot when the primary radio is changed.

3.1.2.4. The aircrew will limit conversation to that essential for crew coordination and mission accomplishment during taxi, takeoff, approach, and landing.

3.2. Preflight.

3.2.1. Required Aircrew Equipment:

3.2.1.1. A survival kit is required for all operations. **(T-2)** The CAP-approved survival kit for the local CAP Wing fulfills this requirement but must be checked prior to each flight to ensure it is present. **(T-2)** HQ CAP-USAF will use survival kits provided by the 908th Airlift Wing. **(T-2)**

3.2.1.2. An operable flashlight is required for all night operations. **(T-2)**

3.2.2. Aircraft Airworthiness. The PIC is responsible for ensuring the airworthiness of the aircraft. CAP-USAF pilots must thoroughly review the CAP Aircraft Maintenance Repair and Documentation (AMRAD) website prior to accepting an aircraft for flight. **(T-2)** Pilots should be aware that aircraft rented from commercial sources may not be as thoroughly maintained as aircraft from CAP or Air Force Aero Club sources.

3.2.3. Propeller Operations. Hand-propping is prohibited. **(T-2)** The propeller may be turned to facilitate ground handling provided the pilot confirms the master, magneto, and ignition switches are in the OFF position with the ignition key removed.

3.2.4. External Power Starts. Use of external power for engine start with a dead battery or for charging a dead battery is prohibited. **(T-2)** Do not accept an aircraft for flight unless the malfunction requiring the use of external power is determined and corrected, e.g., bad battery, drained battery or other electrical malfunction. **(T-2)** A qualified aircraft mechanic will remove the battery from the aircraft for servicing. **(T-2)** Use of external power for cold weather starting during lengthy maintenance work is permitted.

3.2.5. Instrument Cockpit Check. Complete an instrument cockpit check prior to initial takeoff on every sortie. **(T-2) Exception:** An instrument cockpit check is not required when no instrument approaches are planned during a local sortie. **Note:** Det/CCs may define local flying areas.

3.3. Ground and Taxi Operations:

3.3.1. **Refueling Operations.** Pilots will:

3.3.1.1. Ensure personnel not actively involved in refueling remain at least 50 feet away from an aircraft refueling operation. In addition, do not operate the engine, taxi, or radiate electromagnetic energy within the 50-foot safety zone.

3.3.1.2. Not refuel or service aircraft with any personnel inside the aircraft.

3.3.1.3. Ensure all magneto switches and the master switch are in the OFF position, and the ignition key is removed from the switch prior to any aircraft servicing.

3.3.1.4. Check fuel samples for impurities and proper type after every refueling and before the first flight of the day. Fuel should be allowed to settle for 30 minutes to obtain the most valid sampling. If the sample is bad, immediately contact local refueling and maintenance personnel and follow AFM or POH procedures.

3.3.1.5. Visually check fuel quantity prior to every flight. If taking off with less than a full fuel load, pilots will use an aircraft manufacturer or commercially procured dipstick to check fuel quantity. The dipstick must be produced and calibrated for the specific aircraft make and model.

3.3.2. Ground Handling and Towing. Pilots will:

3.3.2.1. Use extreme caution when ground handling aircraft. Improper procedures may result in structural damage.

3.3.2.2. Not use the empennage to ground handle or turn the aircraft.

3.3.2.3. Review the aircraft nose gear turning limits in the AFM or POH prior to towing operations.

3.3.3. Foreign Object Damage. To reduce the risk of foreign object damage during ground operations:

3.3.3.1. Do not allow unauthorized personnel to approach an operating engine.

3.3.3.2. Avoid using excessive power during ground operations.

3.3.3.3. Avoid prop or jet blast from other aircraft.

3.3.3.4. Ensure loose items are secure in the cockpit before opening the doors or windows.

3.3.3.5. Ensure a minimum of 10 feet nose-to-tail separation when starting behind another aircraft.

3.3.4. Aircraft Start. The PIC will:

3.3.4.1. Ensure the area around the propeller is clear before starting the engine.

3.3.4.2. Not allow an individual who is not qualified or not in training, start engines or taxi the aircraft.

3.3.4.3. Report all engine failures or abnormalities and associated details and data to the CAP-USAF flying safety officer and the aircraft owner or operator. If the engine stops after warmup for no apparent reason, abort the sortie until the cause of the malfunction is determined and corrected by a qualified aircraft maintainer.

