MACAIR PART 141
SAFETY
POLICY AND PROCEDURES

This document establishes safety policy and procedures for Sinclair College and MacAir Aero Club students enrolled under 14 CFR Part 141 flight training programs administered by MacAir Aviation. All students are encouraged to review the MacAir Standard Operating Procedures (SOP) manual from which most of this material was derived.

FIRE SAFETY

- Smoking (to include "electronic cigarettes", "vaping" products, and recreational/medicinal marijuana) is prohibited in all MacAir Aero Club facilities; inside of, or within 50 feet of, club aircraft; and within 50 feet of refueling operations.
- Only MacAir line personnel will conduct refueling at KGDK.
- Students using self-serve fuel pumps at cross-country destinations will ground the aircraft prior to fuel servicing operations by grounding the aircraft to the refueling equipment with an approved cable before making any fueling connection to the aircraft. The ground shall be maintained until fueling connections have been removed. The pilot shall touch the filler cap or surrounding area (unpainted surface) with the nozzle spout before removing the cap. The spout shall be kept in contact with the filler neck until the fueling is completed. (***NOTE:*** Refer to *National Fire Code 407* for further guidance.)
- Pilots will ensure accessibility to a fire extinguisher in preparation for engine start.
- In case of fire during engine start or in flight, follow the procedures in the Aircraft Checklist.

ENGINE START / GROUND OPERATIONS

- If the engine does not start within approximately five to seven seconds of engaging the starter, discontinue the start and reattempt after verifying switches and determining status of prime, flooding, ignition, etc. Do not pump the throttle in an attempt to start the engine.
- Taxi speed on the ramp, or in any congested area, shall be no faster than a person walking (less than 5 knots). Do not ride the brakes during taxi; use power reduction to control taxi speed, using the brakes, if necessary, only after the power has been reduced to idle.
- If the pilot has doubts as to wingtip clearance, he/she should request a wing-walker or shut down in place.
- Upon return from a flight, go to the fuel pump if fuel is needed or park the aircraft as directed by line personnel. If line personnel are not available, park the aircraft in a designated spot and chock the aircraft. Refrain from parking on the west ramp unless returning after hours.

GREENE COUNTY AIRPORT PATTERN OPERATIONS

- When winds are less than 5 knots the preferred runway is 07.
- Touch and go patterns will not be flown at Greene County Airport from April 1st through October 31st. Full stop and taxi back patterns are allowed year-round except at night.
- For noise abatement reasons, multiple touch and go patterns and full stop/taxi back patterns will not be flown at night at Greene County Airport. All night pattern entries at Greene County Airport will be to a full stop only.

COLD WEATHER PROCEDURES

- Student pilots will not attempt an engine start when the OAT is less than 32° F without first pre-heating the engine using the electric engine pre-heater (for those aircraft so equipped) or by placing the aircraft in a heated hangar for three hours.
- The minimum oil temperature for takeoff must be IAW the aircraft POH. If the POH does not specify a minimum takeoff oil temperature, the oil temperature needs to be at least to the bottom of the green arc.
- When the overnight OAT is expected to be below 32° F at KGDK, line personnel will pre-heat aircraft engines (using electric pre-heaters or inside a heated hangar) for those aircraft on the next morning's flying schedule and available (i.e., not flying) prior to closing time. If this pre-heating has not been accomplished, the PIC will pre-heat the aircraft prior to engine start.
- Install Cowl Plugs during electric preheating to maintain heat in the engine compartment.
- After each flight when the OAT is less than 50° F, install Cowl Plugs after engine shutdown to keep heat inside the engine compartment.

WIND / WEATHER LIMITATIONS

- Solo student pilot headwind and cross wind limits are 20 knots and 10 knots, respectively, including gusts. Flight instructors may impose more stringent headwind and crosswind limits on any solo endorsements.
- Dual flights will not be initiated if surface winds are forecast to be greater than 30 knots, and flights will be terminated as soon as practical if surface winds exceed 30 knots.
- Simulated emergency training is limited to Visual Meteorological Conditions (VMC).
- A private pilot student trainee will not fly solo unless the current and forecast weather for the location, area, or planned cross-country route, as applicable, is at or above the following weather minimums.

