

## Cessna 172RG – Operating Procedures

### BFC -Preflight Inspection

#### **Cockpit**

- check mags are off
- gear selector down, cowl flaps open
- master on, check fuel quantity gauges, lower flaps in stages, master off
- check fire extinguisher, first aid kit and documents
- remove control locks
- retrieve fuel tester and dip-stick

#### **External Inspection**

- drain fuel/left wing (5 pts), inspect for water, contamination and proper fuel (100LL)
- walk CCW around aircraft, inspect fuselage for damage
- be alert for any airframe contamination (must be removed before flight)
- inspect wheel wells for obstructions
- inspect all surfaces and trailing edges of empennage
- check freedom of movement and security of elevators and rudder
- check security of trim tab
- remove tie-down, inspect tie-down ring and tail for damage
- check ELT antenna for security
- check flaps – security, obstructions, damage
- drain fuel/right wing (5 pts) – inspect
- inspect right wheel – inflation, tread, brake assembly
- remove wing tie down
- inspect right aileron – freedom of movement, security of hinges, damage
- inspect wing-tip and leading edge of wing
- check right fuel quantity, security of fuel cap and upper surface of wing
- check oil quantity, drain and inspect fuel from engine and belly
- inspect cowl flap doors for obstructions and security
- inspect (feel) propeller for damage/security, inspect spinner for security
- check engine cooling inlets for obstructions
- inspect exhaust pipe, landing light and taxi light
- inspect nose gear assembly – oleo, shimmy dampener for security and damage
- check nosewheel for proper tire tread and inflation, check gear doors and wheel well
- check static port is clear (both sides)
- check left fuel quantity, security of fuel cap and upper surface of wing
- remove pitot tube cover, check pitot for blockages
- inspect stall warning tab for blockages and freedom of movement
- inspect fuel tank vent opening for visible blockage
- remove wing tie down
- inspect leading edge of left wing, aileron and flap (as above)
- inspect left landing gear – tire tread, inflation, brake assembly

\* be alert for any items on the ground near the aircraft (ex. nuts, bolts, screws, etc.)

\* report any unsatisfactory or questionable condition to your instructor or an AME

## Cessna 172RG – Operating Procedures

### **Start-Up**

- Follow checklist
- Do not pump throttle, use primer
- After start - set power to 1000 rpms or less and check oil pressure
- Cowl Flaps are to be opened for all ground operations

### **Run-Up**

- Follow Checklist
- Use 1800 rpms (max allowable mag-drop is 150 rpms with 50 rpm difference)
- Cycle propeller ONCE (up to 300 rpm drop)

### **Pre-Take-Off**

- Follow Checklist

### **Take-Off**

- Apply full power gently, check rpms (2700 max) and MP (approx. 28" to 30")
- Apply slight AFT pressure on control column
- Lift-Off at approx. 55-60 kts
- Climb at required airspeed  $V_x$ -67... $V_y$ -84 (normal climb 85-90)
- Raise gear once positive rate of climb is achieved and insufficient runway remains (to land)
- Reduce power to climb power setting at 400' AGL, throttle to 25" propeller to 2500 rpms
- Check engine gauges

### **Cruise**

- Set cruise attitude
- Reduce MP (throttle) to desired setting (approx. 23")
- Reduce RPM (propeller) to desired setting (approx. 2400)
- Close cowl flaps (unless hot temperatures exist)
- Lean mixture

### **Climbs**

- Open cowl flaps (if hot temperatures exist or for prolonged or slow airspeed climb)
- Enrichen mixture (as required)
- Set climb attitude
- Increase RPMs (propeller) to 2500
- Increase MP (throttle) to 25" (throttle will have to be increased to maintain MP)

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### **Descents**

- Enrichen mixture as required
- Reduce MP (throttle) to desired settings (approx. 18” for en route descent)
- Watch airspeed on descent
- Do not shock cool engine

### **Downwind Checks**

- Use approx. 17” to 20” MP (as required)
- Lower gear (below 140 kts)
- Carb Heat On
- Mixture rich
- Cowl flaps – open for touch and go, keep closed for full stop

### **Base**

- Reduce throttle (approx. 13”MP)
- Increase rpms (propeller) to full forward (gently)
- Set flaps (as desired)
- Complete GUMP checks
  - Gas – on both tanks
  - Undercarriage – down and locked
  - Mixture – full rich
  - Prop – full forward

### **Final**

- Approach at 65-70 kts
- Set flaps as desired
- Complete “Final Gear Check”

### **Landing**

- Touchdown nose-up, maintain weight off nosewheel with AFT pressure
- Do not raise flaps on roll-out, wait until taxiing clear of runway
- Open Cowl Flaps once clear of runway (follow checklist)

### **Emergency Procedures**

- Refer to POH