3.3.4.4. Qualified CAP-USAF aircrew may enplane or deplane with engine running (engine running on/off-load) to facilitate crew transfer and limit engine wear. Passengers are only authorized to perform this procedure when a dedicated ground safety observer is ensuring deplaning/enplaning personnel remain well clear of the propeller. Seat swaps where the enplaning/deplaning members remain under the wing do not require a safety observer. During enplaning/deplaning, a qualified crewmember must be at a pilot position at all times.

3.3.5. General Taxi Restrictions and Considerations:

3.3.5.1. CAP-USAF pilots are trained to maneuver general aviation aircraft near obstructions and are authorized to deviate from AFMAN 11-218, *Aircraft Operations and Movement on the Ground* requirements as specified below when critical to mission accomplishment and after exhausting all available options. These options include but are not limited to using a marshaller and/or wing walker, deplaning a crew member, and pushing or towing the aircraft into or out of parking. When deviating from AFMAN 11-218 and operating under power:

3.3.5.1.1. Aircraft must always have a minimum 6-foot wingtip clearance from any obstacle.

3.3.5.1.2. When taxiing closer than 10 feet, use a marshaller or wing walker.

3.3.5.1.3. Turns of more than 30 degrees within 10 feet of an obstacle are prohibited while the aircraft engine is operating.

3.3.5.2. Do not taxi through snowdrifts and significant accumulations of ice.

3.3.5.3. Plan to taxi around water drains and other low spots, gravel, and puddles of water to lessen the chance of prop damage.

3.3.6. Minimum Obstacle Clearances. Comply with the minimum taxi clearances in AFMAN 11-218.

3.3.6.1. Taxi speed within 10 feet of an obstacle will not exceed a slow walk.

3.3.6.2. The marshaller or wing walker must maintain visual contact with the aircraft wingtips and obstacle at all times while remaining constantly visible to the pilot.

3.3.7. Minimum Taxi Interval. Maintain at least 75 feet behind light single-engine aircraft. Maintain at least 200 feet behind multi-engine or small jet aircraft and 500 feet behind taxiing helicopters and large jet aircraft.

3.3.8. Engine Runup. Accomplish an engine runup before every flight. During engine runup, the crewmember not in control of the aircraft will guard and be ready to assume control of the brakes in case of rudder pedal linkage failure.

3.4. Takeoff and Landing:

3.4.1. Runway Requirements. Minimum runway length is 2,000 feet or the sum of the takeoff and landing rolls, whichever is greater. Pilots may accomplish intersection takeoffs provided the available runway length meets this requirement. Touch-and-go landings require a hard surfaced runway at least 3,000 feet in length or the sum of the takeoff and landing rolls, whichever is greater.

3.4.1.1. Do not land over any raised web barrier. Use caution when rolling over any cables or arresting gear. Do not exceed a slow taxi speed and avoid hitting cable "doughnuts" with the tires.

3.4.1.2. CAP-USAF pilots may take off and land on non-hard surface runways listed in the US Government Flight Information Publications (FLIP) Chart Supplement, or with prior permission from the airfield owner, provided the conditions in **paragraph 3.4.1** are met and the pilot is current and qualified.

3.4.1.3. For night operations, the minimum airfield lighting required is low intensity runway lighting (LIRL) and a visual or instrument glide slope must be available.

3.4.1.4. Touch and Go landings are authorized at night.

3.4.1.5. Short Field Takeoff procedures will be used when the runway available for takeoff is greater than 2000 feet but less than the calculated Takeoff Ground Roll over a 50feet obstacle plus 1000 feet.

3.4.1.6. Short Field Landing procedures will be used when the runway available for landing is greater than 2000 feet but less than the calculated Landing Ground Roll over a 50feet obstacle plus 1000 feet.

3.4.2. Wind Limitations. Do not takeoff, land, or taxi if the wind velocity exceeds 30 knots. This speed restriction is reduced to 25 knots when operating on a wet runway and 15 knots when operating on ice or snow-packed surfaces. Do not takeoff or land if the crosswind component exceeds the aircraft manufacturer's maximum demonstrated crosswind velocity or 15 knots, whichever is less. Include maximum reported gust when determining wind velocity.

3.4.3. Cold Weather Limitations.

3.4.3.1. CAP-USAF pilots will not conduct operations when the surface air temperature is less than zero degrees Fahrenheit.

3.4.3.2. For operations when the surface air temperature is below 20 degrees Fahrenheit, CAP-USAF pilots will only conduct operations in CAP aircraft after assuring that preheating of the engine is accomplished prior to engine start. If an approved winterization kit is available, it must be installed.