	Ceiling (ft)	Visibility (sm)
Closed Traffic	1500	3
Local Area	2500	5
Cross Country	3000	5

FUEL REQUIREMENTS

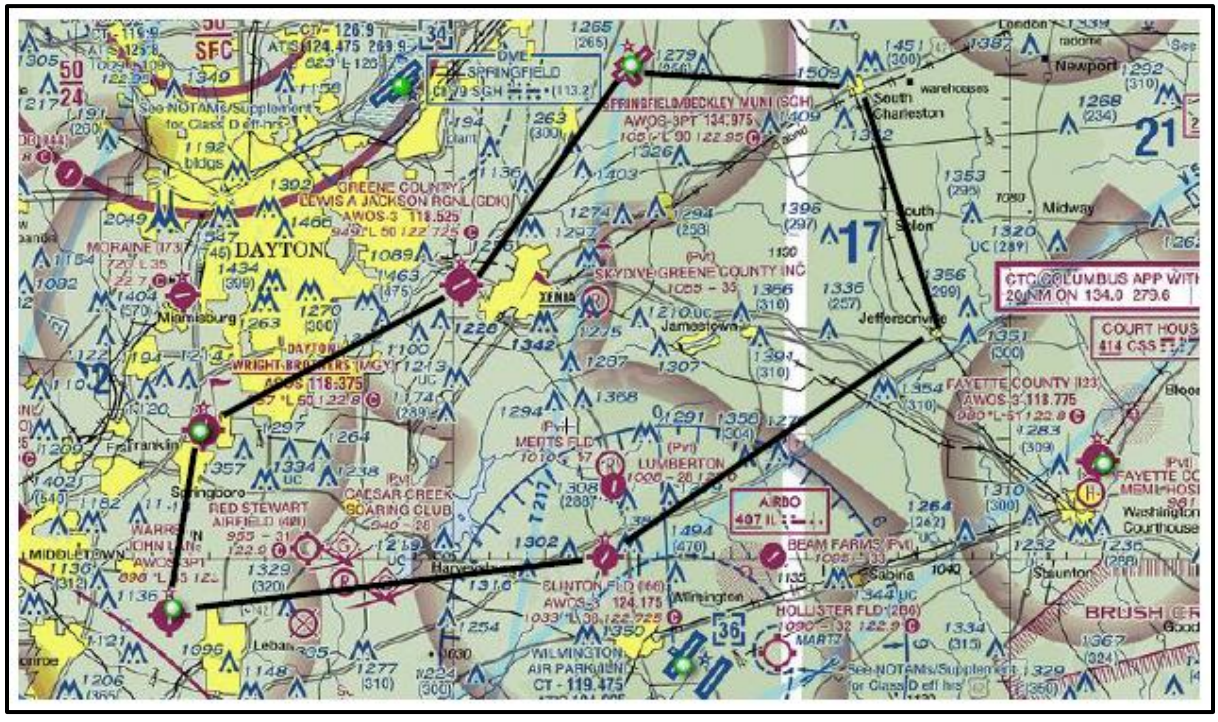
- The PIC shall calculate fuel consumption using the aircraft manufacturer's data published in the POH.
- Pilots shall not begin a flight unless there is sufficient fuel to complete the flight to the point of intended landing, fly from that airport to an alternate (if an alternate is required), and then fly after that for at least 1 hour at normal cruise consumption.
- Local area flights will plan to land with at least 1 hour of fuel remaining.

