

## **Ready to solo?©**

### **Introduction**

Solo preparation began on the first flight. All the airwork of four basics, the ground reference, slow flight, trim, flaps, airspeed control, energy management, radio useage, and orientation have been, to a great extent directed toward the day a student does it all alone.

Preliminary to the flight is FAA required paper work, study, and testing. Performance parameters must be met. Safety is lthe primary consideration. The student must have reached a level of confidence and performance where there is a feeling of competence. Must share the responsibility and sense that the student is competent. There is a laundry list of both legal and safety requirements that must be met.

The day of possible solo is significant both to student and instructor. Psychological conditioning begins during the post flight discussions several flights before actual solo. The instructor must be thinking of visibility and wind limit conditions to be imposed. The parameters of acceptable conditions based primarily on safe/unsafe conditions needs to be clearly understood by the student. Unsafe solo conditions turns the planned dual/solo lesson into a dual only. The teaching accountability of the flight instructor is exceeded in this instance by no other field and equaled in only a few.

The pre-solo discussion is used to confirm that all required papers are if not completed. An oral review of the conditions requiring slow flight and the short approach should be included. The dual flight operations and duration are limited by agreement. The instructor expects that the student will complete at least three safe landings and a go-around in the first half hour of dual closed traffic. If this is not accomplished then the remainder of the lesson will be to review or refine landing skills in dual. The reason for this is that extending the dual time beyond the half hour is likely to create student fatigue that might jeopardize solo safety.

One way to judge the intellectual and emotional load of a stu dent on any pre-solo flight is to see if he can handle the landing process while conversing about some unrelated subject just as he would in an automobile. It's nice to know that the student has some capacity left for emergencies when the instructor gets out.

The extent of the testing of FARs and aircraft knowledge will vary but must cover all required material in both extent and depth to assure competency. Airport and radio procedures should be covered for all anticipated solo situations. The words, "student pilot", now become part of the aircraft identification whenever the full aircraft identification is appropriate. i.e. "Cessna 6185K student pilot"

If all goes well, the student solo proceeds. The student is expected to make two touch and go's a full stop in solo flight. A go around does not count. The instructor will be in the tower to monitor the flight and advise ATC of the student's capability to handle an unexpected situation. On occasion, the instructor may authorize an extension of the solo flight.

### **Pre-solo flight training**

- (1) Preflight, Engine operation, systems
- (2) Starting, taxiing, runup
- (3) Takeoff & landings, normal and crosswind

- (4) Flying straight and level, shallow, medium and steep turns.
- (5) Climbs and climbing turns
- (6) Traffic pattern entries and departures, collision and large aircraft wake avoidance
- (7) Descents straight and w/turns, with and w/out flaps
- (8) Speeds cruise through minimum controllable
- (9) Emergencies and malfunctions
- (10) Ground reference maneuvers
- (11) Power-off landings
- (12) Slips to a landing
- (13) Go arounds from base turns through final flare
- (14) Forced landings from takeoff to anywhere in the pattern
- (15) Stall entries w/varied attitudes and power with recovery at first sign

### **Required Knowledge**

---FAR Part 61.87:

AIRCRAFT;

- Required papers
- Required inspections
- Oil levels
- Fuel consumption/flight time
- Weight/balance limits
- Rotation/climb speeds
- Approach/landing speeds
- Flap use/go-around procedures
- Effect of bank on stall speed
- Emergency operations

### **Student Pilot Requirements**

- License/medical certificate
- Knowledge of flight rules--FAR PART 91
- Proficient in pre-flight/run up-taxiing
- Proficient in climbs/turns/level/descents
- Slow flight/stall recognition-recovery
- Traffic patterns/ground reference/collision avoidance
- Emergencies/priorities
- License and Logbook
- Endorsements