3.4.4. Raising the Landing Gear. When airborne and before moving the gear handle, the pilot flying the aircraft will make an advisory inter-cockpit "gear up" and "gear down" call and pause momentarily before moving the gear handle. On initial qualification training sorties, the instructor pilot (IP) will acknowledge "gear up" and "gear down" before the student moves the gear handle.

3.4.5. Aircraft Lighting. Use all exterior lights at all times unless restricted by the POH. Use the landing or taxi light during all flight operations in airport traffic patterns or other congested airspace. If available, use the pulse light system during daylight operations.

3.4.6. Weather Requirements:

3.4.6.1. For an Instrument Flight Rules (IFR) takeoff, existing weather must be at or above compatible IFR landing minimums at the departure airfield.

3.4.6.2. For IFR landings, pilots will use a 200-foot ceiling and 1/2-mile visibility (runway visual range of 2,400 feet) or published minimums (whichever is higher) to determine IFR landing minimums.

3.4.7. Reduced Same-Runway Separation. All operations require full runway separation.

3.5. Fuel Requirements:

3.5.1. Plan all missions to land with a minimum of 1 hour of usable fuel remaining (calculated at 75 percent power at planned cruise altitude).

3.6. Minimum Altitudes:

3.6.1. Minimum enroute altitude is 1,000 feet AGL.

3.6.2. Minimum altitude during simulated off-airfield forced landings is 500 feet AGL.

3.6.3. Perform all portions of stalls, slow flight, steep turns, and unusual attitude recoveries above 1,500 feet AGL or as directed by the POH, whichever is higher.

3.7. In-Flight Weather Requirements:

3.7.1. Flight into areas of forecast or reported freezing rain or icing is prohibited. **Note:** Aircraft damage may occur 20 miles or more from any thunderstorm.

3.7.2. Flight into areas of known or reported turbulence greater than moderate is prohibited.

3.7.3. Conduct all stalls, slow flight, and unusual attitude training in day Visual Meteorological Conditions (VMC) only.

3.8. Instrument and Navigation Procedures:

3.8.1. Global Positioning System. Global Positioning System (GPS)/RNAV operations are approved IAW the POH and AFMAN 11-202V3.

3.8.2. Simulated Instrument Flight:

3.8.2.1. Current and qualified CAP pilots may act as safety observers for CAP-USAF pilots to practice simulated instrument approaches on CAP-USAF sorties. CAP pilots are authorized to perform safety observer duties if they possess a private pilot certificate with category and class ratings appropriate to the aircraft being flown.

3.8.2.2. Vision-restricting devices to simulate IMC are approved for use provided an instrument rated (Air Force or Federal Aviation Administration [FAA]) safety observer is at a set of controls. The only authorized vision-restricting devices are opaque-type glasses (foggles) and hoods. These devices are not approved for use during takeoff and must be removed NLT the decision height (DH) or missed approach point (MAP) unless a missed approach is immediately executed.

3.9. Passenger Transport Procedures:

3.9.1. Only qualified and current pilots will occupy the left seat with passengers aboard the aircraft. Under actual instrument conditions with passengers on board, all takeoffs, climb outs, and approaches will be made by the pilot in the left seat unless the pilot in the right seat is an IP. The following maneuvers are prohibited with passengers on board the aircraft:

3.9.1.1. Simulated emergency procedures.

3.9.1.2. Stalls.

3.9.2. All passengers will be provided with a passenger briefing and should be provided with hearing protection and a headset. Under no circumstances will a passenger be authorized to manipulate the aircraft controls under 1,000 feet AGL. Passengers will not occupy the left seat during any phase of operation. Passengers may occupy seats with flight controls in aircraft designated for single-pilot operations by the POH.

3.10. Simulated Emergency Procedures: The PIC will ensure the preflight briefing includes all planned airborne simulated emergencies.

3.10.1. Conduct simulated emergency training only during day VMC.

3.10.2. Do not practice simulated emergencies in-flight without an operable interphone.

3.10.3. Do not practice compound or multiple simulated emergencies in-flight.

3.10.4. Do not perform actual engine shutdowns.

3.10.5. Do not practice thrust-reducing takeoff emergency procedures below 500 feet AGL.

3.10.6. Simulated Forced Landings (SFLs) may be continued to touchdown on hard surface runways at least 3,000 feet long with an IP on board or 5,000 feet long without an IP on board.

