

Ground Lesson 8 – Performance and Emergency operations/equipment.

Objective:

For the student to have an understanding of the factors that affect Powered Parachute performance and become familiar with emergency situations and emergency gear.

Content:

Aircraft performance factors

Airframe Limitations

___ Weight limitations ___ Flying in turbulence ___ Load factor limitations

Air Density ___ Standard atmosphere factors affecting air density

___ Pressure altitude ___ Temperature ___ Humidity

Density altitude

___ Calculating density altitude ___ True airspeed calculations with increasing altitude

Aircraft performance considering density altitude and weight

___ Takeoff distance ___ Climb rate ___ Surface ceiling ___ Landing distance

Weight ___ Empty weight ___ Gross weight

Emergency Operations:

___ Engine roughness through engine malfunction or propeller imbalance

___ Engine instruments malfunction ___ Engine overheat.

___ Carburetor or induction icing

___ Four-stroke engines only - loss of oil pressure

___ Fuel starvation

___ Electrical malfunction

Smoke or fire

___ Oil smoke or fire ___ Fuel fire ___ Cabin fire

___ *Flight control malfunction*

___ *Any other emergency appropriate to the aircraft*

Emergency equipment: ___ Fire extinguisher ___ Escape knife

Survival gear

Basics for flying over remote terrain including land and water.

___ Mountain terrain ___ Large bodies of water ___ Desert conditions

___ Extreme temperature changes

Completion Standards:

This lesson is complete when the student understands the items listed in this lesson.

Assignment:

- Read *Pilot's Handbook of Aeronautical Knowledge*, Chapters 8 and 9, as specified in "HPTS Sport Pilot Guide of What to Study," in this book. Use flight computer to calculate density altitude and true airspeed. Modify the checkride emergency checklists (also found in the *Learn to Fly* DVD companion booklet) for the specific aircraft used for the flight lesson.
- Read *Pilots Operating Handbook/Flight manual* Sections "3. Emergency Procedures", "5. Performance", "6. Weight & Balance" and "8. Handling, Service and Maintenance"

Lesson Results:

Date of completion _____ Instructor Signature/ID _____

Student Signature _____ Time flown _____

Instructor remarks: