

## Part 141 Safety Procedures and Practices



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## Section I: Weather Minimums

### Student Pilot Operations

Flight Operation	Visibility	Ceiling	Max Wind	Crosswind Component
Dual VFR Local	3SM	1,600 feet	25 knots	17 knots **
Dual VFR Cross Country	3SM	2,500 feet	25 knots	17 knots **
Solo VFR Local	5SM	1,600 feet	20 knots	10 knots **
Solo VFR Cross Country	5SM	3,500 feet	20 knots	10 knots **
Night Dual	3SM	1,600 feet	25 knots	17 knots **
Night Solo	5SM	1,600 feet	20 knots	10 knots **

Additional weather-related restrictions:

- \*\*Crosswind, All Aircraft Not to Exceed Crosswind Component for aircraft being flown
- Weather at the practice area, departure airport, enroute, and all airports of intended use are forecast to be at least equal to or better than the following criteria and forecast to remain so for the duration of the contemplated flight plus 3 hours for flights estimated over 3 hours or plus 2 hours for flights under 3 hours.
- FLIGHTS SHALL NOT BE DISPATCHED REGARDLESS OF CEILING, VISIBILITY AND WIND CONDITIONS, IF KNOWN OR FORECAST HAZARDOUS WEATHER CONDITIONS SUCH AS ICING, THUNDERSTORMS, HIGH WIND, ETC. EXIST WITHIN THE AREA OF OPERATIONS THAT MAY ENDANGER THE FLIGHT.

### Private Pilot Operations

Flight Operation	Visibility	Ceiling	Max Wind	Crosswind Component
Dual VFR Local	3SM	1,600 feet	25 knots	17 knots **
Dual VFR Cross Country	3SM	2,500 feet	25 knots	17 knots **
Solo VFR Local	3SM	1,600 feet	25 knots	17 knots **
Solo VFR Cross Country	3SM	2,500 feet	25 knots	17 knots **
Night Dual	3SM	1,600 feet	25 knots	17 knots **
Night Solo	3SM	1,600 feet	25 knots	17 knots **

Additional weather-related restrictions:

- \*\* Crosswind, All Aircraft Not to Exceed Crosswind Component for aircraft being flown
- Weather at the practice area, departure airport, enroute, and all airports of intended use are forecast to be at least equal to or better than the following criteria and forecast to remain so for the duration of the contemplated flight plus 3 hours for flights estimated over 3 hours or plus 2 hours for flights under 3 hours.
- FLIGHTS SHALL NOT BE DISPATCHED REGARDLESS OF CEILING, VISIBILITY AND WIND CONDITIONS, IF KNOWN OR FORECAST HAZARDOUS WEATHER CONDITIONS SUCH AS ICING,

### **Instrument Pilot Operations**

<u>Flight Operation</u>	<u>Visibility</u>	<u>Ceiling</u>	<u>Max Wind</u>	<u>Crosswind Component</u>
Dual VFR Local	N/A	N/A	N/A	N/A
Dual VFR Cross Country	N/A	N/A	N/A	N/A
Solo VFR Local	N/A	N/A	N/A	N/A
Solo VFR Cross Country	N/A	N/A	N/A	N/A
Night Dual	N/A	N/A	N/A	N/A
Night Solo	N/A	N/A	N/A	N/A

#### Additional weather-related restrictions:

- IFR FLIGHTS shall be dispatched into instrument meteorological conditions only under the following circumstances:
  - (1) The flight instructor has been authorized by the Chief Flight Instructor to instruct in instrument conditions in the type of aircraft involved.
  - (2) All the required flight instruments, communications and navigation equipment, including transponder, on board are known to be functional.
  - (3) The weather at time of takeoff and the forecast for the contemplated flight plus 2 hours are such that return to the base of operations or an approved airport can be anticipated using the available visual or instrument approach procedures.
  - (4) A suitable alternate airport that meets the requirements of FAR part 91.169 is available and filed with ATC.
  - (5) There are no know or forecast hazardous conditions such as icing, thunderstorms, high winds or other hazards to flight in the area of the contemplated flight.
- **LIMITING WIND CONDITIONS**
  - (1) All students in all courses, before authorized for solo in any aircraft, shall be assigned a maximum surface wind limitation and maximum crosswind component limitation for that make and model aircraft. The maximum surface wind, the maximum crosswind component, and the aircraft make and model shall be recorded in the student's training record and pilot logbook.
  - (2) A crosswind computer shall be used to determine the crosswind component for takeoffs and landings. A sample crosswind computer is included in this manual.  
(See Appendix A – Page 12)

