

# **Airfreddy's** **Guide on Learning To Fly**

**Step-by-Step Guide On the Private  
Pilot License From Start To Finish**



## **The Runup – Before Takeoff Check**

### **[Airplane Flying Handbook Page 2-17](#)**

**THE RUNNUP:** The runup is where you will check all of your engine instruments and make sure everything is operating correctly. Following are a few tips I give my students.

You will taxi to a designated area on the airport called the runup area which is usually at the end of the runway, depending on the airport. This is where we check the engine and flight controls. I have outlined the basic "before takeoff" checklist:

- 1: Parking Brake-** Set (Just hold you feet on the breaks to make sure that they work, I try and get students not to get into the habit of using the parking brake)
  
- 2: Cabin Doors-** closed and latched
  
- 3: Flight Controls-** Free and correct.( Look at my Flight Control Check Below)
  
- 4: Flight Instruments-** set. (I cover them all up for the first 4 flights or so)
  
- 5: Fuel Shutoff Valve-ON**

**6: Elevator Trim-** SET FOR TAKEOFF

**7: Throttle-**1700 RPM ( Refer to your airplanes POH)

**a: Magnetos-**check (RPM drop should not exceed 150 RPM)

**b: Mixture** – Lean for Max Takeoff Power

**c: Carburetor Heat-** CHECK (we are looking for a RPM drop)

**d: Engine Instruments and Ammeter-**CHECK

**e: Suction Gauge-**CHECK IN THE GREEN ARC

**f: Carburetor Heat -** On

**8: Throttle to Full Idle** (ALL THE WAY OUT TO MAKE SURE THE ENGINE WILL STILL RUN WITH THE CARBURETOR HEAT ON)

**9: Throttle Friction-** SET, SET THROTTLE BACK TO 1000 RPM

**10: Radios-** SET

**11: Lights -** as needed.

12: Passenger Briefing - Complete

## Flight Control Check

**FLIGHT CONTROL CHECK:** Here is a simple method I came up with for checking the flight controls. You just move the control column and look at either the ailerons, elevator or rudder.

**1: LEFT:** Turn the control column to the left and the left aileron should go up.

**2: RIGHT:** Turn the control column to the right and the right aileron should go up.

**3: UP / DOWN:** Turn around and look at the elevator. When up pull the control column back the elevator should go up. When you push the control column forward the elevator should go down.

**4: WIGGLE:** Wiggle the rudder back and fourth. When you step on the left rudder pedal, the rudder should move to the left. When you step on the right pedal, the rudder should go to the right.

**CAN'T SEE THE RUDDER:** In some low wing aircraft and certain high wing aircraft, you can't see the rudder. In this case just find the shadow of the tail and you will see the rudder moving in the shadow.

## Setting the Trim

**SETTING THE TRIM:** Sometimes the little mark for the takeoff setting is just worn out. Just look back at the elevator on the side the trim tab is on. Spin the trim wheel until the trim tab is even with the elevator.

## Leaning for Max Takeoff Power

**LEANING FOR MAXIMUM TAKEOFF POWER:** This is one thing I am very big on. My reasons for this are in the next story. Once you have done your first flight you will be familiar with the pre takeoff checklist or RUNNUP checklist. You will notice in there that it will state:

### **MIXTURE- RICH BELOW 3000 Feet**

I have everyone lean the engine for maximum takeoff power. This is one habit I think you should get into doing. A lot of instructors will say, "you don't need it here as we are at sea level" This is true, but remember you want to get into good habits. YOU are the one that could go off on a trip up to the high country some day. If you are not in the habit of doing it, I promise you it will be forgotten even if you have your checklist. Your brain will overlook it because it is not a habit. It will probably be on the day you need it the most.



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