MINIMUM ALTITUDES

- Except as amended below, pilots shall maintain the minimum altitudes required by 14 CFR Part 91.119.
- Pilots shall not descend below 500 feet AGL during simulated forced landings, except to approved runways.
- During the day, do not descend below 1,500 feet AGL when performing stalls, turns over 45 degrees of bank, slow flight, or unusual attitudes in single engine aircraft.
- At night, student pilots shall not descend below 2,000 feet AGL when performing stalls, turns over 45 degrees of bank, slow flight, or unusual attitudes in single engine aircraft.
- Simulated forced landings shall not be conducted over congested areas. After each 2000 feet of descent advance the throttle to clear the engine to ensure that carburetor ice has not formed.

LOCAL FLYING AREA / COLLISION AVOIDANCE

- The MacAir Aero Club local flying area includes the area within a 50 nautical mile radius of Greene County Airport. A map of the local flying area is displayed in the flight planning area.
- The primary training area for private pilot student solo training encompasses a region from KGDK - KSGH - South Charleston - Jeffersonville - I66 - I68 - KMGY - KGDK. However, a MacAir instructor can allow solo student training in areas outside this region if it meets the student's training needs, if the student has previously flown to it with their instructor, and if they are familiar with the region.
- **All aircraft will avoid Skydive Greene County.**



MacAir Solo Student Training Area

- Good clearing procedures during flight in Visual Meteorological Conditions cannot be overemphasized. Pilots must use good Crew Resource Management (e.g., passengers, air traffic control) when clearing. In addition, many MacAir aircraft are equipped with ADS-B "in" capability that provides early warning of potential conflicts outside the visual range of most pilots. Crews should use this resource, in addition to visual clearing, to avoid other aircraft.
- MacAir has identified the known hazards to local flight operations in the greater Dayton area. These include, but may not be limited to, the following: Skydiving operations at Skydive Greene Co (a private grass strip); glider operations around Caesar Creek Gliderport; aircraft not using radios or transponders around Red Stewart (40I) and Barnhart Memorial; military traffic at Wright Patterson AFB (KFFO); and military operations in the Brush Creek and Buckeye MOAs (southeast).

PRIVATE PILOT TRAINING SOLO STUDENT PROCEDURES / LIMITATIONS

- Private pilot solo students shall not fly more than 10 hours solo or exceed 45 days without a dual proficiency flight. This flight will include all items listed in 14 CFR Part 61.87 (d) & (e).
- Private pilot solo students shall not fly solo at night. If after becoming airborne, a student pilot determines he/she will not reach his/her planned destination prior to sunset, he/she shall land at a suitable airport **prior to sunset**. If the student cannot reach a suitable airport prior to sunset, he/she shall contact the nearest ATC facility, declare an emergency, and request radar vectors to the nearest suitable airport.
- Private pilot solo students shall not conduct simulated emergency procedures, to include simulated forced landings or Emergency Descents that descend below 1,500 feet AGL.
- Private pilot solo students shall not carry cargo or baggage on a solo flight other than that required to conduct the flight IAW the training syllabus.
- Private pilot solo students are prohibited from conducting solo takeoffs and landings on other than hard surface runways.
- Private pilot solo student landings shall be either full stop or stop-and-go. If the runway remaining after landing does not meet the length requirement of 2,500 feet, only a full stop landing with taxi back shall be made.
- Private pilot solo students may practice only those maneuvers outlined in the Part 141 syllabus for solo fight that have been graded "Safe" or better on the most recent flight with an instructor unless further restricted by his/her MacAir flight instructor.
- Private pilot solo students will only make pattern entries 45 degrees to the downwind. Instructors are encouraged to review other approved entry procedures with the student IAW AC 90-66C.

SOLO STUDENT CLEARANCE AUTHORITY

- A MacAir Aero Club Flight Instructor is the Clearing Authority for student pilot solo flights in MacAir aircraft, to include those in the local area and the initiation of cross-country flights. The student pilot is the clearing authority for any cross-country flight leg originating at other than KGDK, unless otherwise restricted in these SOPs.