### **Commercial Pilot Operations**

<u>Flight Operation</u>	<u>Visibility</u>	<u>Ceiling</u>	<u>Max Wind</u>	<u>Crosswind Component</u>
Dual VFR Local	N/A	N/A	N/A	N/A
Dual VFR Cross Country	N/A	N/A	N/A	N/A
Solo VFR Local	N/A	N/A	N/A	N/A
Solo VFR Cross Country	N/A	N/A	N/A	N/A
Night Dual	N/A	N/A	N/A	N/A
Night Solo	N/A	N/A	N/A	N/A

#### Additional weather-related restrictions:

- **LIMITING WIND CONDITIONS**
  - (1) All students in all courses, before authorized for solo in any aircraft, shall be

- assigned a maximum surface wind limitation and maximum crosswind component limitation for that make and model aircraft. The maximum surface wind, the maximum crosswind component, and the aircraft make and model shall be recorded in the student's training record and pilot logbook.
- (2) A crosswind computer shall be used to determine the crosswind component for takeoffs and landings. A sample crosswind computer is included in this manual. (See Appendix A- Page 12)

## **Section II: Engine Starting and Taxiing Procedures**

### **Engine Starting Procedures**

#### **CHECKLISTS**

(1) Each aircraft is provided with a checklist that covers all phases of ground and flight operations, day or night, VFR and IFR, and all commonly anticipated emergencies. Both instructor pilots and students shall be familiar with the checklists for the aircraft they are flying and adhere to them.

#### **PROPELLER DANGER AREAS**

(1) Any area within 10 feet of a propeller are should be considered a hazardous area whether the engine is running or static. Inspection of the propeller, propeller hub, nose section, etc., should be made visually. The propeller should be handled at all times as though the engine were going to start. It could! Walking through or putting any part of the body into the propeller arc IS EXTREMELY HAZARDOUS and should be avoided. Hand turning of the propeller is prohibited.

The starting of all aircraft shall be in accordance with the appropriate checklists and established procedures and the following general precautions:

- (a) On the preflight walk around ascertain that the propeller area and the taxi area are clear of all loose objects and debris such as chocks, tow bars, etc. If necessary, reposition the aircraft so that a brake failure on start will not cause the aircraft to roll into an area where collision damage could occur before the engine could be shut down.
- (b) Ensure that the parking brake is set or hold the foot brake (if applicable) before engaging the starter. Turn on the anti-collision light to warn nearby personnel the engine is about to be started and VISUALLY clear the propeller danger area. Call CLEAR! to warn nearby personnel.
- (c) Engine speed should not be allowed to go above 1,000 RPM on start in order to minimize wear and tear (unless the aircraft flight manual states otherwise). Shut down the engine if oil pressure has not started upward within 30 seconds or 60 seconds in very cold weather. The maintenance supervisor or his assistant should investigate the cause.
- (d) Entering or leaving an aircraft with the engine running is extremely hazardous and shall be avoided. For that reason, on dual flights, the engine will not be started until both the flight instructor and the student are in the aircraft.
- (e) Under NO circumstances shall any aircraft be started by hand propping. Contact the maintenance supervisor if auxiliary power is needed for starting.

## **Taxiing Procedures**

- (1) The hanger and ramp areas are confined and often congested and a great deal of caution is required while maneuvering in these areas. The pilot in command is solely responsible for the safety of the aircraft from the time he or she enters it for flight, until it is shutdown and secured. While others may assist a taxiing aircraft in close quarters, the responsibility remains with the pilot in command. If in doubt, STOP!!
- (2) When taxiing in ramp areas or other confined areas, taxi speed shall be no faster than a normal walk.
- (3) When taxiing on taxiways, taxi speed shall be no faster than a brisk walk.
- (4) A good rule about taxi speeds is NEVER taxi so fast that you can not stop safely without brakes.
- (5) Always use the proper application of the flight controls for existing wind.
- (6) Yellow lines maybe painted on taxiways and in the ramp areas. While these lines are not infallible, taxiing with the nose wheel on the yellow line will clear the aircraft of all normal obstacles.
- (7) Never follow small aircraft at a distance of less than three or four airplane lengths; get that close only while waiting in line for takeoff.
- (8) Use extreme caution when taxiing behind large propeller driven aircraft and jets. When taxiing behind a large aircraft is unavoidable maintain at least 500 feet separation and exercise extreme caution.
- (9) Under NO circumstances is aircraft to be taxied into or out of hangars.