3.11. Mandatory Advisory Calls: On missions crewed by more than one crewmember, the pilot flying the aircraft should periodically announce intentions when flying departures, arrivals, approaches, and when circumstances require deviating from normal procedures. Crewmembers will announce when heading or airspeed deviations are observed or an altitude variation of 100 feet or more occurs. Mandatory advisory calls for the crewmember not flying are as follows:

3.11.1. Non-precision Approaches:

3.11.1.1. "One hundred feet above" MDA.

3.11.1.2. "Minimums" at MDA.

3.11.1.3. "Runway in sight" when the runway environment is in sight.

3.11.1.4. "Go-around" at MAP if the runway environment is not in sight or if the aircraft is not in a safe position to land.

3.11.2. Precision Approaches:

3.11.2.1. "One hundred feet above DH/DA."

3.11.2.2. "Proceed visually" at DH/DA if the runway environment is in sight and the aircraft is in a safe position to land.

3.11.2.3. "Go-around" at DH/DA if the runway environment is not in sight or if the aircraft is not in a safe position to land.

3.11.3. Climb Out: "One hundred feet below level-off altitude."

3.11.4. Descent: "One hundred feet above intermediate level-off, procedure turn and final approach fix" altitudes.

3.12. Knock-It-Off Procedures:

3.12.1. "Knock it off" is the common assertive statement for use by all crewmembers. Use "Knock it off" to:

3.12.1.1. Provide a clear warning sign of a deviation or loss of situational awareness.

3.12.1.2. Provide an opportunity to break the error chain before a mishap occurs.

3.12.1.3. Notify all crewmembers that the aircraft or crew is departing from established guidelines, the briefed scenario, or that another crewmember is uncomfortable with the developing conditions.

3.12.1.4. Any instructions following the knock-it-off call should be ***directive***, then ***descriptive***. Example: "Knock it off. CLIMB. Altitude below minimums."

3.12.2. As soon as possible after a knock it off has been called, the aircrew will take the following actions:

3.12.2.1. Stabilize the aircraft on a safe flight vector.

3.12.2.2. Discuss specific concerns.

3.12.2.3. Continue the current maneuver or take a new course of action after direction by the PIC. **Note:** The PIC is the final decision authority.

3.13. Transfer of Aircraft Control: Both pilots must know at all times who has control of the aircraft. In all cases, the pilot assuming control of the aircraft will state, "I have the aircraft." The pilot relinquishing control will state, "You have the aircraft."

3.14. Postflight:

3.14.1. Pilots will lock and chock the aircraft if it will be left unattended for any period of time. Pilots will install an avionics lock (if available), control lock and tie-downs when remaining off station overnight.

3.14.2. The PIC will ensure that adequate security of the aircraft is provided at all times. This includes ensuring responsible personnel on both military and civilian airfields are advised as to the length of stay and where the crew may be contacted.

3.14.3. When not in a position to have continuous physical or visual contact with the aircraft, all cowlings and access panels will be properly installed and locked (where applicable) and all doors and windows will be closed and locked.

3.14.4. Primary crew members will maintain control of the aircraft keys and/or combinations at all times when away from the aircraft.

Chapter 4

OPERATING RESTRICTIONS

4.1. General. The PIC is responsible for exercising the necessary judgment to ensure no aircraft is dispatched with items inoperative that may result in an unsafe degradation and/or an undue increase in crew workload. The PIC will consider the possibility of additional failures during continued operation with inoperative systems or components. Missions originating from home stations will not normally launch with a known malfunction. Any item the PIC considers essential to mission completion will be fixed prior to flight.

4.2. Flight Manual Precedence. These procedures do not supersede procedures contained in the AFM/POH.

4.3. Equipment and Systems Decision Matrix. CAP-USAF pilots will consult the "Kinds of Operations Equipment List" in Section 2 of the POH to inform the go/no-go decision concerning the minimum operational equipment and systems considered essential for safe flight.

4.3.1. In addition to the requirements of **paragraph 4.3**, CAP-USAF pilots will ensure the Standby Battery is operational prior to any flight conducted in IMC.