- A student pilot who lands at an airport not authorized by Aero Club Flight Instructor endorsement IAW 14 CFR and these SOPs shall not file a flight plan from nor takeoff from that airport until being authorized by his/her Flight Instructor or the Chief Flight Instructor. The student shall either contact the Aero Club by radio prior to landing or by telephone immediately after landing in such a situation.

ACCIDENT / INCIDENT REPORTING

- The terms "aircraft accident" and "incident" are defined in NTSB Part 830. For the purposes of these procedures, an unusual occurrence is any occurrence not classified as a mishap, accident, or incident which does not reasonably fall into the category of normal operations or has adverse safety implications. The Chief Flight Instructor shall make the final determination as to an unusual occurrence.
- The PIC of an Aero Club aircraft shall immediately contact the Aero Club Manager, Chief Flight Instructor and Aero Club dispatch desk by phone, fax, or message to advise them of any accident, incident, or unusual occurrence.
- Following an accident, incident, or unusual occurrence, including off-airport landings, aircraft malfunctions, landings at unapproved/unauthorized airports, hard landings, or storm damage, **DO NOT FLY THE AIRCRAFT WITHOUT SPECIFIC AUTHORIZATION FROM THE AERO CLUB MANAGER AND DIRECTOR OF MAINTENANCE.**

AIRCRAFT MAINTENANCE / DISCREPANCY TRACKING

- Each MacAir owned and leased aircraft has an *Aircraft Flight Log* (Blue Book) that contains information on the maintenance status of the aircraft that the pilot needs to know. The *Maintenance Discrepancy and Work Document* in the Blue Book shall be used to record and show correction of discrepancies discovered during normal flight activities. The pilot will review the Blue Book prior to each flight as part of his/her pre-flight inspection and carry it with them in the aircraft when they fly.
- Discrepancies shall be entered in the Upper block of *Maintenance Discrepancy* form. Only one (1) discrepancy shall be entered per block. The person entering the discrepancy shall legibly print his/her name in the "DISCOVERED BY" block and place the date in the "DATE DISCD" block.
- Each PIC shall personally bring each major discrepancy (any discrepancy which makes the aircraft unairworthy or unsafe to operate) to the immediate attention of the ramp Line Personnel, Dispatch Desk, and/or the Director of Maintenance. If no lineman is available, call the Director of Maintenance, Club Manager, and Chief Pilot. Major (grounding) discrepancies include:

  Any aircraft accident.
  Any flight control malfunction.
  Engine malfunction.
  Excessive oil leak.
  Controllable propeller malfunction.
  Oil leaks at hub of any controllable propeller.
  Significant nick or any crack in any propeller.

Any fuel leaks.
Landing gear malfunction.
Cut or wear that exposes cord on any tire.
Brake malfunction.
Precautionary or forced landing off-airport.
Excessively hard/high side load landing.
Ground departure from the runway surface during takeoff or landing.
Collision with other objects on the ground or in flight.
Inoperative or malfunctioning equipment required by FAR for VFR-day operation.
Inoperative or malfunctioning equipment required by FAR 14 CFR 91.205.

- **Only appropriately rated MacAir mechanics are authorized to return grounded aircraft to service.**

SECURING OF AIRCRAFT AFTER HOURS / OFF STATION

- If returning after hours, park on the Aero Club ramp or the west ramp. For off-station overnight stays, park in the designated transient parking area. Close the cowl flaps (as appropriate); install the gust locks (or use seat belts on controls); close air inlets; install the pitot probe cover (if available); chock the aircraft; and tie the aircraft down. At KGDK ropes are available on the west ramp and in the plastic bin by the fence. Lock the aircraft with the blue book inside.
- At KGDK put the keys in the blue book and leave the book/keys on the dispatch desk at the Aero Club or Sinclair Building as applicable. There is a key box outside the door of each building with a key to the door. The combination for the key box is the first four digits of the CTAF frequency. Call or stop by the dispatch desk the next morning to pay for the aircraft. Remember to return the building key to the key box.