## **Section III: Fire Precautions and Procedures**

- (1) The subject of aircraft engine and electrical and cabin fires is a part of every students checkout in an aircraft. Follow the procedures outlined in checklists and take action as dictated by the situation and good judgment.
- (2) In the event of a fire on the ground, attempt to call for assistance on any radio frequency (tower, ground, control, Unicom, etc.) DO NOT hesitate to evacuate the aircraft if you determine the fire is uncontrollable. Contact the Dispatcher and Maintenance Supervisor if away from the home base.
- (3) In the event of an uncontrollable fire in flight, land as soon as possible. DO NOT attempt to restart engine that has been shut down unless an extreme emergency dictates otherwise. If circumstances permit, make radio contact with any tower, FSS, Unicom, etc. and advise them of your emergency situation. Contact the Dispatcher and Maintenance Supervisor after landing.
- (5) No aircraft shall be dispatched or re-dispatched following a fire unless approved by the Maintenance Supervisor.
- (6) Fire extinguishers are located in our flight line area. During cold weather operations, a fire guard shall standby for all cold starts below 40 degrees F or 4 degrees C.
- (7) Smoking is prohibited in, around aircraft, and in the vicinity of fueling operations.
- (8) Aircraft shall be vacated during fueling.

## **Section IV: Dispatch Procedures Following Unscheduled Landings**

### **Landing at an airport that is not part of the approved flight plan:**

1. Secure the aircraft.
2. Contact the flight school to explain the circumstances of the un-programmed landing.
3. Depending on input from the chief instructor or his/her designated representative:
  - Wait for pick up by another aircraft;
  - Prepare the aircraft for departure and continue the previously planned flight; or
  - Prepare the aircraft for departure and return to home base.

### **Landing off airport:**

1. Ensure your safety and the safety of any passengers on board as a first priority.
2. As the situation allows, secure the aircraft.
3. The flight is immediately terminated.
4. Contact the flight school for further instructions.

### **Landing as the result of a mechanical or medical emergency:**

1. The flight is immediately terminated. Never try to takeoff from an unimproved location.
2. Secure the aircraft as best you can.
3. Contact the flight school for further instructions.

### **Landing as the result of inclement weather:**

1. Secure the aircraft.
2. Contact the flight school the circumstances of the un-programmed landing.
3. Discuss the weather forecast with the chief instructor or his/her designated representative and determine when/if further flight operations will commence.
4. Depending on input from the chief instructor or his/her designated representative:
  - Wait for pick up by another aircraft;
  - Prepare the aircraft for departure and continue previously planned flight; or
  - Prepare the aircraft for departure and return to home base.

## **Section V: Aircraft Discrepancies and Return to Service Determinations**

### **Noting Aircraft Discrepancies**

Each and every observed aircraft discrepancy must be reported to flight operations as soon as practicable after discovery to be noted in the dispatch records. Serious discrepancies have the potential for immediate and/or catastrophic consequences.

- If a discrepancy is observed during the preflight inspection:
  1. Report the discrepancy to flight operations.
  2. A certified flight instructor or aviation mechanic will determine if the discrepancy warrants cancellation or delay of the flight using the method identified in 14 CFR Part 91.213.
    - If the certified flight instructor or aviation mechanic determines the aircraft is safe and legal for flight, that individual should sign the dispatch release

where the discrepancy is recorded, returning the aircraft to service.

- If the certified flight instructor or aviation mechanic determines the aircraft is not safe and legal for flight, the flight should be canceled or rescheduled for another aircraft, if one is available.

Any open discrepancies must be resolved and signed-off by a certified aviation mechanic at the aircraft's next scheduled maintenance.

- If a discrepancy is observed during flight:
  1. Report the discrepancy to flight operations upon return to the airport.
  2. If possible, notify the instructor and/or student of the next flight using the affected aircraft of the issue.
  3. A certified flight instructor or aviation mechanic will determine if the discrepancy warrants cancellation or delay of the next applicable flight using the method identified in 14 CFR Part 91.213.
    - If the certified flight instructor or aviation mechanic determines the aircraft is safe and legal for flight, that individual should sign the dispatch release where the discrepancy is recorded, returning the aircraft to service.
    - If the certified flight instructor or aviation mechanic determines the aircraft is not safe and legal for flight, the flight should be canceled or rescheduled for another aircraft, if one is available.
    - Any open discrepancies must be resolved and signed-off by a certified aviation mechanic at the aircraft's next scheduled maintenance.
- If a serious discrepancy is observed during a local flight:
  1. Return to the airport in a safe but efficient manner.
  2. If necessary, the PIC should not hesitate to declare an emergency and receive priority assistance.
  3. Flight operations should be notified of the problem if and when it is safe to do so.
  4. Upon return to the airport, the aircraft should be grounded and turned over to maintenance for further inspection and/or repair.
    - The PIC should provide flight operations and maintenance with a detailed explanation of the incident.
- If a serious discrepancy is observed during a cross-country flight:
  1. Make a safe landing at the nearest appropriate site with an airport being the obvious first choice if such a landing is possible.
  2. If necessary, the PIC should not hesitate to declare an emergency and receive priority assistance.
  3. As soon as it is safe to do so, notify flight operations of the issue.
- 4. Terminate the flight and await further instructions.