4.3.2. Do not perform functional or acceptance check flights unless approved in advance by the CAP-USAF/DO.

4.4. Waivers. CAP-USAF/DO may waive the requirements of **paragraph 4.3** for operational necessity.

DAVID B. LYONS, Maj Gen, USAF
Director of Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

10 USC § 9013, *Secretary of the Air Force*

AFI 10-1001, *Civil Aircraft Landing Permits*, 23 August 2018

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020

AFMAN 11-202V3, *Flight Operations*, 10 January 2022

AFMAN 11-218, *Aircraft Operations and Movement on the Ground*, 5 April 2019

AFMAN 11-301V2, *Management and Configuration Requirements for Aircrew Flight Equipment (AFE)*, 13 February 2020

AFPD 11-2, *Aircrew Operations*, 31 January 2019

DAFI 36-2903, *Dress and Personal Appearance of United States Air Force and United States Space Force Personnel*, 7 February 2020

DAFMAN 11-401, *Aviation Management*, 27 October 2020

Prescribed Forms

None

Adopted Forms

AFTO Form 781, *ARMS Aircrew/Mission Flight Data Document*

DAF Form 847, *Recommendation for Change of Publication*

Office Symbols

ACC/A3—Air Combat Command Director of Operations

ACC/A3T—Air Combat Command Flight Operations Division

CAP-USAF/CC—Civil Air Patrol-United States Air Force Commander

CAP-USAF/CV—Civil

CAP-USAF/DO—Civil Air Patrol-United States Air Force Director of Operations

CAP-USAF/DOF—Civil Air Patrol-United States Air Force Aviation Resource Management

CAP-USAF/DOT—Civil Air Patrol-United States Air Force Training

CAP-USAF/DOV—Civil Air Patrol-United State Air Force Standardization and Evaluation

Abbreviations and Acronyms

AFM—Aircraft Flight Manual

AGL—Above Ground Level

AMRAD—Aircraft Maintenance Repair and Documentation

ARMS—Aviation Resource Management System

CAP—Civil Air Patrol

CAP-USAF—Civil Air Patrol-US Air Force

Det—Detachment

Det/CC—Detachment Commander

DH—Decision Height

DO—Director of Operations

EFB—Electronic Flight Bag

FAA—Federal Aviation Administration

FDP—Flight Duty Period

FLIP—Flight Information Publications

GPS—Global Positioning System

IFR—Instrument Flight Rules

IMC—Instrument Meteorological Conditions

IP—Instructor Pilot

LIRL—Low Intensity Runway Lighting

LR—Liaison Region

MAP—Missed Approach Point

MDA—Minimum Descent Altitude

PEX—Patriot Excalibur

PIC—Pilot In Command

POH—Pilot's Operating Handbook

SFL—Simulated Forced Landings

SORN—System of Records Notice

USC—United States Code

VFR—Visual Flight Rules

VMC—Visual Meteorological Conditions

WMIRS—Web Mission Information Reporting System

Terms

Air Force Aircraft—US Government aircraft under US Air Force jurisdiction. (DAFMAN 11-401).

CAP-USAF Aircraft—An Air Force aircraft operated by HQ CAP-USAF or one of its LRs.

CAP-USAF Pilot—An active duty or civil service pilot operating CAP-USAF aircraft.

Contract Rental Aircraft—An aircraft operated by CAP-USAF under a valid government contract. The aircraft is considered an Air Force asset during the period of its control.

Attachment 2

PREMISSION BRIEFING GUIDE

Table A2.1. CAP-USAFE Permission Briefing Guide.

CAP-USAF Pre Mission Brief CAO 05/19/2021

UNDERLINED items may be briefed as "standard" if the crew has briefed together and there are no changes

1. GENERAL/PREFLIGHT ADMIN
- a. IMSAFE Illness, Medication, Stress, Alcohol, Fatigue, Eating
- b. Boldface, Go/No-Go, FCIF, SII, Ops Notes
- c. Flight Authorization Signed
- d. PIC, Callsign, Tail Number
- e. Mission Overview/Objectives/Reqs
- f. Flight Plan Filed/Base Ops Notified
- g. Step/Takeoff/Est. Land Times
- h. WX, Alt Airfield, AHAS
- i. NOTAMS, AFD, VFR/IFR Sup, TFRs (PPR?)
- j. Fuel Required, Fuel State, AMRAD MX Status
- k. TOLD/Weight & Balance
- l. ORM Score/Mitigation

2. CREW COORDINATION
- a. Clearing
- b. In-Flight Checks
- c. Radio Procedures
- d. Brief CRM Topic of the Month from Chart

3. EMERGENCY PROCEDURES
- a. Aircrew Responsibilities
- b. Emergency Ground Egress
- c. Takeoff Emergencies
- d. Physiological Incident
- e. Emergency Divert Airfields
- f. Brief EP of the Day from Chart

4. SIMULATED EMERGENCY PROCEDURES
- a. Potential Hazards/Mitigation
- b. Knock-It-Off Decision Points & Criteria

5. GROUND OPERATIONS
- a. Airfield Diagram/Taxi Routing

6. TAKEOFF/DEPARTURE
- a. Expected Runway
- b. Normal/Soft/Short Field Procedures
- c. Departure Routing

7. AREA WORK
- a. Boundaries/Altitudes
- b. Area Work And Parameters

8. PATTERN WORK
- a. Runway Length/Width
- b. Pattern Altitude/Planned Entry
- c. Nonstandard Procedures Or Restrictions

9. ENROUTE
- a. Routing
- b. Controlling Agencies
- c. Special Use Airspace

10. RECOVERY/LANDING
- a. Routing/Descent/Arrival Plan
- b. Visual Illusions
- c. Go-Around Considerations
- d. Airfield Diagram/Taxi Routing/Barriers

11. PERSONAL ITEMS
- a. Remove Jewelry/Check Fuel Card

12. QUESTIONS

Date	EP of the Day
1	Engine Fire During Start
2	Engine Fire in Flight
3	Emer. Engine Shutdown on Ground
4	Emer. Engine Shutdown in Flight
5	Engine Failure During T/O - Abort
6	Engine Failure Immediately After T/O
7	Engine Failure in Flight (Restart)
8	Electrical Fire in Flight
9	Emer. Landing w/out Engine Power
10	Precautionary Land w/Engine Power
11	Ditching
12	Cabin Fire
13	Wing Fire
14	Inadvertent Icing Encounter in Flight
15	Landing with a Flap Main or Nose Tire
16	High Volts Annunciator
17	Low Volts Annunciator
18	AHRS Failure
19	Emer. Descent thru Clouds (no AHRS)
20	Spin Recovery
21	Rough Engine or Loss of Power
22	Electrical: Excessive Rate of Charge
23	Electrical: Insufficient Rate of Charge
24	High CO Level Annunciation
25	Static Source Blockage
26	180° Turn in Clouds (AHRS Failed)
27	Airspeeds for Emergency Operations
28	Fuel Flow Stabilization Procedure
29	Air Data System Failure
30	Emer. Landing w/out Engine Power
31	Engine Failure in Flight (Restart)

CRM TOPIC OF THE MONTH

CRM Skill	Positive Factors	Negative Factors
January & July: Communication	○ Listens ○ Provides feedback ○ Precise & efficient communication with all entities	○ Interrupts ○ Withholds or discounts info ○ Info is ambiguous, unclear, incomplete or inaccurate
February & August: Crew/Flight Coordination	○ Maintains flight/mission integrity ○ Establishes & maintains crew-contracts ○ PIC exhibits team-building & leadership ○ All crewmembers assume responsibility, assertiveness & persistence ○ All crewmembers utilize conflict resolution and solution-driven recommendations	○ Lacks flight discipline ○ Judges, ridicules, overreacts ○ Ignores, imposes or accepts error
March & September: Mission Analysis	○ Pre-mission Analysis: Thorough planning & briefing of plan to all crew members. Establish points to reevaluate plan inflight ○ Ongoing mission evaluation: Analyze progress throughout the flight. Re-evaluate threats & viability of mission ○ Post mission debrief: Analyze crewmember responses and outcomes to threats & errors	○ Pre-mission brief: Skipped, rushed, incomplete, vague ○ Ongoing mission evaluation: Fails to conduct timely threat & error management ○ Debrief: Rushed, incomplete, vague, focused on blame, ignores input
April & October Risk Management & Decision Making	○ Uses risk management processes, problem solving & evaluation of hazards ○ Enacts deliberate, timely and informed decisions	○ Avoids decisions ○ Delays, wavers, or argues ○ Fails to evaluate consequences of decision
May & November Situational Awareness	○ Prevents loss of SA by anticipating tasks, delegating responsibilities, and identifying errors ○ Recognizes own/others loss of SA and uses task management and crew coordination techniques to recover from loss	○ Disorientated or confused ○ Unresponsive to crew ○ Lost ○ Fixated on one aspect of flight
June & December Task Management	○ Anticipates high task-load portions of flight ○ Establishes priorities: Aviate/Navigate/Communicate ○ Manages automation and available resources ○ Enforces checklist discipline, & standard operating procedures.	○ Rushes or overloads ○ Skips tasks due to complacency ○ Fails to prioritize Aviate/Navigate/Communicate ○ Drops cross-check of aircraft position & flight progress