### **Making Return to Service Determinations**

Only a certified flight instructor or aviation mechanic may return an aircraft to service after a discrepancy has been noted. The individual making that determination must use sound judgment and the method identified in 14 CFR Part 91.213 during the process.

Flight students are prohibited from operating in any aircraft that have open discrepancies, not signed-off by a certified flight instructor or aviation mechanic.



## Section VI: Securing of Aircraft

When securing aircraft post-flight, the approved checklist should be used to ensure nothing is overlooked. General procedures include:

- Aircraft are to be tied down and chocked when at home base.
- Chocks are to be carried on each flight for use at each airport other than the home airport.
- Control locks are to be inserted and each aircraft door must be locked after each flight.
- Sun screens should be placed appropriately after each flight.

## Section VII: Fuel Reserves

At the conclusion of each flight, the following minimum fuel reserves must be present in the fuel tank(s).

<b>Local VFR Flights</b>	1 hour
<b>Cross-Country VFR Flights</b>	1 hour
<b>IFR Flights</b>	1 hour

## Section VIII: Collision Avoidance Procedures

The following procedures will be used in collision avoidance during ground operations.

- PIC will visually and verbally "clear left, clear right, and clear ahead" before any movement on the ground.
- PIC will self-announce all movement intentions at a non-towered airport or coordinate movement with ground control at a towered airport.
- PIC will be alert to the operations of other aircraft and ground vehicles.

The following procedures will be used in collision avoidance during flight operations.

- Pilots will be vigilant for other traffic in the air and not become preoccupied by in-flight duties to the point that collision avoidance scanning technique is lost.
- Clearing turns will be performed before every flight maneuver.
- Flight instructors will assist with collision avoidance scanning at all times, but the student is equally responsible for scanning the area, except in the case of simulate instrument instruction.
- Pilots should monitor the appropriate practice area frequency as well as local airport traffic frequencies to make position reports as necessary and to listen for other aircraft.

## **Section IX: Minimum Altitudes and Simulated Emergency Landings**

### **Minimum Safe Altitudes**

The minimum safe altitudes regulated by 14 CFR Part 91.119 are in effect at all times with operating in flight school aircraft. That regulation states that, except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

- Anywhere an altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.
- Over congested areas. Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.
- Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

### **Simulated Emergency Landing Procedure**

ALL SIMULATED EMERGENCIES PRACTICE SHALL BE CONDUCTED ON DUAL FLIGHTS. STUDENTS ON SOLO FLIGHTS SHALL NOT PRACTICE SIMULATED EMERGENCIES

- When a simulated emergency landing is conducted, it will only be initiated by a certified flight instructor on dual instructional flights, unless the student holds a private pilot or higher grade pilot certificate.
- All simulated engine failures will be simulated by the reduction of throttle, with no other method being acceptable.
- If the simulated emergency landing site is off airport:
  - The flight may not continue below the altitude specified in 14 CFR Part 91.119.
  - Care should be taken to not disturb persons or property on the ground with loud engine noises during go-around procedures.
- If the simulated emergency landing site is a suitable airport:
  - Care should be taken to not adversely affect other aircraft in the airport traffic pattern.
- Intentions should be clearly announced over the radio and such operations should be aborted at any time those operations may cause a conflict with other traffic.

## **Section X: Practice Areas**

- (1) VFR practice areas have been designated by the school. A sample chart is included (See Appendix A – Page 13)
- (2) All solo practice shall be conducted within the designated practice area(s).
- (3) There are no designated routings to the practice area(s). Solo students are expected to proceed directly to and from the practice area according to the airport standard approach and departure procedures.

## **Section XI: Other Rules and Procedures**

### **Dispatching of Flights**

- All flights, solo and dual, must be approved by the student's assigned instructor or his/her designee.
- All cross-country flight planning must be done prior to getting access to the aircraft keys. If the student is not prepared for his/her flight at the time on the flight schedule, the student's flight slot will be given to another student. The student's cross-country navigation log must be signed by his/her instructor or the instructor's designee prior to receiving the aircraft keys.

## **FIRES AND FIRE DRILL PROCEDURES AT SCHOOL FACILITIES**

(1) The following procedures shall be followed for both an actual fire and for fire drills. The fire department will not be notified in case of a fire drill.

(a) OFFICE STAFF- Turn on a fire alarm to the local fire department by telephone or any other means available. Specify the location and type of fire. After the alarm has been turned on, supervise the evacuation and securing of the building.

(b) INSTRUCTORS- Assist in the evacuation of the students. Assist in securing the building by turning off lights, electrical equipment and appliances, and closing all doors and windows as the building is evacuated. Evacuate the building to the South or East parking lot area for accounting.

(c) STUDENTS- Evacuate the building as expeditiously and orderly as possible by the nearest exit or as directed by the school staff. Proceed to the South or East parking lot area for accounting.